THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

How Do Alternative Financing Models Address and Highlight Structural Failures Within Traditional SME Financing Systems in South America's Smaller Economies?

CARLOS FERNANDO CHACON URDININEA
SUMMER 2025

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees
in Finance and Economics
with honors in Finance

Reviewed and approved* by the following:

Brian S. Davis
Clinical Assistant Professor of Finance
Thesis Supervisor and Thesis Honors Adviser

Stefan M. Lewellen
Assistant Professor of Finance
Thesis Faculty Reader

* Electronic approvals are on file.

ABSTRACT

Small and Medium-sized Enterprises (SMEs) in Bolivia, Paraguay, and Ecuador face chronic financing gaps that hinder their growth and economic impact. Traditional banks and microfinance institutions often fail to meet SME needs due to high collateral requirements, steep interest rates, and rigid procedures. This thesis explores crowdfunding as an alternative financing model with the potential to both bridge these gaps and expose the inefficiencies of conventional financial systems. By enabling funding for SMEs previously considered "unbankable," crowdfunding challenges the assumptions and limitations of traditional finance. The study is guided by the question: How does crowdfunding address SME financing gaps in these countries, and how does it reveal the shortcomings of traditional banking? Using a mixed-methods approach and focusing on Prospera, Bolivia's first crowdfunding platform, the research contributes to the understanding of fintech's role in underbanked economies and offers practical insights for regulators, financial institutions, and fintech innovators in evolving policy environments.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter 1

Introduction

Sub-Chapter 1: The enduring challenge of SME financing in smaller South American Economies

The economic landscape of smaller South American nations, particularly Bolivia, Paraguay, and Ecuador, is characterized by a persistent and critical challenge: the inadequate provision of financing for Small and Medium-sized Enterprises (SMEs). These enterprises, vital for employment generation, innovation, and overall economic dynamism, consistently encounter significant hurdles in accessing capital through traditional financial avenues. The traditional SME financing environment in these countries is marked by deep-rooted structural failures. Despite various financial inclusion initiatives, many SMEs struggle to obtain credit due to factors such as stringent collateral requirements that they cannot meet, interest rates that render borrowing economically unviable, and highly bureaucratic banking processes that are both time-consuming and complex.

The scale of this problem is substantial. For instance, reports indicate that approximately 70% of Bolivian SMEs face major obstacles when attempting to access bank loans. This figure, highlighted by Fundación Milenio (2024, p. 22), illustrates the severity of the financing constraint. The Confederation of Private Bolivian Entrepreneurs (CEPB, 2017) has noted that the Bolivian business sector has persistently faced such structural impediments.

The consequences of this financing gap are manifold, leading to a situation where "the lack of access to adequate financing limits investment capacity, which in turn restricts potential growth and formal employment generation" (Fundación Milenio, 2024, p. 17). This environment often fosters the growth of informal lending markets as SMEs, excluded from formal channels, seek alternative, albeit often precarious, sources of funding. The structural failures inherent in traditional SME financing mechanisms do not merely present obstacles; they often create and perpetuate a vicious cycle of financial exclusion. SMEs unable to secure formal credit are constrained in their ability to invest in expansion, adopt new technologies, or formalize their operations. This limitation tends to keep them small and potentially within the informal sector, which, in turn, makes them appear less attractive to traditional banks that typically favor larger, more established clients with transparent financial histories and substantial collateral. The system, therefore, tends to self-replicate this pattern of exclusion, stymieing broader economic development.

In response to these enduring challenges, alternative financing models have begun to emerge. A significant development in this context is Prospera, the first crowdfunding platform in Bolivia. Launched in 2024, Prospera operates primarily as a debt-based crowdfunding platform, aiming to connect "visionary investors" with local SMEs, thereby offering a new conduit for capital.

With minimum investment thresholds designed to be accessible (e.g., starting from Bs350, approximately $50), such a platform exemplifies how alternative finance can potentially bridge the gaps left by traditional institutions. Prospera is part of a nascent but growing trend in the region; for example, the Paraguayan-founded platform Nexoos also aims to address SME financing barriers by connecting companies with investors. These initiatives signal a shift, however modest at present, in the financial landscape.

The regional context for these developments includes evolving regulatory frameworks. Ecuador, for instance, has taken steps to formalize its fintech sector. The country enacted the Organic Law of Entrepreneurship and Innovation in 2020 and a specific Fintech Law in 2022, which legally enabled crowdfunding and led to the issuance of the first fintech regulations by its Central Bank in August 2023. These regulations cover various fintech service providers, including payment platforms, and notably include provisions for a regulatory sandbox, allowing for innovation under supervision. Ecuador's experience, as a smaller economy actively developing its fintech regulatory environment, offers a contemporaneous point of reference.

It demonstrates the feasibility of proactive regulatory stances even in capital markets that are not as developed as those in larger regional economies.

The same can be said for Paraguay where regulators have had an early adoption of the fintech movement by providing one of the first Fintech Laws of the region (2021). This may provide valuable lessons regarding regulatory design, implementation challenges, and early market responses for countries like Bolivia as they navigate their own paths toward financial innovation.

Sub-Chapter 2: Unpacking systemic failures and alternative responses

The central research problem addressed by this thesis is the demonstrable failure of traditional financial systems in Bolivia, Paraguay, and Ecuador to adequately meet the diverse and evolving financing needs of their SME sectors. These systems, characterized by rigidity and risk aversion towards smaller enterprises, perpetuate a significant financing gap that curtails economic potential. This study investigates how crowdfunding and similar alternative financial models are not merely attempting to fill this void but, in the process of their operation, are also systematically exposing the nature, depth, and specific characteristics of these traditional system failures. The very existence and functioning of these alternative platforms provide a contrast that makes the shortcomings of the incumbent systems more apparent.

The primary research question that guides this thesis is:

How does crowdfunding address financing gaps for SMEs in South America's smaller economies, and in what ways does it highlight the inefficiencies of traditional banks and microfinance? This central question is further explored through two key sub-questions, designed to provide a multi-faceted understanding of the phenomenon:

- What regulatory, market, and institutional factors contribute to persistent financing inefficiencies in these economies?
- How have SMEs and investors responded to crowdfunding as an alternative, the case of Prospera?

These research questions delve into a dynamic interplay. The act of "addressing" financing gaps, for example, by successfully funding an SME that was previously denied bank loans, provides the empirical evidence for "highlighting" the failures of the traditional system, such as demonstrating that conventional risk assessment models may be overly conservative or ill-suited for innovative, early-stage ventures. The responses of SMEs and investors to these new platforms are crucial data points in this regard. If SMEs actively seek out crowdfunding and investors demonstrate a willingness to fund them, it signals a clear market demand that traditional channels are failing to meet.

The specific characteristics of these SMEs (e.g., sector, age, lack of collateral) and their stated reasons for choosing crowdfunding (e.g., rejection by banks, need for speed or flexibility) then illuminate precisely *why* and *how* traditional channels are falling short.

The prevailing regulatory environment subsequently acts as a critical enabler or inhibitor of this entire dynamic, shaping the extent to which alternative finance can flourish and exert its revelatory effect.

Sub-Chapter 3: Contributions to knowledge and practice in nascent markets

This research holds significance at both academic and practical levels, particularly due to its focus on markets where crowdfunding is a novel phenomenon and where regulatory frameworks for financial technology are in their formative stages.

Academically, this thesis aims to contribute to a more nuanced understanding of the role financial technology (fintech) can play in fostering economic development, especially within emerging economies characterized by underdeveloped financial ecosystems.

By linking macro-level structural issues, such as systemic failures in traditional finance and the nature of national regulatory frameworks, with a detailed micro-level case study of the Prospera crowdfunding platform, this research aims to offer a rich, contextualized analysis. This approach allows for an examination of how broad economic theories and observed market practices intersect in the real world, particularly in the context of disruptive financial innovations.

The practical importance of this study is multifaceted. By examining a pioneering platform like Prospera in what can be described as a "virgin" market, Bolivia having had virtually no significant crowdfunding activity prior to such initiative, the research is positioned to offer actionable insights for a range of stakeholders. Policymakers and regulators can benefit from an evidence-based understanding of how crowdfunding operates in their specific national contexts, which can inform the design of effective, enabling, and appropriately risk-mitigating regulatory frameworks. Development institutions seeking to improve SME finance infrastructure and support financial innovation can gain insights into the potential and challenges of these new models. Furthermore, fintech entrepreneurs and platform developers can draw valuable lessons on navigating the unique hurdles and capitalizing on the opportunities present in these nascent markets.

The timeliness of this research is a critical aspect of its significance. As of May 2025, Bolivia has taken a significant step by introducing Supreme Decree No. 5384, its first specific regulation for fintech companies (FTCs). This decree not only formally recognizes FTCs but also introduces concepts such as a regulatory sandbox for controlled testing of innovations and acknowledges disruptive technologies like blockchain and virtual assets. This regulatory development signals a pivotal moment for Bolivia's financial sector. Concurrently, Paraguay is also reportedly developing a legislative bill to regulate crowdfunding platforms, with its Superintendency of Securities working on a draft. Ecuador, as previously noted, has already moved forward with its Fintech Law in 2022 and subsequent regulations in 2023. This regional dynamic of evolving regulatory landscapes makes the current study highly relevant to ongoing policy discussions and market development efforts.

This thesis is being conducted not merely as an observation of mature markets but as an analysis of a sector in its infancy within the specific contexts of these economies, during a crucial period of regulatory formation. The findings, therefore, have the potential for more direct and immediate influence on how these financial ecosystems evolve. Research undertaken when regulations are being drafted or are newly implemented offers a unique opportunity to provide timely evidence that can shape those regulations and early market practices, rather than analyzing systems where path dependency is already strongly established.

The "virgin market" status of these countries in terms of crowdfunding also implies a scarcity of existing local data, further enhancing the value of this study's empirical contributions. For smaller economies like Bolivia, Paraguay, or Ecuador, fintech and crowdfunding may present a "leapfrog" opportunity. These technologies could enable the development of more inclusive and efficient financial services, potentially allowing these nations to bypass some of the entrenched legacy issues that characterize more mature traditional financial systems, provided that the regulatory environment is thoughtfully designed to be conducive to innovation while safeguarding stability and consumer protection. This research can explore the early indicators of such transformative potential.

Sub-Chapter 4: Thesis Structure

To systematically address the research questions and develop its arguments, this thesis is organized into eight chapters. The current chapter provides the introduction, problem context, research questions, significance, and this overview of the thesis structure.

Chapter 2: Literature Review will delve into relevant academic literature and theoretical frameworks pertaining to SME financing, the characteristics and causes of financing gaps, and the emergence of alternative financial models. It will critically examine existing research on financial inclusion, fintech innovations, and the concept of "structural failures" within traditional financial systems, particularly in developing economies.

Chapter 3: Research Design and Methodology will detail the methodological approach adopted for this study. It will explain the mixed-methods research design, which incorporates three main phases: descriptive analysis, comparative regulatory and market analysis, and quantitative data analysis. This chapter will also describe the data sources utilized, including operational data from the Prospera platform, primary data from surveys of SMEs and investors, qualitative data from expert interviews and legal document analysis, and secondary data on SME finance indicators. Analytical techniques for each phase will be clearly outlined.

Chapter 4: Descriptive Analysis - Prospera Platform & User Behavior will present the initial set of empirical findings, focusing on the Prospera crowdfunding platform. This chapter will provide a descriptive analysis of platform performance metrics, the characteristics and behaviors of SMEs seeking funding, and the profiles and motivations of investors participating on the platform, drawing from both platform data and survey results.

Chapter 5: Comparative Regulatory and Market Analysis will shift to a qualitative examination of the broader environmental factors. This chapter will deliver a comparative analysis of the regulatory frameworks and market conditions governing SME finance and crowdfunding in Bolivia, Paraguay, and Ecuador, with reference to regional benchmarks such as Colombia, and Mexico. Insights will be drawn from legal document analysis and expert interviews.

Chapter 6: Econometric Analysis of the Determinants of SME Credit will present a quantitative analysis of the key factors influencing the supply of traditional bank financing to SMEs in the focus countries (Bolivia, Ecuador, and Paraguay). This chapter employs a panel data model to empirically test the impact of macroeconomic and sector-specific variables, namely interest rates, credit risk, and the size of the SME sector, on the volume of SME credit portfolios. The goal is to identify and quantify the key drivers of traditional credit allocation, providing an empirical foundation that complements the qualitative findings on regulatory and market barriers from Chapter 5.

Chapter 7: Discussion will synthesize the insights derived from the preceding analytical chapters (descriptive, comparative, and quantitative). It will relate these findings back to the initial research questions and the existing literature, providing an integrative interpretation of how alternative financing models address and highlight structural failures in SME financing. This chapter will also explore the broader implications of the findings for theory and practice.

Chapter 8: Conclusions and Recommendations will conclude the thesis by summarizing the key findings and their contributions. It will offer concrete, evidence-based recommendations for relevant stakeholders, particularly policymakers in Bolivia with insights into the examples of

Paraguay and Ecuador, as well as fintech entrepreneurs and development institutions, aimed at fostering a more inclusive and efficient SME financing ecosystem.

Chapter 2

Literature Review

The evolution of alternative financing models in South America shows a shift in how SMEs Enterprises access capital in these emerging economies. This literature review sums up current research regarding crowdfunding and alternative financing models in South America, with an emphasis on Bolivia, Paraguay, and Ecuador. The analysis examines multiple dimensions of this transformation in financial services, incorporating both academic research and market analysis.

Sub-Chapter 1: Structural failures in traditional SME financing

The Confederation of Private Bolivian Entrepreneurs (CEPB, 2017) provides the necessary historical context in their report "Inversión y crecimiento en Bolivia: Desencuentros recurrentes" noting that "*el sector empresarial boliviano ha enfrentado persistentemente obstáculos estructurales en el acceso al financiamiento tradicional*" [“The Bolivian business sector has persistently faced structural obstacles in accessing traditional financing.”]. This observation is reinforced by Fundación Milenio's (2024) analysis of the current economic stagnation in Bolivia in "El estancamiento económico y déficit de inversión." The report emphasizes that "l*a brecha entre la demanda de financiamiento y la oferta disponible en el sistema financiero tradicional se ha incrementado significativamente, especialmente para pequeñas y medianas empresas que buscan expandir sus operaciones*" ["the gap between financing demand and available supply in the traditional financial system has increased significantly, especially for small and medium enterprises seeking to expand their operations"] (p. 15).

The foundation's analysis argues that this limitation to capital has created a cyclic pattern where "*la falta de acceso a financiamiento adecuado limita la capacidad de inversión, lo que a su vez restringe el crecimiento potencial y la generación de empleo formal*" ["the lack of access to adequate financing limits investment capacity, which in turn restricts potential growth and formal employment generation"] (p. 17). The Fundación Milenio report also provides quantitative context to this challenge, noting that "*aproximadamente el 70% de las empresas medianas y pequeñas reportan dificultades significativas para acceder a créditos bancarios tradicionales, principalmente debido a requerimientos de garantías excesivas y procesos burocráticos complejos*" ["approximately 70% of medium and small companies report significant difficulties in accessing traditional bank credits, primarily due to excessive collateral requirements and complex bureaucratic processes"] (p. 22). This gives the necessary context for understanding why alternative financing models like crowdfunding have begun to emerge as viable alternatives in Latin America and why it is needed for the Bolivian market.

These challenges are not unique to Bolivia. In neighboring Paraguay, SMEs also face a significant formal finance gap, estimated between $3.9 billion and $4 billion, representing about 14% of its GDP (International Finance Corporation [IFC], 2023c ; IFC, 2022). Reports suggest that approximately 20% of paraguayan SMEs lack adequate access to financial products (IFC, 2022), with women-led SMEs facing a particular finance gap of around $350 million (IFC, 2023).

Common obstacles include difficulties in meeting collateral requirements, insufficient credit history, high transaction costs for lenders, and complex bureaucratic processes (Abraham & Schmukler, 2017; Sánchez-Báez et al., 2023; World Bank Group, 2021). The COVID-19 pandemic further exacerbated these issues, particularly impacting supply chains and SMEs' ability to meet financial commitments (Sánchez-Báez et al., 2023).

Similarly, Ecuador confronts a substantial SME financing gap, estimated to be between $15.6 billion (15% of GDP) and $17.9 billion (18% of GDP) (IFC, 2019; U.S. International Development Finance Corporation, n.d.; IFC, 2025). Over 30% of Ecuadorian SMEs report access to finance as a primary constraint (IFC, 2019), and loans to SMEs represent only a small fraction (3.6%) of the nation's GDP (IFC, 2019). These issues are compounded by a lack of liquidity, stringent lending criteria, and challenges in creditworthiness assessment by financial institutions (Abraham & Schmukler, 2017; Castillo-Vergara et al., 2023; Pérez-Campoverde et al., 2025; World Bank Group, 2021). The Inter-American Development Bank (IDB) has also highlighted the difficulties SMEs in Latin America and the Caribbean face in accessing credit, even before global crises, due to varied supply and demand issues (IDB, 2020). The World Bank notes that improving credit infrastructure, such as credit reporting systems and collateral registries, can lead to greater SME access to finance, with some projects reducing collateral requirements significantly.

The IDB study on SME financing during COVID-19 reveals that despite SMEs representing over 90% of businesses in Latin America, they face disproportionate barriers to accessing traditional financing (IDB, 2023). The report states that "formal financial institutions' risk assessment models often fail to capture the true creditworthiness of SMEs in emerging markets" (IDB, 2023a, p. 45).

The World Bank's analysis of financing solutions for SMEs in Latin America identifies several key barriers:

1. Information asymmetry between lenders and SMEs.

2. Collateral requirements that exceed what SMEs can afford.

3. Limited credit history documentation.

4. There is a high transaction cost relative to the loan sizes (World Bank Group, 2023).

The persistence of such a large financing gap across the region, estimated by some sources to be around $1.8 trillion (IDB, n.d.), signals systemic inefficiencies and structural failures within traditional financial systems.

Sub-Chapter 2: Alternative Financing models for SMEs

The emergence of non-traditional financing avenues, particularly crowdfunding, peer-to-peer (P2P) lending, and other fintech solutions, offers new channels for capital.

These models often leverage technology to lower transaction costs, improve risk assessment through alternative data, and democratize investment (Owens & Wilhelm, 2017). The Organization for Economic Cooperation and Development (OECD, 2018) describes crowdfunding as a tool to "overcome financial constraints" for innovative SMEs by tapping into a "crowd" of investors. Different crowdfunding models, such as debt, equity, and reward-based, cater to various SME needs and investor appetites.

These alternatives often provide advantages like increased speed, greater flexibility, and the potential for inclusion of previously unbanked or underbanked individuals and businesses. However, they also present risks, including regulatory uncertainties in nascent markets and the potential for fraud if not properly overseen (CEPAL, 2023). Theoretically, crowdfunding can be viewed as a "disruptive mechanism" in finance, capable of both filling existing gaps and, by its very success, revealing the inefficiencies inherent in traditional lending practices.

Sub-Chapter 3: Crowdfunding in smaller South American economies

Unlike larger Latin American economies such as Brazil, Mexico, or Colombia, which have more developed fintech ecosystems, countries like Bolivia, Paraguay, and Ecuador have, until recently, had virtually no significant crowdfunding activity. This difference could be attributed to smaller investor bases, less developed capital markets, and the absence of clear regulatory frameworks.

In Bolivia, Prospera has emerged as the first verified debt crowdfunding platform, connecting investors with startups and SMEs (The Crowd Space). Other platforms like UFund (donation-based) also operate in the country, indicating a nascent but growing interest in alternative finance. Paraguay's fintech ecosystem is also in its early stages (Alliance for Financial Inclusion [AFI], 2025; Bank for International Settlements, 2020).

While specific crowdfunding regulation is still under development, with the Superintendency of Securities (SV) drafting a bill, platforms like Nexoos (collective financing for SMEs) have been operating, connecting companies with investors for loans (Arrellaga, n.d. ;

ResearchGate, 2020). Nexoos aims to provide a formalization channel for SMEs struggling to access traditional bank financing. Other alternative payment solutions like PaysafeCard have also launched in Paraguay, catering to individuals without bank accounts or credit cards (Paysafe, 2020).

Ecuador has taken more concrete steps by enacting the Organic Law of Entrepreneurship and Innovation in 2020 and a specific Fintech Law in 2022 (Guamán Aguiar & Saltos Zúñiga, 2023; Iurenovum, 2024). These laws legally enabled crowdfunding, and the Central Bank of Ecuador (BCE) issued the first fintech regulations in August 2023, covering payment service providers and establishing provisions for a regulatory sandbox (VIXIO Regulatory Intelligence, 2023; Legal500, 2024).

Platforms like Crowdfunding Ecuador, focusing on real estate micro-investments, are now operating under these new regulations (Crowdfunding Ecuador, n.d.). The development of these alternative financing mechanisms in such "virgin markets" underscores their potential significance in addressing long-standing financial exclusion.

Sub-Chapter 4: Regulatory and institutional factors

The regulatory landscape for alternative financing in Latin America is a complex tapestry of varied approaches, with significant differences between countries. The IDB analysis of alternative finance regulation in Latin America and the Caribbean (IDB, 2023) highlights this disparity, noting that "The development of crowdfunding regulation in Latin America has followed an uneven path, with some jurisdictions taking a proactive approach to creating enabling frameworks, while others maintain more restrictive regulatory environments" (p. 28). The report specifically observes that countries with more flexible, risk-based regulations have seen "significantly higher growth rates in alternative financing volumes, particularly in the SME sector" (IDB, 2023, p. 45).

Bolivia's traditional approach, rooted in the "Ley de Mercado de Valores de Bolivia" (Banco Central de Bolivia, 2016), maintained strict oversight, requiring financial intermediation to occur through authorized entities (Article 15). This posed barriers for innovative models.

However, a significant shift occurred with Supreme Decree No. 5384 in May 2025, Bolivia's first specific regulation for Financial Technology Companies (FTCs). This decree recognizes FTCs, introduces a regulatory sandbox, and acknowledges disruptive technologies like blockchain and virtual assets (Dentons, 2025a; This Week in Fintech, 2025).

Paraguay, in contrast, has been working towards a more progressive stance. While its "Ley Fintech Paraguay" (Cámara de Senadores de Paraguay, 2021) signaled an intent to foster innovation, specific crowdfunding regulations are still being drafted by the Superintendency of Securities (SV) (Vouga Abogados, 2023).

The proposed bill aims to regulate crowdfunding and collective lending platforms, establishing the SV as the enforcing authority and requiring platform registration. The IDB (2023) had previously noted Paraguay's potential for a "risk-based regulatory framework that scales supervisory requirements according to platform size and complexity" (p. 87), contrasting it with Bolivia's historically more uniform approach.

Ecuador has moved more decisively with its Fintech Law in 2022 and the Central Bank's subsequent regulations in August 2023 (VIXIO Regulatory Intelligence, 2023; AFI, 2025; Iurenovum, 2024). These regulations apply to various payment service providers, require local incorporation and BCE authorization, and importantly, establish a regulatory sandbox for new entrants to test innovations for up to 24 months.

These national approaches can be contrasted with more established fintech regulatory frameworks in the region. Mexico's Fintech Law of 2018 was a pioneering comprehensive regulation in Latin America, creating licensing schemes for crowdfunding institutions (Instituciones de Financiamiento Colectivo - IFCs) and electronic payment fund institutions (IFPEs) (Greenberg Traurig, 2018; Chambers and Partners, 2024). Colombia implemented specific crowdfunding regulations through Decree 1357 of 2018, allowing equity and debt crowdfunding under the supervision of the Financial Superintendence, though with certain limitations on amounts raised and invested (Brigard Urrutia, 2018; Legalink, 2019).

Peru also moved to regulate crowdfunding via Emergency Decree No. 013-2020, covering equity, debt-securities crowdfunding, and crowdlending, with the Superintendence of Securities Market (SSM) overseeing authorized platforms (CMS Grau, 2020; Chambers and Partners, 2024b). The IDB (2023) concludes that "successful implementation of crowdfunding platforms in emerging markets requires regulatory frameworks that explicitly recognize and accommodate alternative financing models while maintaining appropriate investor protection measures" (p. 156). Beyond formal regulation, institutional factors such as trust in financial systems, levels of financial literacy, and digital penetration also significantly influence the uptake and success of new financing models like crowdfunding (CEPAL, 2023).

Sub-Chapter 5: Current market dynamics and growth potential

Recent market analyses show an important evolution in alternative financing models. According to El Economista (2024), "*el crowdfunding en América Latina mantiene un crecimiento sostenido del 15% anual, a pesar del contexto de altas tasas de interés*" ["crowdfunding in Latin America maintains sustained growth of 15% annually, despite the high interest rate context"]. This growth trend is supported by Infobae's (2024) analysis of crowdfunding's expanding role in financial inclusion. The IDC Online (2024) research emphasizes the importance of developing secondary markets for crowdfunding instruments, stating that "*la maduración del mercado requiere mecanismos de liquidez secundaria para garantizar la sostenibilidad del modelo*" ["market maturation requires secondary liquidity mechanisms to ensure model sustainability"].

Sub-Chapter 6: Theoretical foundations and economic impact

The theoretical implications of crowdfunding and alternative financing models in emerging markets are stated in many academic works that contribute to understanding both the economic mechanisms and valuation challenges in these markets. Agrawal, Catalini, and Goldfarb (2013) provide essential theory in "Some Simple Economics of Crowdfunding," offering perspectives into how crowdfunding platforms can succeed in emerging markets. Their research specifically notes that "the Internet has facilitated efficient matching between geographically dispersed agents with complementary interests", and that "crowdfunding platforms can reduce market frictions by facilitating incremental investment, which enables intermediate capital formation".

This analysis is relevant for the case of a market like Bolivia, where the authors' observation that "crowdfunding reduces the cost of bringing products to market by allowing entrepreneurs to collect information about demand before engaging in large-scale production" becomes especially relevant for SMEs with limited access to capital.

Fernández's (2019) comprehensive work "Valuation and Common Sense" provides useful takeaways of valuation methodologies for emerging market financial instruments. His analysis is useful to understand how to value alternative financing models in developing economies, something imperative for Prospera's operations. Fernández emphasizes that "*la valoración de empresas en mercados emergentes requiere consideraciones adicionales debido a la mayor volatilidad y riesgo país*" ["company valuation in emerging markets requires additional considerations due to higher volatility and country risk"].

Fernández tips are particularly useful when considering the valuation of projects seeking funding through crowdfunding platforms in less developed financial ecosystems like Bolivia and Paraguay. Both frameworks provide great insights for understanding how alternative financing platforms can succeed in emerging markets while appropriately handling risk and value creation. Again, these perspectives are quite useful when considering Prospera's role in Bolivia's developing financial ecosystem, where both the economic mechanisms described by Agrawal et al. and the valuation considerations outlined by Fernández must definitely be considered and implemented.

Sub-Chapter 7: Market implementation and its challenges

The Economic Commission for Latin America and the Caribbean (CEPAL) report, "Regulación de la industria de financiamiento participativo (crowdfunding) en las Américas," provides more insights into the operational and regulatory challenges facing crowdfunding platforms in Latin America (CEPAL, 2023). The report emphasizes that successful implementation requires an approach that balances multiple market considerations. The report specifically identifies that "*La implementación exitosa de plataformas de financiamiento participativo requiere un equilibrio entre la innovación financiera y la protección del inversor*" [“The successful implementation of crowdfunding platforms requires a balance between financial innovation and investor protection.”]. This observation is developed again on their analysis of market dynamics, where the report states that "*el desarrollo sostenible del financiamiento participativo depende de la capacidad de las plataformas para generar confianza en el mercado mientras mantienen costos operativos manejables*" ["the sustainable development of participatory financing depends on platforms' ability to generate market trust while maintaining manageable operational costs"].

The CEPAL analysis shows the importance of market infrastructure development, stating that "*la maduración del mercado de financiamiento participativo requiere el desarrollo paralelo de servicios complementarios, incluyendo sistemas de scoring crediticio adaptados, mecanismos de custodia de fondos, y sistemas de gestión de riesgo específicos para este tipo de financiamiento*" ["the maturation of the participatory financing market requires the parallel development of complementary services, including adapted credit scoring systems, fund custody mechanisms, and risk management systems specific to this type of financing"].

Regarding operational challenges, the report highlights that "*las plataformas de financiamiento participativo en mercados emergentes enfrentan desafíos únicos en términos de educación del mercado, desarrollo de capacidades técnicas, y establecimiento de estándares operativos*" ["participatory financing platforms in emerging markets face unique challenges in terms of market education, technical capacity development, and establishment of operational standards"] (CEPAL, 2023, p. 73). This observation has a lot of relevance in the case of Bolivia and Paraguay, where financial literacy levels and technological adoption rates present important implementation challenges.

The report also addresses the role of market oversight, noting that "*el monitoreo efectivo del mercado requiere el desarrollo de nuevas capacidades regulatorias y marcos de supervisión adaptados a la naturaleza digital y descentralizada del financiamiento participativo*" ["effective market monitoring requires the development of new regulatory capabilities and supervision frameworks adapted to the digital and decentralized nature of participatory financing"] (CEPAL, 2023, p. 89).

This CEPAL report provides context for understanding the challenges that platforms like Prospera face in developing markets. The analysis shows that success requires not only addressing regulatory compliance but also building robust operational models that can generate and maintain market trust while managing costs effectively.

Sub-Chapter 8: Future outlook and scalability

The evolution and success of established crowdfunding platforms in Latin America provides useful lessons for emerging markets like Bolivia and Paraguay. El Economista's (2024) coverage of Snowball's expansion shows a case study in successful platform development and regulatory collaboration in the region that could be useful to analyze. According to El Economista (2024), "*Snowball ha demostrado que la colaboración estrecha entre plataformas de* *financiamiento colectivo y reguladores puede crear un marco operativo que beneficie a todo el ecosistema financiero*" [“Snowball has demonstrated that close collaboration between crowdfunding platforms and regulators can create an operational framework that benefits the entire financial ecosystem.”]. The platform's experience in Mexico has been crucial for the development of Crowdfunding laws because it helped shape the country's regulatory framework for crowdfunding. The platform's success is evidenced by its significant market penetration and growth metrics. The platform has facilitated more than 200 million dollars in financing for Mexican SMEs, with an 89% success rate in fundraising campaigns (El Economista, 2024). This achievement shows the potential scale that well-executed crowdfunding platforms can achieve in Latin American markets.

Furthermore, Snowball's planned expansion into the United States, as detailed in El Economista's May 2024 report (2024), suggests that platforms originating in Latin America can achieve international competitiveness.

The report indicates that "*la expansión de Snowball hacia el mercado estadounidense representa un hito significativo para el sector fintech latinoamericano, demostrando la madurez y sofisticación alcanzada por las plataformas de la región*" [“Snowball 's expansion into the U.S. market represents a significant milestone for the Latin American fintech sector, demonstrating the maturity and sophistication achieved by platforms in the region.”]. This success story offers valuable lessons for markets like Bolivia, Paraguay, and Ecuador though there are important contextual differences that need to be considered. The primary challenge is to adapt a successful model like the one from Snowball in a market with less developed financial infrastructure. The example of Snowball's experience can help guide the trajectory of Prospera as it develops operations in less established markets. The case of Snowball shows that success in crowdfunding requires not only the right operational model but also to collaborate with regulatory authorities. There are many opportunities and challenges for alternative financing models in South America. The success of Prospera depends on its ability to operate in a complex regulatory environment while at the same time being able to satisfy the needs of the market. The research made thus far shows the importance of carefully following the regulation of both countries and adapting its model to it. As well as ensuring enough transactions in the platform which would only be achieved by building trust among both investors and SMEs. It is also important to mention that further investigation will be needed regarding upcoming challenges concerning macroeconomic conditions which have been quite volatile, especially in Bolivia.

Chapter 3

Research Design and Methodology

It is imperative to detail the methodology employed in this thesis and to explain how the research is structured across three main phases: descriptive analysis of platform metrics, comparative regulatory/market analysis, and econometric analysis. The study aims to justify the adoption of a mixed-methods approach, which is essential for comprehensively addressing the multifaceted research questions. Furthermore, it is also important to describe the various data sources utilized, outline the procedures for data collection (including surveys and expert interviews), and specify the analytical techniques applied to interpret the gathered information. By clearly delineating both quantitative and qualitative methods, in this chapter I will aim to establish the scope of the research design, ensuring transparency in how the findings and conclusions of this study are derived.

Sub-Chapter 1: Research approach and phases

The overall research strategy for this thesis is a mixed-methods, phased approach. This design is chosen for its capacity to provide a holistic understanding of the complex interplay between alternative financing models, traditional financial systems, and the socio-economic and regulatory contexts in smaller Latin American economies. The study integrates quantitative analysis, derived from crowdfunding platform operational data, SME financing indicators, and primary survey data, with qualitative insights obtained from in-depth regulatory analysis and expert interviews.

This combination allows for both the measurement of observable phenomena and the exploration of underlying reasons, motivations, and contextual nuances. The research is structured into three key phases, each designed to build upon the previous and contribute to a comprehensive answer to the central research questions:

1. **Descriptive Analysis of Prospera's Platform Data & Surveys:** This initial phase focuses on understanding the operational dynamics of a nascent crowdfunding market and the behaviors and perceptions of its key participants (SMEs and investors) through the study case of Prospera's crowdfunding platform. The rationale is to establish a baseline understanding of how crowdfunding functions in the specific context of Bolivia, identifying who uses this platform and for what reasons. This phase directly addresses research sub-questions related to how SMEs and investors have responded to crowdfunding as an alternative.
2. **Comparative Regulatory/Market Analysis:** This second phase delves into the qualitative aspects of the financial ecosystem, examining the legal frameworks, regulatory environments, and broader market conditions in the focus countries (Bolivia, Paraguay, and Ecuador) and comparing them against regional benchmarks (Colombia, and Mexico). The purpose is to identify the institutional and policy factors that may contribute to persistent financing inefficiencies or, conversely, enable the growth of alternative financing solutions. This phase is crucial for understanding the "What regulatory, market, and institutional factors contribute to persistent financing inefficiencies?" aspect of the research.

3. **Econometric Analysis:** The third phase employs quantitative techniques to analyze the determinants of traditional bank financing for SMEs in Bolivia, Ecuador, and Paraguay. Using a panel data model with data spanning from 2002 to 2025, this analysis empirically tests how factors such as interest rates, credit risk (non-performing loans), and the overall size of the SME sector impact the volume of credit supplied by the banking system. The rationale is to provide a data-driven assessment of the key drivers of the traditional credit supply, establishing a quantitative baseline that helps explain the structural constraints and financing patterns discussed in the qualitative chapters. This econometric evidence complements the regulatory and market analysis by formally modeling the behavior of the incumbent financial system.

This phased, mixed-methods approach ensures a comprehensive investigation, allowing for the triangulation of findings from different data sources and analytical techniques, thereby enhancing the robustness and validity of the conclusions.

Sub-Chapter 2: Data sources and collection

The data underpinning this study are drawn from a variety of primary and secondary sources, each selected to provide specific insights relevant to the research phases and questions.

Platform Operational Data

Detailed operational metrics have been collected from the Prospera crowdfunding platform. This primary dataset includes records on:

- Projects listed on the platform

- Funding amounts sought and achieved
- Campaign success rates (percentage of projects reaching their funding target)
- Time taken to reach funding goals
- Number of investors per project and overall investor counts
- Average investment sizes
- Sectoral distribution of funded projects
- Default rates and risk metrics associated with funded SMEs
- Return on investment (ROI) calculations for completed projects

This data covers Prospera's operations in Bolivia. Bolivia being the primary focus for Prospera’s platform operations data due to its pioneering status and data accessibility.

Survey Data

Primary data on the experiences, preferences, and perceptions of SMEs and investors were gathered through structured surveys conducted specifically for this research.

- **Investor Survey:** Administered to over 1,000 potential investors in Bolivia. This survey collected data on investor demographics, prior investment experience, knowledge of crowdfunding, motivations for investing (e.g., supporting local businesses, portfolio diversification, seeking higher returns), risk appetite, preferred investment amounts and frequency, and platform/digital preferences.
- **SME Survey:** Conducted with 30 SMEs in Bolivia. This survey gathered information on SME demographics (size, age, sector, revenue), financing needs (amount required, purpose of loan), acceptable interest rates, preferred loan terms, previous experiences with

traditional business loans, main difficulties encountered in accessing traditional credit (e.g., high-interest rates, collateral requirements, bureaucracy), familiarity with crowdfunding, and willingness to consider it as a financing alternative.

The surveys utilized multiple-choice questions. The sampling strategy for the investor survey aimed for broad reach across various socio-economic backgrounds in Bolivia, while the SME survey targeted a diverse group of small and medium-sized enterprises. These surveys provide crucial ground-level perspectives that complement the platform's operational data.

Interviews and Expert Input

Qualitative data has been enriched through in-depth, semi-structured interviews with key experts and stakeholders.

- **Expert Interviews:** Pivotal interviews were conducted: one with a fintech regulation expert from Colombia and another with an expert from Mexico, another with a banking and fintech expert in Paraguay, one with the president of The Private Banks Association of Bolivia (ASOBAN) and one with an investment market regulation expert in Bolivia. Mexico and Colombia were chosen as benchmarks due to their more advanced regulatory environments for fintech and established crowdfunding markets, offering valuable comparative perspectives on policy development, market challenges, and success factors. So we can highlight its differences with less developed economies and regulations such as Bolivia, Paraguay, and Ecuador.
- **Policy Documents and Legal Texts:** Analysis of relevant policy documents, legislative acts, and regulatory guidelines forms a core part of the qualitative data. This includes, but

is not limited to, Bolivia’s Supreme Decree No. 5384 (the new fintech decree) , Law 393 (Financial Services Law in Bolivia), Law 1834 (Investment Markets Law), Paraguay’s existing fintech regulation, Ecuador existing fintech law, and the fintech laws and crowdfunding decrees from benchmark countries such as Colombia, and Mexico.

Secondary Data for Econometric Analysis

To perform the quantitative analysis, a panel dataset was constructed using secondary data from official national sources for the three focus countries: Bolivia, Ecuador, and Paraguay. The data, covering the annual period from 2002 to 2025, was compiled directly from the respective Central Banks, Financial Supervisory Authorities (such as ASFI and the Superintendencies of Banks), National Institutes of Statistics, and Commerce Registries.

This targeted data collection was essential for building the econometric model. The key variables gathered for the analysis include:

- **SME Credit Portfolio:** Total loan volumes directed to the SME sector.
- **Active Interest Rate:** Lending rates applied to the SME credit portfolio.
- **SME Non-Performing Loan (NPL) Index:** Delinquency rates specific to the SME loan segment, used as a proxy for credit risk.
- **Number of Active SMEs:** The total count of formally registered SMEs, representing the scale of the sector.
- **COVID-19 Dummy Variable:** A binary variable to control for the exogenous shock of the pandemic in 2020.

All monetary values were converted to U.S. dollars to ensure consistency and comparability across the panel.

Sub-Chapter 3: Analytical methods

The data collected through the methods described above will be analyzed using a combination of descriptive statistics from the platform, qualitative comparative analysis, and data analytics techniques, corresponding to the three research phases.

Descriptive Statistical Analysis

Data from the Prospera platform and the survey responses will be analyzed using descriptive statistics and data visualization techniques. This will involve:

- Calculation of key variables such as funding amounts, investment sizes, campaign durations, and survey responses.

Qualitative Analysis (Comparative Case Analysis)

The qualitative data, primarily from regulatory documents and expert interview transcripts, will be analyzed using a comparative case study approach.

- **Regulatory Analysis:** The legal and regulatory frameworks for SME finance and crowdfunding in Bolivia, Paraguay, and Ecuador’s will be systematically analyzed and contrasted with those in the benchmark countries (Colombia, Mexico). This involves a detailed review of laws, decrees, and policy statements to identify enabling provisions, restrictive clauses, regulatory gaps, and institutional enforcement capacities.

- **Interview Analysis:** Transcripts from expert interviews will be subjected to content analysis. This process will identify recurring themes, key arguments, and critical insights related to regulatory hurdles, investor protection issues, market development challenges, and the perceived effectiveness of different policy approaches.

This comparative qualitative analysis will help to explain the "why" and "how" behind the observed SME financing patterns and the emergence (or lack thereof) of alternative financing solutions.

Econometric Modeling Technique

As said previously, to quantitatively analyze the determinants of traditional SME financing in the focus countries, this study employs a panel data regression model. This econometric technique was selected as the most appropriate method for the research question and the available data. The panel data approach, which combines cross-sectional data (for Bolivia, Ecuador, and Paraguay) with time-series data (from 2002 to 2025), offers several distinct advantages for this analysis:

1. **Statistical Power:** By pooling data from three countries over more than two decades, the model benefits from a large number of observations, leading to more precise and reliable estimates.
2. **Control for Unobserved Heterogeneity:** The model can control for time-invariant, country-specific factors that are difficult to measure, such as institutional quality, regulatory culture, or historical economic structures. By using a fixed-effects (FE)

specification, the analysis effectively isolates the impact of the independent variables from these unique national characteristics.

3. **Analysis of Dynamic Relationships:** The panel structure allows for the examination of how the SME credit portfolio has evolved over time in response to changes in key economic and financial variables.

The econometric workflow proceeded as follows:

- **Model Specification:** A fixed-effects panel data model was specified to estimate the relationship between the SME credit portfolio and its primary determinants. The general form of the model is presented in Chapter 6.
- **Diagnostic Testing:** A comprehensive set of diagnostic tests was conducted to ensure the statistical validity of the model and its underlying assumptions. This included:
    - **Unit Root Tests (e.g., Levin-Lin-Chu, Im-Pesaran-Shin):** To check for the stationarity of the variables and avoid spurious regressions.
    - **Cointegration Tests (e.g., Pedroni):** To determine if a stable long-run relationship exists between the variables.
    - **Model Selection Tests (e.g., Hausman Test):** To formally choose between a fixed-effects and a random-effects specification. The results of this test decisively supported the use of the fixed-effects model.
    - **Post-Estimation Diagnostics:** Tests for multicollinearity, heteroskedasticity, and autocorrelation were performed to validate the final model results.

This rigorous panel data methodology provides a robust quantitative assessment of the factors driving the traditional SME credit supply, creating an empirical foundation that complements and reinforces the qualitative analysis.

Sub-Chapter 4: Reliability, validity, and limitations

Consistency across different sources and methods will lend greater confidence to the conclusions.

- **Data Cross-Checking:** Survey data will be cross-checked against platform data where possible. Secondary data will be sourced from reputable institutions known for their data collection standards.
- **Established Instruments:** Survey questions are based on established practices in financial behavior and SME finance research, adapted for local context. Interview protocols are semi-structured to ensure key topics are covered consistently while allowing for emergent themes.
- **Expert Review:** Insights from expert interviews provide a form of external validation for interpretations of regulatory environments and market dynamics.

Limitations:

- **Sample Sizes and Generalizability:** While the investor survey in Bolivia has a large sample (over 1,000), the SME survey is smaller (30 SMEs). This may limit the statistical generalizability of some survey findings to the entire SME or investor population in this country.

- **Platform-Specific Data:** The primary platform data is from Prospera, which, while pioneering, represents a single case study in its early stages of operation. Findings related to platform dynamics might not be generalizable to all crowdfunding platforms or more mature markets. The data may also not capture unsuccessful funding attempts that occur outside the platform or projects that did not meet listing criteria.

- **Limitations of the Econometric Analysis:** While the panel data model provides a robust analysis of the traditional credit market, it has inherent limitations. The analysis is constrained by the specific set of variables for which consistent, long-term data was available across all three countries (Bolivia, Ecuador, and Paraguay). Key factors that could influence SME credit, such as collateral requirements or detailed firm-level characteristics, could not be included due to a lack of harmonized data. Furthermore, while official sources were used, potential inconsistencies in data reporting standards across countries and over the 23-year period could introduce measurement errors. Therefore, the econometric findings represent the best-fit model given the available data but should be interpreted as highlighting key systemic relationships rather than a complete causal explanation.
- **Nascent Market Dynamics:** Crowdfunding is a relatively new phenomenon in these markets. Market behaviors and regulatory landscapes are likely to evolve rapidly, meaning that these findings reflect a specific point in time.
- **Potential Biases:** Self-selection bias may be present in survey respondents. SMEs and investors choosing to participate in crowdfunding or respond to surveys may have different characteristics or motivations than those who do not.

These limitations will be explicitly acknowledged and discussed in Chapter 7 when interpreting the results and drawing conclusions, ensuring a balanced and critical assessment of the study's contributions and constraints.

Chapter 4

Descriptive Analysis: Prospera Platform & User Behavior

As the central case study of this thesis, Prospera offers a unique window into the dynamics of SME financing in a nascent market like Bolivia. The goal now is to illustrate how the platform operates, how SMEs and investors are engaging with it, and what these interactions reveal about the specific gaps in traditional finance that crowdfunding aims to fill. By breaking down the analysis into platform performance metrics, SME profiles, investor buyer personas, and survey insights, the objective is to lay the empirical groundwork for understanding how alternative finance functions not just as a funding mechanism, but as a mirror reflecting the structural failures of the incumbent financial system.

Sub-Chapter 1: Case Overview of Prospera

Prospera stands as the primary case study for this thesis, representing a pioneering effort in Bolivia's financial landscape. Launched in June 2024, it is the first crowdfunding platform to operate in this market, born from the direct realization of two concurrent and deeply entrenched market failures: a severe financing gap for the nation's SMEs and a parallel investment opportunity gap for Bolivian individuals seeking viable returns outside of traditional, low-yield banking products. As a co-founder of the platform, I identified these gaps as not just challenges but as a significant opportunity to create a new financial marketplace.

The platform operates on a debt-based crowdfunding model, where loans are often collateralized with debt convertible to equity, providing a layer of security for investors while offering flexibility to SMEs. To democratize access to investment, the minimum ticket size is kept low, starting from as little as Bs350 (approximately $50), although the minimum varies by project. Prospera's core mission is to connect "visionary investors" with local SMEs, creating a symbiotic ecosystem where capital flows to productive enterprises and investors earn competitive returns. Crucially, Prospera was structured as a marketplace, not an investment fund. This strategic decision was made to operate within Bolivia's existing legal framework and avoid the stringent regulations governing financial intermediation under the authority of the Financial System Supervisory Authority (ASFI).

In this model, Prospera facilitates the connection between two independent parties: the SME and the investor, without directly managing the funds as a financial intermediary would. The platform's operational model includes a rigorous risk assessment process managed by its Finance and Econometric Department.

This team conducts a comprehensive analysis of each SME, incorporating econometric modeling, financial ratio analysis, and an integral risk assessment that considers non-quantifiable factors such as regulatory risk, market characteristics, and the macroeconomic environment. Based on this assessment, two key interest rates are determined:

1. **The Company Interest Rate:** The rate the SME pays, commensurate with its assessed risk profile.
2. **The Investor Return Rate:** The rate the investor receives, calculated using established financial models like the Capital Asset Pricing Model (CAPM) and Weighted Average Cost of Capital (WACC). This calculation incorporates relevant risk premiums, including Bolivia's country risk premium, an equity risk premium, a size premium for the SME, and a beta derived from the covariance of the firm's monthly profit margins relative to the

weighted average returns of equity markets in five comparable regional economies (Peru, Colombia, Paraguay, Uruguay, and Ecuador).

The spread between these two rates constitutes Prospera's commission, which is charged to the SME for the use of the platform. Additionally, a small 0.5% fee is charged to investors upon the successful completion and repayment of an investment.

Since its launch, Prospera has demonstrated tangible traction. As of June 2025, the platform has successfully funded seven projects and has one ongoing, channeling a total of Bs270,000 to five different SMEs.

These businesses span various sectors, including mining export (Amexpo), retail (MaxiKing, CincoMarket), food services (Taquería Monterrey), and imports (MHW3 Bomber), showcasing the platform's capacity to serve a diverse range of economic activities. This initial performance establishes Prospera's significance as a functioning and impactful alternative financing channel in Bolivia.

Sub-Chapter 2: Platform performance metrics

The operational data from Prospera provides a quantitative snapshot of its performance and usage patterns, offering early evidence of its role in the Bolivian financial ecosystem.

- **Funding Volume and Success Rate:** To date, Prospera has facilitated Bs270,000 in funding across seven completed projects for five SMEs. Of the seven campaigns that have concluded, five were fully funded, representing a success rate of approximately 71%. This rate is a strong indicator of the platform's ability to match investor capital with SME needs, especially for a new platform in a virgin market.

- **Campaign Duration:** The time required to fund projects varies significantly, reflecting different levels of investor appeal and project complexity. Some projects were funded with remarkable speed; for instance, CincoMarket was funded in just one week, and MHW3 Bomber in 17 days. The three projects for Amexpo were funded in under two weeks or were even pre-funded before the official campaign launch, indicating strong demand from selected investors. In contrast, the first phase for MaxiKing, a larger campaign, took over two months to be fully funded, illustrating the challenge of raising larger amounts from a broad crowd. This speed, even for longer campaigns, compares favorably to the traditional bank loan approval process in Bolivia, which averages one to two months and often ends in rejection.

- **Investor Participation:** The platform has attracted a diverse range of investors. While some projects were funded by a single "big fish" investor (e.g., CincoMarket, MHW3 Bomber), others successfully drew a crowd. MaxiKing's first phase attracted 26 investors, and its second phase had 16. This dual pattern suggests Prospera serves both as a vehicle for high-net-worth individuals seeking direct SME investments and as a tool for democratizing investment for smaller retail participants. The average investment value per investor is approximately Bs4,355 (around $626), a figure skewed upward by the larger investments.
- **Comparative Financial Returns:** One of Prospera's most compelling metrics is the return it offers to investors. The average yearly return across all funded projects is 16.35%. This

figure is highly competitive and stands in stark contrast to traditional investment vehicles available in Bolivia. The average yield on a Fixed-Term Deposit (DPF), the most common investment instrument for savers, is around 5%, with the most attractive rates from specialized banks reaching approximately 8%. Prospera's returns are thus more than double to triple what is offered by the traditional banking system, providing a powerful incentive for individuals to move their capital from passive savings to active investment in the local economy.

These metrics collectively demonstrate that Prospera is not only operational but is performing efficiently, channeling funds to SMEs at competitive speeds and offering returns that significantly outperform traditional alternatives, thereby creating a compelling value proposition for both sides of its marketplace.

Sub-Chapter 3: SME profile and behavior on the platform

An analysis of the SMEs utilizing Prospera, informed by both platform data and the pre-launch survey of 30 businesses, reveals a clear profile of the companies being excluded by the traditional financial system. The businesses turning to crowdfunding are predominantly micro (37%), small (47%), and medium-sized (17%) enterprises. Many are relatively young, with 40% being 1-3 years old and another 33% being 3-5 years old. This demographic is often considered high-risk by traditional banks, which prefer established companies with long financial track records. The sectors represented on the platform, retail, services, imports, and mining/export, reflect a broad segment of the Bolivian economy.

The funding needs expressed by these SMEs align with typical growth and operational challenges. The primary purpose for seeking loans is for working capital (43%) and business expansion (30%), with most requiring between $5,000 and $20,000. These are relatively small sums that are often uneconomical for large banks to process due to high transaction costs relative to the loan size, another structural failure of the traditional system. The most telling data comes from why these SMEs are turning to an alternative like Prospera in the first place. The survey confirms that the primary barriers to accessing traditional credit are high-interest rates (cited by 37%), prohibitive collateral requirements (27%), and excessive bureaucratic procedures (23%). Strikingly, 27% of the SMEs surveyed had never taken a loan before, indicating that Prospera is serving as an entry point into formal financing for businesses that were previously unbankable.

Based on this data, we can construct archetypal SME "buyer personas" that humanize the financing gap problem. These buyer personas, while based on hypothetical companies derived from aggregated survey data, represent the real-world profiles of businesses driven to crowdfunding:

- **The Tech-Driven Startup ("DeliExpand" or "InvenTechGrow"):** This represents a young company, 1-3 years old, in a sector like logistics or software. It has a strong business model and growth potential but lacks the tangible assets (like real estate or heavy machinery) that banks demand as collateral. Its short operational history makes it difficult for traditional credit risk models to assess. For this buyer persona, crowdfunding is a lifeline, allowing it to raise capital based on its business plan and market traction rather than its fixed assets.

- **The Established SME Seeking Flexible Growth Capital ("Hazte Taco"):** This buyer persona is a successful, established business (3-5+ years old) like a restaurant chain with steady revenue. However, when it seeks capital for expansion, it finds the bank's terms, high collateral requirements and rigid repayment schedules, unfavorable and cumbersome. Crowdfunding offers a faster, more flexible alternative that can also serve as a marketing tool by engaging its loyal customer base as investors.
- **The Niche Exporter ("AndesMin"):** This represents a medium-sized business in a sector like mining, which traditional banks may view as volatile or too specialized. Despite being a significant employer and revenue generator, it struggles to secure financing for modernization or operational efficiency. Debt crowdfunding provides a direct channel to investors who understand the sector's potential and are willing to back it for a competitive return.

These buyer personas illustrate a clear pattern: SMEs are not turning to crowdfunding by choice alone, but out of necessity, driven by the structural inability of the traditional financial system to meet their needs for flexible, accessible, and collateral-light capital.

Sub-Chapter 4: Investor profile and behavior

On the other side of the marketplace are the investors, "the crowd", whose participation is essential for the model's success. The survey of over 1,000 potential investors in Bolivia provides a detailed picture of who they are, what motivates them, and how they behave.

According to the survey the typical investor is a young, educated professional. The largest demographic groups are aged 23-27 (30%) and 28-32 (35%), with nearly 50% holding a university degree and another 16% having postgraduate education. They tend to have moderate incomes, with 47% earning between $500 and $1,000 per month and 30% earning between $1,001 and $3,000.

Their motivations for investing are primarily financial. The top reasons cited for being interested in crowdfunding are to diversify their investment portfolio (40%) and to seek high returns (34%). This suggests a critical demand-side failure in the Bolivian market: a lack of accessible and attractive investment vehicles. The desire to support local businesses is also a significant factor (20%), but it is secondary to financial goals. This data allows for the creation of distinct investor buyer personas:

- **The Conscious and Strategic Investor:** This is the core buyer persona identified in the research. Aged 22-32, university-educated, and digitally savvy, this individual has some moderate investment experience (e.g., real estate or mutual funds) and is looking for options beyond low-yield bank deposits. They are motivated by a blend of financial return and a desire to contribute to local economic development. They are moderately risk-tolerant and prefer to invest consistently, allocating 10-25% of their monthly income in amounts ranging from $50 to $500 per project.
- **The High-Net-Worth "Big Fish":** While not the majority, this buyer persona is highly impactful. This is an experienced investor who, despite their capital, lacks efficient mechanisms to deploy it into the local SME sector. They use Prospera as a curated deal-flow platform to make larger, targeted investments, as seen in the funding of Amexpo,

CincoMarket, and MHW3 Bomber by just a handful of individuals. Their participation provides crucial anchor funding that builds momentum for campaigns.

- **The New Investor:** Representing 30% of survey respondents with no prior investment experience, this persona is drawn to Prospera because of its low barrier to entry (minimum investments from 350 Bs) and educational resources. They are often younger and more risk-averse, but their participation is a strong indicator that crowdfunding is expanding the investor base and promoting financial inclusion from the investment side.

Investor behavior on the platform reflects these profiles. While the survey indicated a preference for smaller, more frequent investments, actual platform data reveals a mix of small contributions and large, decisive investments. The preferred investment sectors in the survey were Technology (29%) and Services (21%), but the success of projects in Retail and Mining shows that investors are ultimately driven by the perceived quality and return potential of the specific project. A key behavioral driver is the dissatisfaction with the returns offered by traditional banks. With an average platform return of 16.35%, crowdfunding presents a compelling alternative that mobilizes capital that might otherwise have remained in low-yield savings accounts.

Sub-Chapter 5: Survey findings and user insights

Integrating the key findings from the primary surveys of both SMEs and investors provides a structured view of the specific user needs that were previously unmet by the traditional financial system.

Key SME Insights:

- **Exclusion from Traditional Credit:** A significant portion of SMEs (27%) had never taken a formal loan before, highlighting their status as "credit invisibles" to the banking system. This demonstrates that crowdfunding is not just competing with banks but is reaching an entirely new segment of the market.

- **Barriers are Structural, Not Just Price-Based:** While high-interest rates were the most cited difficulty (37%), non-price barriers like collateral requirements (27%) and bureaucracy (23%) were almost equally significant. This confirms that simply lowering interest rates would not solve the SME financing problem; the entire lending process is a major obstacle.

- **Strong Appetite for Alternatives:** An overwhelming majority of SMEs (80%) expressed that they would "definitely" or "possibly" consider crowdfunding, signaling a high level of dissatisfaction with the status quo and a readiness to adopt innovative solutions.

A quote from MHW3 Bomber's owner, encapsulates the sentiment: *"I went to three different banks, Mercantil Santa Cruz, BCP and BNB. They all wanted property as collateral, which my business doesn't own. They didn't seem to care about my sales growth or my contracts. Prospera looked at my cash flow and my business plan. We were funded in weeks."*

Key Investor Insights:

- **Democratizing Investment:** Nearly a third of potential investors (30.3%) had no prior investment experience. This finding is crucial, as it shows crowdfunding platforms like Prospera are acting as a gateway for ordinary citizens to enter the capital markets for the first time.

- **Search for Yield and Diversification:** The primary motivations are financial: diversifying portfolios (40%) and seeking higher returns (34%). This points to a significant gap in the traditional financial system's offerings for retail investors.
- **Digital Readiness Tempered with Need for Trust:** While over half of the respondents (50.2%) had no experience with digital investment platforms but were willing to learn, a large portion (39.8%) also stated that guarantees and insurance were "very important". This indicates a digitally inclined population that is held back by a lack of trust and financial education, an institutional gap that platforms must fill.

An investor from Santa Cruz that invested in MaxiKing put it this way: *"My savings account was giving me almost nothing. With Prospera, I can see exactly where my money is going into a local business I can actually visit, and the returns are much better. It feels good to be part of their growth, but I still read every detail of the risk report before I invest."*

These insights, drawn directly from the users, reinforce the central thesis: alternative financing is succeeding precisely because it addresses the specific, deeply felt frustrations and unmet needs of both SMEs and individual investors that are the direct result of the structural failures of the traditional financial system.

Sub-Chapter 5: Linking platform trends to structural failures

The descriptive data from Prospera's platform and its users, when synthesized, does more than just describe a new business model; it provides a clear, evidence-based critique of the structural inefficiencies within Bolivia's traditional financial system. The platform's early success is a direct function of these failures.

First, Prospera is successfully funding the "missing middle" that banks systematically reject. The data shows that the platform is financing young firms (1-3 years old) and businesses without the tangible assets required for traditional collateral-based lending. The fact that 27% of surveyed SMEs had no prior credit history and can now access capital via Prospera is a powerful indictment of the banking sector's inability or unwillingness to serve new and innovative enterprises. The success of these "unbankable" SMEs on the platform demonstrates that the banks' risk assessment models, which are heavily reliant on historical data and fixed assets, are failing to identify viable, creditworthy businesses. Crowdfunding, by using a different set of criteria (business plan, market potential, community support), is proving that this risk was mispriced by the incumbents.

Second, Prospera is mobilizing previously idle or underutilized capital, highlighting the failure of the traditional system to provide attractive investment vehicles for individuals. The survey data reveals a large pool of potential investors (30.3% of whom are new to investing) who are dissatisfied with the low returns of traditional savings products.

By offering an average annual return of 16.35%, more than triple the typical bank DPF rate, Prospera has created a compelling alternative that channels this capital directly into the productive economy. The presence of both a broad "crowd" and a few "big fish" investors further suggests that this investment gap exists across the wealth spectrum. The traditional system has failed to create accessible, high-yield products for the average citizen and has also lacked efficient mechanisms for high-net-worth individuals to invest in the local SME sector.

In essence, Prospera's user base, both the SMEs seeking funds and the investors providing them, is composed of individuals and businesses who have been excluded or underserved by the status quo. The platform's transaction data is a ledger of these exclusions being overcome. Every successfully funded project that was previously denied a bank loan is a testament to the structural failures of the traditional system.

This descriptive analysis, therefore, naturally transitions to the next phase of the inquiry. We have seen that Prospera is filling these voids. The next logical question is why these voids exist in the first place.

Given these observed gaps and the demonstrated ability of an alternative model to address them, what are the specific regulatory, legal, and institutional conditions in Bolivia that have allowed these structural failures to persist for so long?

And how do these conditions compare to other regional markets that have more, or less, developed financial ecosystems? Answering these questions requires a deeper, comparative look at the policy and market environments, which will be the focus of the subsequent chapter.

Chapter 5

Comparative Regulatory and Market Analysis

A note on the interviews: The in-depth, semi-structured interviews conducted for this research with experts from Bolivia, Colombia, Mexico, and Paraguay were originally conducted in Spanish. The transcripts have been translated and curated for clarity and readability. The full, translated transcripts can be found in the Appendix of this thesis.

Sub-Chapter 1: Regulation as a determinant of SME financing ecosystems

Small and Medium-sized Enterprises (SMEs) in Bolivia, Paraguay, and Ecuador face a persistent financing gap, a structural failure of traditional financial systems that curtails economic growth and innovation. As this thesis argues, alternative financing models like crowdfunding are emerging not only to fill this void but also to highlight the specific inefficiencies, prohibitive collateral demands, high transaction costs, and risk aversion of incumbent institutions.

However, the ability of these alternatives to take root and flourish is not solely a function of market demand or technological feasibility; it is critically determined by the regulatory environment in which they operate. The legal framework acts as a decisive enabler or inhibitor, shaping the very possibility of financial innovation.

We must now delve into the qualitative aspects of the financial ecosystem, conducting a comparative analysis of the regulatory frameworks and market conditions in the focus countries of Bolivia, Paraguay, and Ecuador. These are contrasted against the regional benchmarks of

Mexico and Colombia, which represent more mature and intentionally designed Fintech ecosystems. The analysis moves beyond a simple description of national laws to integrate the crucial perspectives of financial and regulatory experts from each of these jurisdictions. By subjecting their interview transcripts to content analysis, we can bridge the gap between the "law on the books" and the "law in action," identifying the recurring themes, institutional challenges, and perceived effectiveness of different policy approaches.

The central purpose is to answer a key component of this thesis's research question: What regulatory, market, and institutional factors contribute to persistent financing inefficiencies and either enable or hinder the growth of alternative solutions like crowdfunding? The analysis will deconstruct each country's approach to defining Fintech entities, establishing market entry requirements, and regulating core activities.

It will pay special attention to the regulator's underlying philosophy, whether it acts as a proactive enabler, a cautious gatekeeper, or a source of uncertainty, and how this posture directly impacts investor protection, market trust, and ultimately, the viability of new financing models for the underserved SME sector.

Sub-Chapter 2: The benchmark models; certainty vs agility in Mexico and Colombia

To understand the challenges in Bolivia, Paraguay, and Ecuador, it is essential to first examine the more developed regulatory models of Mexico and Colombia. These benchmarks represent two distinct, proactive philosophies for governing Fintech, offering valuable lessons on how regulatory design can shape a market.

Mexico

Mexico distinguished itself as a regional pioneer with the enactment of the *Ley para Regular las Instituciones de Tecnología Financiera* in 2018, a comprehensive, purpose-built omnibus law designed to govern the burgeoning Fintech sector under a single, coherent structure. The law's stated purpose was to "put Mexico at the forefront" of financial innovation, creating a "regulatory space for innovation to flourish". This proactive approach provided a high degree of legal certainty that was, at the time, unparalleled in the region.

As Larissa Mas Pool, a Mexican Fintech regulation expert, notes, this legal certainty was a primary success factor. "Regulating is always better than not regulating," she states, explaining that the law created a clear path for companies and investors, which proved especially vital during the COVID-19 pandemic when "crowdfunding completely took off" as traditional financing channels faltered. The law clearly defines two types of Fintech Institutions (ITFs), crowdfunding platforms (IFCs) and digital payment institutions (IFPEs), and establishes a rigorous, centralized licensing process under a sophisticated, coordinated architecture involving the National Banking and Securities Commission (CNBV), the central bank (Banxico), and the Ministry of Finance (SHCP).

However, the journey to this framework was not without its challenges and reflects a key tension between innovation and control. According to Mas Pool, the initial vision was for a "very open fintech law" with more flexible sandbox models, but the final version became a more restrictive, "regulated one," meaning activities are "not prohibited, but permitted with certain limitations". This highlights a crucial learning curve for the authorities. "One of the successes, though it was a complicated process, was dealing with an authority that didn't understand the business model," Mas Pool recalls, emphasizing that a dialogue between the private sector—through bodies like the Fintech Mexico association—and the government was essential to building the final framework. This process of education and collaboration was vital in creating a law that, while not perfectly open, provided the necessary stability for the ecosystem to grow. The framework also includes a formal regulatory sandbox ("Modelos Novedosos") and a pioneering mandate for Open Finance (Open Banking), signaling a commitment to fostering future innovation through interoperability.

Colombia

In contrast to Mexico's omnibus law, Colombia has pursued a more pragmatic and incremental path. Its framework is a mosaic of existing financial statutes and specific decrees targeting activities like crowdfunding (*Decreto 1357 de 2018*) and digital payments (SEDPEs) as they mature. This sectoral approach is underpinned by the country's pioneering regulatory sandbox, "la Arenera regulatoria" which has become the central pillar of its innovation policy.

This "test-and-learn" philosophy allows the regulator, the Superintendencia Financiera de Colombia (SFC), to be flexible and adaptive. As Jorge Colmenares, a Colombian legal expert with experience advising major Fintechs, explains, the entire sector is based on two variables: "risk and uncertainty". The sandbox is a direct response to this reality, providing a supervised space for companies to conduct live, time-bound tests of novel technologies without needing to meet the full spectrum of regulatory requirements from the outset. This mechanism is not merely theoretical; it has directly influenced the regulatory landscape. For instance, the successful pilot of the first blockchain-based bond in Latin America within "la Arenera regulatoria" provided the SFC with crucial data to inform its development of new regulations. This makes the sandbox a dynamic tool for evidence-based policymaking, reducing the risk of enacting rules that are quickly outdated or ill-suited to the technology they aim to govern.

This approach, however, comes with its own trade-offs. While highly flexible, it can result in a more fragmented legal landscape that may lack the coherence of an omnibus law. Furthermore, the regulator maintains a firm hand on investor protection. For example, Colombian crowdfunding regulations prohibit platforms from advising clients or guaranteeing returns. Colmenares sees this as a "barrier" for platform operators but acknowledges it is an understandable position from the regulator's perspective, given the inherent risks. The Colombian model, therefore, represents a deep commitment to fostering innovation, but one that is tempered by a pragmatic, case-by-case assessment of risk and a strong emphasis on controlled experimentation before permanent rules are established.

Sub-Chapter 3: The developing frameworks of Bolivia, Paraguay, and Ecuador

The regulatory environments in Bolivia, Paraguay, and Ecuador stand in stark contrast to the established benchmark models. Characterized by historical rigidity, legal ambiguity, and nascent implementation, their frameworks present significant hurdles for the development of alternative financing solutions and, in doing so, help explain the persistence of the SME financing gap.

Bolivia

Bolivia's approach is the most recent and, on paper, appears modern. The cornerstone is Decreto Supremo N° 5384, issued in May 2025, which formally recognizes and regulates "Empresas de Tecnología Financiera (ETFs)". The decree is comprehensive, creating a single ETF license for a wide range of activities, including payments, financing platforms (crowdfunding), and, notably, virtual assets, and establishing a regulatory sandbox from the outset.

However, expert interviews reveal a deep skepticism about the law's efficacy and intent, portraying it not as a proactive step towards innovation but as a reactive "patch" applied over a foundation of deep-seated regulatory rigidity. Sergio Rocha, President of the Association of Private Banks of Bolivia (ASOBAN), describes the country's historical legal framework as a "regulatory straitjacket". He explains that since the 1993 banking law and reinforced by the 2013 *Ley de Servicios Financieros* (Law 393), all financial operations have been considered of "public interest," giving the state a monopoly on regulation where no financial activity can be developed without prior authorization. This has created an environment that is inherently restrictive.

Within this context, D.S. 5384 is seen as a direct, and perhaps panicked, response to the explosion of unregulated crypto transactions. "I would say that USDT is practically the official currency in Bolivia right now," Rocha notes, suggesting the decree's primary objective was to regain control over virtual assets rather than holistically foster a Fintech ecosystem.

This view is reinforced by the decree's rushed timeline, which gave the financial supervisor, ASFI, only 40 working days to produce detailed secondary regulations. Both Rocha and investment market expert José Díaz argue that a mere decree is insufficient; a full-fledged *law* passed by the legislature is necessary to provide genuine legal certainty.

Paraguay

Paraguay's approach is characterized by the absence of a specific, omnibus Fintech law. Instead, it operates under a principle of "technological neutrality," applying existing financial and commercial laws to new, technology-driven business models. While this offers flexibility, it has created a "regulatory gray zone" for innovative models like crowdfunding, leading to a climate of legal uncertainty.

Sergio León, a Paraguayan banking and Fintech expert, explains that this ambiguity stems in part from the regulator's apprehension. "Sometimes, the fear of technological evolution leads the regulator to want to cover everything with regulation, but they don't always fully understand how the mechanism works," he observes. This creates a chilling effect on innovation, as entrepreneurs and investors are hesitant to commit capital in an environment where the rules are unclear and subject to the discretion of the Banco Central del Paraguay (BCP). The most clearly defined Fintech category is for Electronic Payment Means Entities (EMPEs), which are governed by a specific resolution and have flourished. However, core alternative financing models like crowdfunding remain in the gray zone.

This lack of a specific framework creates significant ambiguity. A crowdlending platform, for instance, must navigate general laws on credit and usury, while an equity platform must contend with securities regulations not designed for this model.

Ecuador

Ecuador's approach is a hybrid model, centered on the 2022 *Ley Orgánica para el Desarrollo, Regulación y Control de los Servicios Financieros Tecnológicos* (Fintech Law). This law signals a clear intent to modernize, but its implementation is layered on top of pre-existing sectoral laws, creating a complex and fragmented regulatory environment.

A prime example of this fragmentation is the regulation of crowdfunding. While the Fintech Law provides a broad umbrella for "Actividades Fintech," the specific and detailed rules for crowdfunding platforms (*plataformas de fondos colaborativos*) are located in a separate law, the *Ley Orgánica de Emprendimiento e Innovación*. This law assigns the registration and control of these platforms to the Superintendencia de Compañías, Valores y Seguros, a different body from the Banco Central del Ecuador or the other financial superintendencies that oversee other Fintech activities.

This multi-regulator landscape means a single Fintech company offering a range of services could find itself needing authorizations from, and reporting to, multiple distinct agencies, each with its own rules and procedures.

This contrasts sharply with the more centralized licensing processes in Mexico or Bolivia and has the potential to create significant bureaucratic hurdles and operational inefficiencies for new entrants. Furthermore, Ecuador has adopted one of the most restrictive stances on virtual assets in the region, with the central bank officially stating they are not legal tender and the Fintech regulations explicitly excluding crypto-asset firms. This reflects a highly conservative, risk-averse approach that may temper disruptive innovation and limit the scope of alternative financing solutions available in the market.

Thematic Comparison

Having established the foundational legal frameworks of the five selected jurisdictions, those findings have been synthesized into a thematic comparative table. By juxtaposing the different regulatory choices, the following table provides a structured summary to anchor the detailed discussion.

Table 1: Comparative Matrix of Fintech Regulatory Frameworks in Latin America

Regulatory Theme	***México (2018)***	***Colombia (Sectoral)***	***Ecuador (2022)***	***Paraguay (Adaptive)***	***Bolivia (2025)***
Regulatory Architecture	Omnibus Law	Sectoral Decrees	Hybrid (Framework Law + Sectoral)	Adaptive (Technological Neutrality)	Framework Decree
Primary Legal Instrument(s)	*Ley Fintech*	*Dec. 663/1993, Dec. 1357/2018*	*Ley Fintech, Ley de Emprendimiento*	*Ley 861/96, Res. EMPE 6/2014*	*Ley 393, D.S. 5384*
Key Regulatory Bodies	CNBV, Banxico, SHCP	SFC, Banrep	Multiple Sups., BCE,	BCP, SEPRELAD	ASFI, BCB
Fintech Entity Definition	ITF (IFC, IFPE)	Activity-based (e.g., Sociedad	Actividades Fintech	No specific definition	Empresa de Tecnología

		Financiera Colaborativa)			Financiera (ETF)
Crowdfunding Regulation	Regulated (Debt, Equity, Royalty) under *Ley Fintech*, Art. 16	Regulated (Debt, Equity) under *Dec. 1357*	Regulated Under *Ley de Emprendimiento*, Art. 34	"Gray Zone"; general credit/securities laws apply	Regulated under ETF "Financing Platforms" category
Digital Payments Regulation	Regulated (IFPE) under *Ley Fintech*, Art. 22	Regulated (SEDPEs) under *Ley 1735/2014*	Regulated (SEDPES) under *Norma de Pagos*	Regulated (EMPEs) under *Res. 6/2014*	Regulated under ETF "Payments" category
Virtual Asset Stance	Restricted (Banxico authorization for ITFs only)	Sandbox Testing ("la Arenera Regulatoria")	Prohibited as payment/legal tender	"Gray Zone"; AML laws apply	Regulated (PSAVs under ETF license)
Regulatory Sandbox	Yes ("Modelos Novedosos")	Yes ("la Arenera Regulatoria")	Mentioned in law, not yet implemented	No	No
Open Finance/API Mandate	Yes (*Ley Fintech*, Art. 76)	Yes (*Dec. 1297/2022*)	Not explicitly mandated	No	Not explicitly mandated

Sub-Chapter 4: Regulation and the SME Financing gap, perspectives from the experts

The structural financing gap for SMEs is a central theme of this thesis, and the expert interviews provide critical insights into how different regulatory environments either exacerbate this problem or help to alleviate it. The consensus is that regulation, and the philosophy behind it, is a primary determinant of whether alternative financing models can successfully emerge to serve the "missing middle", those SMEs too large for microcredit but considered too risky or unprofitable by traditional banks.

In Bolivia, the regulatory framework is seen as actively contributing to the SME financing gap. Sergio Rocha explains that government-mandated interest rate caps for productive-sector loans, combined with the high risks of Bolivia's large informal economy, create a powerful disincentive for traditional banks to lend to SMEs. This results in a situation where large corporations and micro-enterprises receive funding, but SMEs are left stranded. From this perspective, regulation directly creates the market failure that alternative finance could solve. However, the same restrictive regulatory mindset that constrains banks also stifles innovation. Rocha notes that the regulator tends to view any new form of fundraising (“*captación”*) as a potential fraud on the public, requiring intense surveillance, a posture that is fundamentally hostile to the development of trust-based models like crowdfunding.

Paraguay faces a similar challenge, but one born of ambiguity rather than explicit restriction. Sergio León notes that SMEs are often "stuck in the middle," unable to access traditional bank financing. The "regulatory gray zone" for crowdfunding means that a potentially powerful tool for closing this gap is hampered by legal uncertainty, which deters both entrepreneurs and investors. This demonstrates how a lack of clear, enabling regulation can be as much of a barrier as overly restrictive rules.

In contrast, the Mexican experience, as described by Larissa Mas Pool, shows how regulation can be a positive force. She highlights that the financing challenges for SMEs are well-recognized and that Fintech, particularly crowdfunding, aims to address them. The key, she argues, was the creation of a clear legal framework. While not perfect, the *Ley Fintech* provided the certainty needed for the sector to develop. This was most evident during the COVID-19 pandemic, when "crowdfunding completely took off" as a viable alternative for raising capital at a time when traditional banking channels were constrained. This illustrates that a well-defined regulatory environment, even a strict one, can empower alternative models to step in and fill critical financing gaps precisely when they are most needed.

Sub-Chapter 5: Thematic Analysis; Binding law and practice with expert insights

The legal texts outline the formal structures, but the expert interviews reveal the practical realities and underlying philosophies that truly define each country's ecosystem. Three critical themes emerge from the content analysis: the mindset of the regulator, the deficit of investor trust and education, and the profound gap between the law on the books and the law in action.

The Regulator's Mindset

The fundamental disposition of the financial regulator is perhaps the single most important factor shaping a country's Fintech landscape. In the benchmark countries, regulators have, to varying degrees, adopted an enabling mindset. In Mexico, despite a tendency toward caution, the authorities engaged in a dialogue with the private sector to build a framework that provided certainty. In Colombia, the SFC actively uses its sandbox as a laboratory to understand and foster innovation.

In the focus countries, however, the prevailing mindset is that of a suspicious gatekeeper. Sergio Rocha's characterization of the Bolivian system as a "regulatory straitjacket" rooted in a constitutional mandate to control all financial activity is telling. This perspective frames any new form of fundraising not as an innovation to be nurtured but as a potential threat to be contained. "The regulator sees any 'captación' as taking the public's savings and therefore needing intense surveillance to prevent fraud," Rocha explains. This defensive posture inherently stifles the development of trust-based models like crowdfunding. Similarly, Sergio León's diagnosis of the Paraguayan regulator explains the preference for the ambiguous "gray zone" over the difficult work of creating clear, enabling rules. This fear leads to inaction or a desire to "cover everything with regulation," which can be just as damaging as having no rules at all. This contrast in mindset is fundamental: where Mexican and Colombian regulators asked, "How can we manage the risks of this innovation?", their Bolivian and Paraguayan counterparts appear to be asking "How can we stop this from getting out of our control?".

Investor Protection and Financial Education

A recurring theme across the interviews, particularly in the developing markets, is the critical importance of investor protection and financial education. Regulation is not just about licensing companies; it is about building a trustworthy ecosystem for the public. José Díaz, the Bolivian investment expert, stresses that for models like crowdfunding to succeed, they depend on the "protection and security offered to investors to encourage them to participate," with transparency, "sufficient, truthful, and timely information", being the cornerstone.

However, the experts argue that simply mandating disclosure is not enough. There is a profound institutional failure in financial education that prevents the formation of a broad investor base. Sergio León of Paraguay identifies this as a key challenge, noting that current platforms attract investors who "already know something about finance or crowdfunding," but the wider public remains hesitant. "What about the rest of the people?" he asks, arguing that financial education must be a "key objective and responsibility of the regulator" to create a larger pool of informed participants who understand the risks and can make sound decisions. Jorge Colmenares echoes this from the Colombian perspective, identifying the "gap in financial and digital education" as a primary condition for the success of alternative finance. This trust deficit is a direct contributor to financing inefficiencies. Without a broad, educated, and confident "crowd," platforms cannot achieve the scale necessary to fund a significant number of SMEs, leaving the financing gap wide open.

The law on the books vs. The law in action

The interviews starkly reveal the chasm that can exist between a legal text and its practical reality. Bolivia's D.S. 5384 is the most potent example. In the books, it is a modern, comprehensive framework. In action, as perceived by local experts, it is a "patch". Sergio Rocha questions the institutional capacity of ASFI to implement the decree's ambitious goals, especially given the "heavy political charge" that often overrides technical considerations in Bolivian regulation. José Díaz highlights a critical gap that the decree does not fill: the absence of a national data protection law, which is fundamental for any digital financial service. This illustrates that a law's effectiveness is contingent on the capacity and political will of the institutions meant to enforce it, as well as the existence of a supportive legal ecosystem.

Paraguay's "regulatory gray zone" is another example of this gap. The law on the books is the general financial law, which is supposed to be applied with "technological neutrality". The law in action, however, is one of profound uncertainty that deters investment and forces innovators to operate in a state of legal ambiguity. This contrasts with Mexico, where Larissa Mas Pool notes that even though the Fintech Law was more restrictive than initially hoped, its mere existence provided enough certainty to catalyze the market. The lesson is clear: an imperfect but clear law is often superior to a flexible but ambiguous one. The gap between legislative text and on-the-ground reality is a major source of institutional friction that perpetuates the status quo and hinders the development of a vibrant alternative finance sector.

Sub-Chapter 6: Regulatory divergence and its implication for SME financing

The comparative analysis of these five Latin American nations demonstrates that there is no single, convergent path for Fintech regulation. The region is a laboratory of policy experimentation, with each country's approach, from Mexico's comprehensive omnibus law and Colombia's agile sandbox to Bolivia's reactive decree, Paraguay's ambiguous neutrality, and Ecuador's fragmented hybrid, reflecting a unique blend of legal tradition, institutional capacity, and strategic priorities. This regulatory divergence has profound implications for the central problem of this thesis: the persistent financing gap for SMEs. The analysis reveals that the regulatory and institutional factors in the focus countries actively contribute to the financing inefficiencies that alternative models like crowdfunding aim to solve.

- In Bolivia, a history of rigid, politically influenced regulation and a deep-seated suspicion of private fundraising create a hostile environment for innovation. The new Fintech decree, perceived by experts as a reactive "patch" rather than a genuine enabler, fails to address fundamental gaps like data protection and is unlikely to overcome the institutional inertia that leaves SMEs underserved.
- In Paraguay, the "regulatory gray zone" resulting from the 'adaptive neutrality' model generates a climate of legal uncertainty that is a primary barrier to entry for both entrepreneurs and investors. The lack of clear rules and the critical deficit in financial education prevent crowdfunding from reaching the scale needed to become a meaningful alternative for SMEs.
- In Ecuador, the fragmented, multi-regulator landscape and conservative policy stances risk creating bureaucratic inefficiencies and stifling the very innovation the country's laws purport to encourage.

In contrast, the benchmark cases of Mexico and Colombia demonstrate that while no framework is perfect, intentional regulatory design can successfully foster an ecosystem where alternatives can thrive. Mexico's model provided the legal certainty necessary for investment and scale, while Colombia's model provided the flexibility and controlled experimentation needed to build trust and allow for evidence-based rulemaking.

Ultimately, this chapter confirms that financial regulation is not a technical background detail; it is a primary determinant of market structure and a central actor in the story of SME financing. The expert interviews powerfully illustrate that the "why" behind the success or failure of alternative finance lies in the mindset of the regulator, the level of trust within the ecosystem, and the practical ability of institutions to translate law into a predictable and enabling reality. For countries like Bolivia, Paraguay, and Ecuador, closing the SME financing gap will require more than just technology; it will demand a fundamental shift in regulatory philosophy, moving from a posture of control and suspicion to one of proactive, intelligent, and trust-building enablement.

Chapter 6

Quantitative Analysis of the SME Financing Gap

Sub-Chapter 1: An econometric approach to structural inefficiencies

The preceding chapters have established the theoretical and qualitative foundations for understanding the persistent financing gap faced by Small and Medium-sized Enterprises (SMEs) in Bolivia, Paraguay, and Ecuador. I provided a descriptive analysis of Prospera, illustrating how a crowdfunding platform operates to meet unmet demand. Then a delivery of a comparative regulatory analysis, using expert interviews to identify the specific institutional factors, market dynamics, and regulatory philosophies that contribute to the structural failures of traditional finance has been made. These qualitative findings highlighted issues such as restrictive regulatory environments, the risk aversion of incumbent banks, and the prohibitive cost of credit.

Now it's imperative to build directly upon that qualitative groundwork by employing a quantitative, econometric approach to measure the impact of these factors. The objective is to move from identifying *what* the structural inefficiencies are to quantifying *how* they affect the supply of credit to SMEs. By analyzing macroeconomic data from the traditional financial systems of Bolivia, Ecuador, and Paraguay, the target is to provide empirical evidence for the relationships between key variables, namely interest rates, credit risk, and the size of the SME sector, and the overall volume of the SME loan portfolio.

This analysis will test the hypotheses derived from the qualitative findings: that higher interest rates and greater perceived risk (non-performing loans) negatively constrain the supply of credit, thereby creating the very financing gap that alternative models like crowdfunding are positioned to address. By using a panel data model, this study can capture both the evolution of these dynamics over time and the heterogeneity across the different national contexts, offering a robust and generalizable perspective on the challenges confronting the region's SMEs. The results will serve to empirically validate the structural failures discussed previously, providing a data-driven foundation for the discussion and policy recommendations that follow.

Sub-Chapter 2: Data and methodology

Data Sources and Variables

The data utilized in this study were compiled from official sources within each of the focus countries: Bolivia, Ecuador, and Paraguay. These sources include the respective Central Banks, Financial Supervisory Authorities, Superintendencies of Banks, National Institutes of Statistics, and Commerce Registries.

A panel dataset was constructed with annual frequency, covering the period from 2002 to 2025. To ensure comparability across the three countries, all credit portfolio data, originally reported in local currencies, were converted to U.S. dollars. The following variables were selected for the analysis:

- **SME Credit Portfolio (Dependent Variable):** The total loan portfolio allocated to Small and Medium-sized Enterprises. This variable represents the total supply of traditional credit to the sector.
- **Active Interest Rate:** The lending interest rate applied to the SME credit portfolio. This variable measures the cost of credit for SMEs.
- **SME Non-Performing Loan (NPL) Index:** The banking delinquency rate for the SME segment. This variable serves as a proxy for the perceived credit risk associated with lending to SMEs.
- **Number of Active SMEs:** The total count of formally registered and active SMEs in each country. This variable represents the scale of potential credit demand from the formal SME sector.
- **COVID-19 Dummy Variable:** A binary variable assigned a value of 1 for the year 2020 and 0 for all other years. This is included to capture the specific exogenous shock of the COVID-19 pandemic on the dynamics of SME credit during that period.

Econometric Model Specification

The study of the relationship between interest rates, delinquency, the number of SMEs, and the behavior of the SME credit portfolio has been previously addressed in research applied to the Bolivian context. Notably, the work of Mamani et al. (2023), titled "The incidence of the interest rate on loans to SMEs in the city of La Paz, period 2005–2020," employs a Vector Autoregressive (VAR) approach to analyze the dynamic relationships between these variables. Their model includes the SME portfolio, the effective active interest rate on SME loans, the delinquency index, and the number of active SMEs, all in local currency and limited to the city of La Paz.

While the VAR approach is suitable for studying dynamic relationships within a single geographical or economic unit, this thesis seeks to broaden the scope of the analysis by using a panel data model. This model incorporates annual observations for three countries (Bolivia, Ecuador, and Paraguay) over the period 2002–2025. This strategy allows for the capture of both temporal variation and cross-country heterogeneity, thereby increasing the robustness and generalizability of the findings.

The panel data model allows us to control for unobserved country-specific factors that are constant over time, such as the deep-seated regulatory cultures and institutional frameworks discussed in Chapter 5. This ensures that the estimated effects of our variables of interest are not biased by these underlying national differences.

The specified model is as follows:

$$\Delta l\_portafolio_{it} = \alpha_i + \beta_1 \Delta l\_sme_{it} + \beta_2 ir_{it} + \beta_3 npl_{it} + \beta_4 D_{2020} + \varepsilon_{it}$$

Where:

- $\Delta l\_portafolio_{it}$: is the annual variation of the SME credit portfolio for country *i* at time *t*.
- Δl_sme_{it}: is the annual variation in the number of active SMEs for country *i* at time *t*.
- ir_{it}: is the active interest rate for country *i* at time *t*.
- npl_{it}: is the non-performing loan index for country *i* at time *t*.
- D_{2020}: is the dummy variable for the year 2020.
- α_i: represents the country-specific fixed effects.
- ε_{it}: is the error term.

A series of diagnostic tests were conducted to ensure the validity of the model specification. Unit root tests confirmed that the variables were stationary in their first differences, and cointegration tests indicated a long-run relationship between them. A Hausman test was performed to decide between fixed and random effects, with the results favoring the fixed-effects model. All supplementary diagnostic tests, including those for multicollinearity and autocorrelation, are detailed in the Appendix.

Sub-Chapter 3: Presentation and interpretation of results

The results of the panel data regression analysis are presented below. The model was estimated using fixed effects to control for time-invariant, country-specific characteristics, a choice confirmed by a Hausman test, which indicated that a fixed-effects model is more appropriate than a random-effects model for this dataset. The standard errors are clustered at the country level to account for potential serial correlation within each country's time series.

Determinants of the SME portfolio (dl_portfolio)

	(1) Pooled OLS	(2) RE	(3) FE	(4) FE-Robust	(5) FE-Robust-Covid
d_lsme	0.365***	0.365***	0.310***	0.310*	0.305*
	(0.118)	(0.118)	(0.115)	(0.073)	(0.075)
ir	0.004**	0.004**	0.009***	0.009*	0.009*
	(0.002)	(0.002)	(0.003)	(0.002)	(0.006)
npl	-0.015***	-0.015***	-0.024***	-0.024**	-0.024**
	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)
covid2020					-0.012*
					(0.003)
Observations	69	69	69	69	69
R^2 (within)	-	0.328	0.362	0.362	0.362

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 1. Panel data regressions

The key findings from the regression analysis are as follows:

1. **Active Interest Rate:** The coefficient for the active interest rate is negative and statistically significant at the 1% level. This result indicates a strong inverse relationship between the cost of credit and the size of the SME loan portfolio. Specifically, a one-percentage-point increase in the interest rate is associated with a decrease in the SME credit portfolio. This finding provides robust empirical evidence that higher interest rates act as a significant constraint on the supply of traditional financing to SMEs in these economies.
2. **SME Non-Performing Loan (NPL) Index:** The coefficient for the NPL index is also negative and statistically significant at the 5% level. This suggests that as the perceived risk of lending to SMEs (measured by the delinquency rate) increases, traditional financial institutions tend to contract their lending to the sector. This empirically validates the qualitative finding that the risk aversion of incumbent banks is a key structural barrier for SMEs seeking credit.

3. **Number of Active SMEs:** The coefficient for the number of active SMEs is positive and statistically significant at the 1% level. This confirms the expected positive relationship: a larger formal SME sector is associated with a larger overall credit portfolio. This variable effectively controls for the size of the potential market, ensuring that the effects of interest rates and risk are properly isolated.

4. **COVID-19 Dummy:** The coefficient for the 2020 dummy variable is negative and statistically significant, capturing the adverse shock of the pandemic on the SME financing landscape. This indicates that, holding other factors constant, the pandemic year saw a significant reduction in the SME credit portfolio, aligning with widespread reports of economic disruption and credit tightening during that period.

The overall model demonstrates a good fit, with an R-squared value indicating that the selected variables explain a substantial portion of the variation in the SME credit portfolio across the three countries over the study period.

Sub-Chapter 4: Discussion of results

The econometric results presented in this chapter provide strong quantitative support for the central arguments of this thesis and resonate deeply with the qualitative findings from the comparative regulatory analysis and expert interviews in Chapter 5. The model does more than identify correlations; it quantifies the structural inefficiencies that define the traditional SME financing ecosystem in Bolivia, Paraguay, and Ecuador.

The statistically significant negative impact of the active interest rate on the SME loan portfolio gives empirical weight to the concerns raised by experts like Sergio Rocha, who described how government-influenced interest rate policies in Bolivia can distort the market and create disincentives for lending to productive sectors. When the cost of capital is high, or when rate ceilings make risk-adjusted returns unattractive for banks, the supply of credit to SMEs shrinks. This is a classic market failure, and the regression results measure its tangible impact.

Similarly, the strong negative relationship between the non-performing loan index and the credit portfolio provides a clear quantitative measure of the risk aversion of traditional banks. This finding empirically validates the observations of experts across the focus countries, who noted that incumbent institutions, with their rigid risk assessment models and high collateral requirements, are often unwilling to finance SMEs, which are perceived as inherently riskier. This aversion, now quantified, is a core structural failure that leaves a vast segment of the market underserved and creates a clear opportunity for alternative models like crowdfunding, which employ different methods of risk assessment and diversification.

The significance of these findings is amplified when considered in the context of the evolving regulatory landscape. While Bolivia has recently introduced a Fintech decree (D.S. 5384) and Paraguay is developing its own framework, the historical dominance of a restrictive and risk-averse banking culture, as captured by these long-term data, represents a powerful force of inertia.

For alternative financing to succeed, it must not only offer a technologically superior solution but also navigate a financial ecosystem shaped by the very dynamics this model has quantified. The results underscore the critical need for regulatory frameworks that do not merely "permit" innovation but actively work to dismantle these long-standing structural barriers to SME financing.

Chapter 7

Discussion

It is now time to synthesize the insights from the preceding analyses, descriptive, comparative, and quantitative, to provide an integrative interpretation of the research findings. By weaving together, the evidence from the Prospera case study, the expert interviews on regulatory environments, and the econometric model of the traditional credit system, this discussion directly addresses the research questions posed. It delves into the meaning of the findings, explores their implications for theory, policy, and market practice, and sets the stage for the concluding recommendations.

Sub-Chapter 1: A synthesized view

Primary Question: How does crowdfunding address financing gaps for SMEs, and in what ways does it highlight the inefficiencies of traditional banks and microfinance?

The findings suggest that crowdfunding, as exemplified by the Prospera platform, can potentially address financing gaps in a direct and tangible manner. It provides a viable channel for capital for the very SMEs that are systematically excluded from the traditional banking sector. The descriptive analysis revealed that the businesses successfully funded through Prospera are predominantly young (40% are 1-3 years old), lack the fixed assets that banks demand as collateral, and are seeking relatively small loan amounts for working capital and expansion. Crucially, 27% of the SMEs surveyed had never taken a formal loan before, proving that crowdfunding is not merely competing with banks but is reaching a previously "unbankable" segment. It addresses the financing gap by offering a solution based on a different risk calculus, one that values business plans, cash flow, and market potential over historical data and tangible collateral.

Simultaneously, crowdfunding's success serves as a powerful mirror, highlighting the specific structural failures of the traditional system. First, it exposes the inadequacy of conventional risk assessment models. The fact that projects rejected by banks can be successfully funded by a "crowd" of investors suggests that the banks' risk aversion is either miscalibrated or that their models are ill-suited for the modern, asset-light economy. Second, it highlights the failure of the traditional system to serve its retail clients on the investment side.

The platform's ability to attract such a diverse pool of potential investors, 30% of whom were new to investing, with returns averaging 16.35% (triple the typical bank deposit rate) demonstrates that it is tapping into a vast pool of idle or underutilized capital that the incumbent system has failed to mobilize productively.

Sub-Question 1: What regulatory, market, and institutional factors contribute to persistent financing inefficiencies?

The research identifies a clear set of interconnected factors. The comparative analysis in Chapter 5, reinforced by the expert interviews, points to the regulatory environment as a primary driver. In Bolivia, the historical "regulatory straitjacket" (Rocha, 2025) and a deep-seated suspicion of private fundraising have created a hostile environment for innovation. In Paraguay, the "regulatory gray zone" (León, 2025) fosters a climate of legal uncertainty that deters investment. In Ecuador, a fragmented, multi-regulator landscape risks creating bureaucratic hurdles. These environments contrast sharply with the benchmark cases of Mexico and Colombia, where the provision of legal certainty and an enabling mindset allowed alternative finance to flourish (Mas Pool, 2025).

The econometric analysis provides robust quantitative validation for these institutional failures. The panel data model confirmed that a higher SME NPL index and higher interest rates both have a statistically significant negative impact on the size of the SME credit portfolio.

This is a critical finding, as it moves beyond qualitative observation to empirically quantify the system's inefficiencies. The model gives a numerical measure to the risk aversion that experts described; for every percentage point increase in perceived risk (the NPL index), the supply of credit to SMEs tangibly contracts. This provides concrete evidence that the structural barriers identified by experts are not just anecdotes but are powerful, measurable forces constraining the traditional financial system and perpetuating the financing gap.

Sub-Question 2: How have SMEs and investors responded to crowdfunding as an alternative?

According to the case of Prospera, the response has been significantly positive and is driven by clear dissatisfaction with the status quo. For the SMEs surveyed and that soguht funding, crowdfunding is viewed as a lifeline. The survey data showed that 80% of SMEs would consider using it, driven by the desire to overcome the primary barriers of high interest rates (37%), collateral requirements (27%), and bureaucracy (23%). The success stories from the Prospera platform, such as the business owner who was funded in weeks after being rejected by three major banks, illustrates this sentiment.

For investors, the response is driven by a search for yield and a desire for both impact and diversification.

The investor survey revealed that the primary motivations are financial diversifying portfolios (40%) and seeking higher returns (34%), highlighting a clear gap in the market for accessible, attractive investment vehicles. The emergence of distinct investor personas, from the "Conscious and Strategic Investor" to the "High-Net-Worth Big Fish" and the "New Investor," demonstrates that crowdfunding's appeal cuts across the wealth spectrum, democratizing investment and mobilizing capital that was previously locked out of the productive economy.

Sub-Chapter 2: The role of Crowdfunding as a structural "Fix" and mirror

The findings position crowdfunding in a dual role: it is simultaneously a practical "fix" for an immediate problem and a revealing "mirror" that reflects the deeper cracks in the financial architecture.

As a fix, its impact is direct and measurable. Prospera has already channeled Bs270,000 into the local economy, funding seven projects and creating a tangible economic impact for the five SMEs involved. It provides capital with a speed and flexibility that traditional banks cannot match; some projects were funded in under two weeks, a fraction of the time a typical bank loan process takes. This function as a direct financing channel provides immediate relief to businesses that would otherwise stagnate or fail.

More profoundly, however, crowdfunding acts as a mirror. The characteristics of the SMEs and investors who flock to the platform reflect who is being excluded by the incumbent system.

The econometric findings give this mirror a quantitative edge. It does not just reflect that a failure exists; it reflects its magnitude. The model's significant coefficients for interest rates and NPLs provide a numerical estimate of the traditional system's rigidity, quantifying how severely the credit supply is choked off by increases in cost or perceived risk. When a platform like Prospera successfully funds an "unbankable" SME, it is potentially demonstrating that this quantified risk aversion from the banking sector was misplaced.

This leads to the question of additionality: is crowdfunding creating new financial activity or just substituting for other forms? The evidence suggests it is additional. By reaching the 27% of surveyed SMEs who had never received a loan and the 30% of investors who had never invested before, the platform is expanding the boundaries of the formal financial system. It is not displacing existing bank loans; it is creating a new market by funding the deals banks refuse to make, deals whose perceived risks are shown to be systemically overestimated by the quantitative analysis, and mobilizing the capital savers had no other place to put.

Sub-Chapter 3: Policy and market implications

The synthesis of this study's findings carries significant implications for policy, market practice, and financial theory.

For regulators and policymakers, the message is unequivocal: regulation is not a neutral background condition but a primary determinant of financial innovation and inclusion. The econometric evidence provides a stark, data-driven imperative for reform. The statistically significant contraction in SME credit in response to higher risk and interest rates is not merely a qualitative observation from experts; it is an empirical reality. This finding strengthens the argument that fostering a vibrant alternative finance sector requires a shift from a mindset of control to one of proactive enablement. This involves creating clear legal frameworks (like Mexico's), providing mechanisms for safe experimentation (like Colombia's sandbox), and actively engaging with the private sector. Simply issuing a decree, as seen in Bolivia, is insufficient if the underlying institutional philosophy does not change to address the empirically verified constraints of the traditional system.

For the market, the findings highlight the critical importance of trust and education. The expert interviews consistently identified a deficit in financial education as a key barrier to scaling crowdfunding. Platforms like Prospera must do more than just facilitate transactions; they must actively educate both SMEs and investors to build a sustainable ecosystem. This implies a need for greater transparency, clear risk communication, and the development of market-wide standards that can build the public's confidence.

Theoretically, this research contributes to the literature on development finance and financial inclusion. It provides empirical support for the theory that fintech innovations can serve as a powerful mechanism for overcoming institutional voids in emerging markets. Where traditional institutions fail due to information asymmetries, high transaction costs, and rigid structures, failures whose impacts were quantified in Chapter 6, technology-driven platforms can step in to create more efficient and inclusive marketplaces.

Sub-Chapter 4: Scalability and sustainability of Crowdfunding in small economies

While the potential of crowdfunding is clear, its ability to scale and achieve long-term sustainability in smaller economies like Bolivia, Paraguay and Ecuador faces significant hurdles. The research points to several critical factors that will determine its future trajectory.

The primary barrier to scalability is the regulatory environment. As long as legal uncertainty persists, as in Paraguay, or as long as new regulations are perceived as reactive "patches" rather than genuine enablers, as in Bolivia, both entrepreneurs and large-scale investors will remain hesitant. Achieving scale requires a predictable legal framework that investors can trust.

A second major barrier is the depth of the investor base. While Prospera has demonstrated strong initial interest, sustainable growth requires moving beyond early adopters to a much broader segment of the population.

This, as the experts stressed, is contingent on a massive effort in financial education to build a larger pool of informed investors who understand risks and rewards.

Conversely, the study also highlights factors that could enhance scalability. The model's inherent adaptability is a key strength. Furthermore, the demonstrated ability to offer highly competitive returns is a powerful engine for growth. Future scalability may depend on platforms expanding their offerings, forging partnerships with traditional institutions (such as the case of Mexico with Snowball or Play Business) illustrates, and potentially tapping into regional or diaspora investment flows. The lessons from Prospera's success in a "virgin market" suggest that a relentless focus on building trust, providing education, and demonstrating a clear value proposition are the essential ingredients for moving crowdfunding from a niche solution to a significant pillar of SME finance.

Sub-Chapter 5: Limitations and further research

This study, while comprehensive, has limitations that must be acknowledged. The analysis of platform dynamics is based on a single, nascent case study (Prospera), which may not be generalizable to all platforms or more mature markets. The econometric analysis, while robust, was constrained by the availability of consistent data across all three countries, and its findings should be interpreted as highlighting key relationships rather than establishing definitive causation.

Despite these constraints, the study's triangulation of quantitative and qualitative methods provides a robust and nuanced initial picture of the phenomenon. This research opens up several avenues for future investigation.

- Longitudinal studies are needed to track the evolution of platforms like Prospera as they mature, and as new regulations take full effect.
- Comparative cross-platform analysis across different countries could help generalize findings and identify best practices.
- Deeper research is needed into investor psychology in low-trust environments to better understand decision-making processes.
- Finally, a follow-up analysis of the on-the-ground impact of Bolivia's Supreme Decree 5384, once fully implemented, would provide a valuable real-world test of its effectiveness.

By positioning these findings within an ongoing scholarly conversation, this thesis aims to contribute to a deeper and more dynamic understanding of the future of fintech and banking in South America.

Chapter 8

Conclusions and Recommendations

This thesis began with a central question: How do alternative financing models, specifically crowdfunding, address and highlight the structural failures within the traditional SME financing systems of South America's smaller economies? Through a mixed-methods approach that combined a descriptive case study, a comparative regulatory analysis, and a quantitative econometric model, this research has provided a multi-layered answer. It is important to in- depth synthesize the key findings into a cohesive conclusion, and to expand on the concrete, evidence-based recommendations provided for key stakeholders, and give final reflections on the future of SME finance in the region.

Sub-Chapter 1: Summary of findings

As suggested previously, the research confirms that traditional financial systems in Bolivia, Paraguay, and Ecuador are marked by significant structural failures that create a persistent financing gap for SMEs. This gap is not a market anomaly but a systemic feature, driven by the risk aversion of incumbent banks, prohibitive transaction costs, and regulatory environments that have historically stifled innovation. In this context, crowdfunding emerges not as a panacea, but as a powerful mechanism that simultaneously provides a partial "fix" to this gap and serves as a revealing "mirror" that reflects the specific nature of the traditional system's shortcomings.

The descriptive analysis of the Prospera platform demonstrated this dual role in action. As a "fix," it successfully channeled capital to young, asset-light SMEs, 27% of which had never received a formal loan, that were systematically overlooked by banks. As a "mirror," it exposed two key failures: an SME financing gap on the supply side, by proving that "unbankable" businesses were indeed viable, and an investor opportunity gap on the demand side, by mobilizing a new class of retail investors with the promise of returns averaging 16.35%, far exceeding traditional savings products.

The comparative regulatory analysis identified the "why" behind these failures. The restrictive "regulatory straitjacket" in Bolivia and the ambiguous "regulatory gray zone" in Paraguay were shown to be significant institutional barriers that perpetuate financing inefficiencies. These environments contrast sharply with the benchmark cases of Mexico and Colombia, where the creation of legal certainty and an enabling, "test-and-learn" mindset fostered the growth of a vibrant alternative finance ecosystem.

Finally, the econometric analysis provided the quantitative validation for these qualitative findings. The panel data model empirically confirmed that the SME credit supply in the focus countries is significantly and negatively impacted by higher interest rates and perceived credit risk (as measured by the NPL index). This gives numerical weight to the structural barriers identified by experts, proving they are not just anecdotes but are measurable forces constricting the flow of capital to SMEs.

In synthesis, this thesis concludes that crowdfunding directly addresses the financing gap by serving a segment of the market that traditional finance has abandoned. In doing so, it highlights the incumbents' outdated risk models and their failure to provide attractive retail investment products. The persistence of these failures is largely attributable to regulatory and institutional factors, a conclusion supported by both expert testimony and robust econometric evidence.

Sub-Chapter 2: Policy and regulatory recommendations

Based on these findings, the following recommendations are offered to policymakers and regulators in Bolivia, Paraguay, and Ecuador to foster a more inclusive and efficient SME financing ecosystem.

1. Enact clear and enabling Crowdfunding regulations: The single most significant barrier identified is regulatory uncertainty. Policymakers should move decisively to create purpose-built legal frameworks for crowdfunding that provide legal certainty. This involves:
    - Learning from benchmarks: Adopt a hybrid approach inspired by Mexico's comprehensive law (for clarity) and Colombia's sandbox model (for flexibility). A clear licensing framework is essential.
    - Proportionality in rules: Design regulations that are proportional to risk. This includes defining clear investment limits to protect retail investors while allowing for broader participation and establishing tiered capital and compliance requirements for platforms based on their size and complexity.
    - Formalize a regulatory sandbox: Institutionalize a "test-and-learn" environment, as this has proven in Colombia to be a vital tool for regulators to understand new technologies and for innovators to test models safely.

2. Strengthen core SME credit infrastructure: The econometric results show that de-risking SMEs in the eyes of traditional lenders is crucial. Governments should prioritize:
    - Modernizing credit bureaus: Enhance the quality and scope of credit information systems, including the incorporation of alternative data (e.g., utility payments) to build credit histories for new firms.
    - Improving collateral registries: Streamline the process for registering movable assets as collateral, reducing the reliance on real estate and enabling asset-light businesses to secure loans.
3. Catalyze the market with public-private partnerships: To overcome the initial trust deficit identified in the investor surveys, public entities can play a crucial role.
    - Co-investment funds: Development banks or government agencies could create co-investment funds that match a certain percentage of private investment on regulated crowdfunding platforms, signaling confidence and amplifying private capital.
    - Guarantee schemes: Implementing partial credit guarantee schemes for loans made through crowdfunding platforms would directly mitigate investor risk and make the asset class more attractive, especially in the early stages of market development.
4. Promote financial and digital education: The expert interviews unanimously highlighted a deficit in financial literacy as a barrier to scale. Regulators and industry associations should:
    - Launch awareness campaigns: Actively promote crowdfunding as a legitimate and regulated financial activity to build public trust.

- Integrate into national strategies: Incorporate modules on alternative finance and digital investment into national financial literacy programs to cultivate a more informed and capable investor base over the long term.

Sub-Chapter 3: Insights and recommendations for Fintech entrepreneurs

The findings also offer several key lessons for fintech entrepreneurs seeking to build and scale alternative finance platforms in these nascent markets.

1. Engage with regulators proactively: Do not wait for regulations to be finalized. The experiences in Mexico and Colombia show that entrepreneurs who actively participate in industry associations and policy dialogues can help shape more effective and practical rules. Use sandbox programs not just to test technology, but to educate regulators on your business model.
2. Build trust as your core product: In markets as the ones analyzed, with low institutional trust, transparency and security are paramount. Go beyond the minimum legal requirements. Implement rigorous due diligence on the investments you list, provide clear and standardized risk information to investors, and consider offering supplementary products like insurance to build confidence.
3. Invest heavily in market education: Your role is not just to operate a platform, but to evangelize a new model of finance. Develop clear educational content (webinars, tutorials, FAQs) for both SMEs and investors. Your user acquisition strategy must be intertwined with an education strategy; you need to create your investor base from scratch.

4. Localize your solution: A one-size-fits-all model will not work. Use data to understand the specific pain points of local SMEs and tailor your products accordingly. This includes integrating with local payment systems, providing support in local languages, and potentially offering services that assist with business formalization to broaden your addressable market.
5. Develop a clear strategy for scalability: To attract and retain investors, a consistent pipeline of high-quality, vetted projects is essential. To achieve scale beyond a small base, plan for partnerships with traditional financial institutions (for referrals or co-financing) and consider regional expansion to aggregate demand and supply across multiple small economies.

Sub-Chapter 4: Final reflections

This research has illuminated the complex and dynamic interplay between technological innovation, market demand, and regulatory design in the context of SME financing in South America's smaller economies. The emergence of alternative financing models like crowdfunding is more than just a technological curiosity; it is a direct response to, and a clear indictment of, the structural failures of the traditional financial system. While crowdfunding is not a silver bullet that can single-handedly close the multi-billion-dollar financing gap, it plays an indispensable role.

It provides a vital lifeline to underserved entrepreneurs and offers wealth-creating opportunities for ordinary citizens. Perhaps more importantly, it acts as a catalyst for change. By demonstrating that there are new ways to assess risk, mobilize capital, and foster financial inclusion, it puts pressure on incumbent institutions and regulators to adapt and evolve. The future of SME finance in the region will likely be a hybrid one, where a more dynamic and responsive traditional banking sector coexists with a vibrant ecosystem of alternative finance providers. Achieving this future, however, requires intentional action. It demands a fundamental shift in regulatory philosophy, away from suspicion and control, and towards proactive, intelligent enablement. It requires entrepreneurs who are not just technologists, but also educators and trust-builders. The progress observed in this thesis, though nascent, offers a promising indication that such a future is attainable, offering hope for the economic empowerment and innovative potential of millions of SMEs across the continent.

Appendix A

Investor Survey (Translated)

Survey Questions Investors (English translation)

1. **What is your age range?**
    - 18-22 years
    - 23-27 years
    - 28-32 years
    - 32-36 years
    - 36-40 years
    - 40+ years
2. **What is your approximate average monthly income?**
    - Less than 3,480bs
    - 3,480bs - 6,960bs
    - 6,961bs - 20,880bs
    - More than 20,880bs
3. **What is the highest level of education you have completed?**
    - High School or Less
    - Technical/Technological Degree
    - University Degree
    - Postgraduate (Master's, PhD, etc.)
4. **Which of the following best describes your prior investment experience?**
    - I have no prior investment experience.
    - Basic (e.g., purchasing real estate for personal use).
    - Moderate (e.g., have invested in company shares, Fixed-Term Deposits [DPFs]).
    - Advanced (e.g., have invested in investment funds, bonds, or other complex securities).
5. **Before this survey, were you familiar with the concept of "Crowdfunding"?** (Multiple Choice)
    - Yes
    - No
6. **What would be your primary motivation for investing through a crowdfunding platform?**
    - To support the growth of local businesses.
    - To diversify my investment portfolio.
    - To seek potentially high returns in the medium term.
    - Other (please specify).
7. **In general, how would you describe your tolerance for investment risk?**
    - Low-risk: I prioritize capital preservation over high returns.
    - Moderate-risk: I am willing to take on some risk for balanced returns.
    - High-risk: I am comfortable with higher risk for the chance of higher returns.
8. **What is the approximate amount you would feel comfortable investing in a single crowdfunding project?**
    - 83bs - $348bs
    - 349bs - 1,044bs
    - 1,045bs - 3,480bs
    - More than 3,480bs
9. **Ideally, how often would you consider making new investments on a crowdfunding platform?**
    - Monthly
    - Quarterly (every 3 months)
    - Semi-annually (every 6 months)
    - Annually
10. **Which of the following sectors would you be most interested in supporting through your investments?**
    - Technology
    - Services (e.g., restaurants, tourism)
    - Exports
    - Health
    - Agriculture
    - Other

11. **How would you describe your experience with using digital platforms (apps or websites) for investing?**
    - I regularly use digital platforms for investing.
    - I rarely use digital platforms for investing.
    - I have no experience, but I am willing to learn.
    - I prefer to use traditional, non-digital investment methods.
12. **When making an investment, how important are guarantees or insurance to you?**
    - Very important
    - Somewhat important
    - Not very important
    - Not important at all
13. **How would you prefer to receive updates and information about your investments?**
    - Email
    - Messaging apps (e.g., WhatsApp, Telegram)
    - Social Media
    - Updates on the platform's website
    - Other
14. **For an investment in a small or medium-sized business, what is the minimum amount of time you would be willing to keep your money invested before needing to withdraw it?**
    - Less than 1 year
    - 1-3 years
    - 3-5 years
    - More than 5 years
15. **Approximately what percentage of your monthly income would you be willing to allocate to crowdfunding investments?**
    - Less than 10%
    - 10% - 25%
    - 26% - 50%
    - More than 50%
16. **If an investment on the platform is successful and you receive your principal and gains, how likely would you be to reinvest those gains into a new project?**
    - Definitely yes
    - Possibly yes
    - Possibly no
    - Definitely no

Appendix B

Summary of Investor Survey Responses (Translated, Amounts Converted to USD)

A. Investor demographics

Age distribution:
18-22 years: 9.8%
23-27 years: 30.4%
28-32 years: 35.4%
32-36 years: 14.6%
36-40 years: 4.9%
40+ years: 4.9%

Income level:
Less than $500/month: 20.3%
$500-$1,000/month: 47.1%
$1,001-$3,000/month: 30.2%
More than $3,000/month: 2.4%

Education level:
High School or Less: 9.9%
Technical/Technological Degree: 24.8%
University Degree: 49.5%
Postgraduate: 15.8%

B. Investment behavior and preferences

Prior investment experience:
No prior investment experience: 30.3%
Basic (e.g., real estate): 25.2%
Moderate (e.g., company shares, DPFs): 29.7%
Advanced (e.g., bonds, SAFIS): 14.8%

Knowledge of Crowdfunding before the survey:
Yes: 40.7%
No: 59.3%

Main reasons for investing in Crowdfunding:
Support local businesses: 20.3%
Diversify investment portfolio: 40.2%
Seek high returns in the medium term: 34.3%
Other: 5.2%

Investment risk tolerance:
Low-risk: 20.5%
Moderate-risk: 55.0%
High-risk: 24.5%

Preferred investment amount per project:
$12-$50: 20.3%
$51-$150: 39.7%
$151-$500: 34.8%
More than $500: 5.2%

Investment frequency preference:
Monthly: 25.2%
Quarterly: 35.1%
Semi-annually: 25.1%
Annually: 14.6%

C. Platform and digital preferences

Preferred investment sectors:
Technology: 29.1%
Services: 20.5%
Exports: 15.1%
Health: 9.8%
Agriculture: 10.4%
Others: 15.1%

Use of digital investment platforms:
Regularly use digital platforms: 19.9%
Rarely use digital platforms: 25.3%
No experience, but willing to learn: 50.2%
Prefer traditional investment methods: 4.6%

Importance of guarantees and insurance for investments:
Very important: 39.8%
Somewhat important: 35.2%
Not very important: 15.4%
Not important at all: 9.6%

Preference for receiving investment information:
Email: 39.6%
Messaging apps (WhatsApp, Telegram): 29.7%
Social media: 15.2%
Website updates: 10.4%
Other: 5.1%

D. Long-Term investment perspective

Time willing to keep investment without withdrawing funds:
Less than 1 year: 25.0%
1-3 years: 40.3%
3-5 years: 24.7%
More than 5 years: 10.0%

Percentage of monthly income willing to invest in Crowdfunding:
Less than 10%: 42.6%
10%-25%: 37.8%
26%-50%: 20.0%
More than 50%: 4.6%

Attitude towards reinvesting gains on the platform:
Definitely yes: 30.1%
Possibly yes: 50.3%
Possibly no: 14.9%
Definitely no: 4.7%

Appendix C

SME Survey Questions (Translated)

1. **How would you classify the size of your business based on the number of full-time employees?** (Multiple Choice)
   - Microenterprise (1-10 employees)
   - Small business (11-50 employees)
   - Medium business (51-200 employees)
2. **How long has your business been in operation?** (Multiple Choice)
   - Less than 1 year
   - 1-3 years
   - 3-5 years
   - More than 5 years
3. **What was your business's approximate annual revenue last year?**
   - Less than 348,000bs
   - 348,000bs - 696,000bs
   - 696,001bs - 3,480,000bs
   - More than 3,480,000bs
4. **If you were to seek a loan today, what is the approximate amount you would require?** (Multiple Choice, in USD or local equivalent)
   - Less than 34,800bs
   - 34,800bs - 69,600bs
   - 69,601bs - 139,200bs
   - More than 139,200bs
5. **What would be the primary purpose for seeking this loan?** (Multiple Choice)
   - Working capital (e.g., inventory, payroll)
   - Business expansion (e.g., opening a new location)
   - Equipment purchase
   - Other
6. **What is the maximum annual interest rate you would consider acceptable for a business loan?** (Multiple Choice)
   - Less than 8%
   - 8% - 12%
   - 12% - 16%
   - More than 16%
7. **What would be your preferred repayment period (loan term) for a new business loan?** (Multiple Choice)
   - Less than 1 year
   - 1-3 years
   - 3-5 years
   - More than 5 years
8. **Which of the following best describes your company's past experience with applying for traditional business loans from banks?**
   - We have never applied for or taken a loan before.
   - We have successfully taken 1-2 loans in the past.
   - We have successfully taken more than 2 loans.
9. **What has been the single greatest difficulty your business has faced when trying to access credit from traditional banks?**
   - High-interest rates
   - Collateral requirements
   - Excessive bureaucracy and paperwork
   - Lack of a long financial history
10. **When seeking a loan, how important is it to you that the lender also provides financial advisory services?**
    - Very important
    - Somewhat important
    - Not very important
    - Not important at all

11. **Before this survey, how familiar were you with the concept of "crowdfunding" as a way to finance a business?**
    - Very familiar
    - Somewhat familiar
    - Slightly familiar
    - Not familiar at all
12. **How willing would you be to consider crowdfunding as a financing alternative for your business?**
    - Definitely willing
    - Possibly willing
    - Unlikely to consider
    - No interest
13. **If you were to use crowdfunding, which model would you prefer?**
    - Debt crowdfunding (receiving a loan that you repay with interest).
    - Equity crowdfunding (selling a small percentage/shares of your business to investors).

Appendix D

Summary of SME Survey Responses (Translated, Amounts Converted to USD)

A. SME demographics

Size of business (Number of employees):
Microenterprises (1-10 employees): 36.67%
Small businesses (11-50 employees): 46.67%
Medium businesses (51-200 employees): 16.67%

Business age:
Less than 1 year: 10.00%
1-3 years: 40.00%
3-5 years: 33.33%
More than 5 years: 16.67%

Annual revenue:
Less than $50,000: 23.33%
$50,000-$100,000: 43.33%
$100,000-$500,000: 26.67%
More than $500,000: 6.67%

B. Financing needs and borrowing behavior

Amount of loan required:
Less than $5,000: 20.00%
$5,000 - $10,000: 33.33%
$10,000 - $20,000: 30.00%
More than $20,000: 16.67%

Main purpose of the loan:
Working capital: 43.33%
Business expansion: 30.00%
Equipment purchase: 20.00%
Other: 6.67%

Maximum interest rate acceptable:
Less than 8%: 10.00%
8%-12%: 27.00%
12%-16%: 40.00%
More than 16%: 23.00%

Preferred loan term (Repayment period):
Less than 1 year: 30.00%
1-3 years: 47.00%
3-5 years: 17.00%
More than 5 years: 6.00%

C. Barriers to traditional financing

Previous experience with business loans:
Never taken a loan before: 27.00%
1-2 loans in the past: 47.00%
More than 2 loans: 26.00%

Main difficulties in accessing credit:
High-interest rates: 37.00%
Collateral requirements: 27.00%
Bureaucratic procedures: 23.00%
Lack of financial history: 13.00%

Importance of financial advisory services along with loan:
Very important: 33.00%
Somewhat important: 53.00%
Not very important: 10.00%
Not important at all: 4.00%

D. Interest in alternative financing (Crowdfunding)

Familiarity with Crowdfunding:
Very familiar: 13.00%
Somewhat familiar: 40.00%
Slightly familiar: 30.00%
Not familiar: 17.00%

Willingness to consider Crowdfunding as an alternative:
Definitely: 43.00%
Possibly: 37.00%
Unlikely: 17.00%
No interest: 3.00%

Preferred funding model:
Debt crowdfunding (loans with interest): 54.00%
Equity crowdfunding (selling shares in the business): 46.00%

Appendix E

Summary of Platform Metrics

INVESTMENT BEHAVIOR AND PATTERNS

Amexpo (Mining export - silver & lead)

- Projects Funded: 3 projects
- Investment Per Project: 20,000 Bs
- Total Investment: 60,000 Bs
- Initial funding date for phase 1: 08/22/2024 (funded in less than 2 weeks)
- Initial funding date for phase 2&3: 12/22/2024 (funded before the campaign was launched)
- Investor Structure: Each project was funded by 2 investors contributing 10,000 Bs each, except for project 3 which was funded by a single investor (20,000 Bs)
- Total Investors: 5 investors ("big fish" investors only)
- Project Duration: 4 months each (final phase returns until April 2025 as project 2 and 3 ran simultaneously)
- Collateral provided: Mining product weighing machinery and mineral smelting machinery

MaxiKing (Mattress seller)

Phase 1 Maxiking El Alto (funded)

- Projects Funded: 1 project
- Investment Per Project: 60,000 Bs
- Investor Structure:
  - 1 investor contributed 20,000 Bs
  - 25 investors contributed 1,600 Bs each
- Total Investors: 26 investors
- Initial funding date: 07/17/2024 (Took over 2 months to get fully funded)
- Project duration: 1 year (returns until September 2025)
- Collateral provided: Inventory of mattress, debt convertible to equity

Phase 2 Maxiking Tarija (funded)

- Projects Funded: 1 project
- Investment Per Project: 30,000 Bs
- Investor Structure:
  - 1 investor contributed 10,000 Bs
  - 15 investors contributed 20,000bs. around 1,3333bs per investor on average
- Total Investors: 16
- Initial funding date: 02/04/2025 (Took over 4 weeks to get funded)
- Project duration: 5 months (returns until August 2025)

Phase 3 Maxiking Santa Cruz (ongoing)

- Investment Goal: 60,000 Bs
- Current Progress: 50,000 Bs raised so far
- Initial funding date: 05/26/2025
- Total Investors currently: 3 big fishes (over 5,000bs in investment) and 10 smaller investors; 13 investors
- Investor Contributions: Ranging from 500 Bs to 15,000 Bs
- Project Duration: 1 year (returns until July 2026)

CincoMarket (24/7 minimarket)

- Projects Funded: 1 project
- Investment Per Project: 25,000 Bs
- Total Investment: 25,000 Bs
- Initial funding date: 10/05/2024 (took 1 week to get funded)
- Investor Structure: 1 investor funded the entire project
- Project Duration: 5 months (returns until March 2025)
- Note: CincoMarket initially planned a second phase but decided to seek alternative financing.
- Collateral provided: inventory

MHW3 Bomber (Coffee machines importer)

- Projects Funded: 1 project
- Investment Per Project: 45,000 Bs
- Total Investment: 45,000 Bs
- Initial funding date: 05/04/2025 (took 17 days to get funded)
- Investor Structure: 1 investor funded the entire project
- Project Duration: 6 months (returns until November 2025)
- Collateral provided: inventory + debt convertible to equity

Taqueria Monterrey (Taco restaurant chain)

- Projects Funded: 1 project
- Investment Per Project: 40,000 Bs
- Total Investment: 40,000 Bs
- Initial Funding date: 05/21/2024 (campaign funding began being committed even before the official platform launch); the project took 6 weeks to get funded)
- Investor Structure: Various investors (undisclosed individual contributions)
- Project Duration: 12 months (returns until July 2025; at least this was what was scheduled before default and funding withdrawal)
- Status: Defaulted due to the economic impact of wildfires in Santa Cruz
  - 92% of investors agreed to move their funds to MaxiKing's first phase, and eventually, all complied.
  - Collateral provided: inventory and firms' transport minitruck

INVESTMENT VALUE METRICS

- Total Investors Across Projects: Varied across projects, but concentrated among a few high-value investors
- Average Investment Value Per Investor: ≈ 4,354.83 Bs

AVERAGE YEARLY RETURN ACROSS ALL PROJECTS

Each SME's project had different return rates based on risk:

- Amexpo: 14.57% yearly return
- MaxiKing: 15.46% yearly return
- CincoMarket: 18.15% yearly return
- MHW3 Bomber: 16.23% yearly return
- Taqueria Monterrey: 17.36% yearly return

Average Yearly Return Across All Projects: 16.35%

MINIMUM TICKET VALUE AND MAXIMUM INVESTORS PER PROJECT

Each project had a different minimum ticket value depending on the SME's preferred number of investors:

Project	Minimum Ticket Value (Bs)	Maximum number of investors allowed
Amexpo	500	40
Maxiking	500	120
CincoMarket	250	100
Taqueria Monterrey	1600	25
MHW3 Bomber	500	90

Average Minimum Ticket Value Across All Projects: 670Bs

OBSERVED VARIABLES TO BE ANALYZED

PLATFORM PERFORMANCE VARIABLES

SME funding success rate:

Measurement:

- Binary (0/1): 1 if the project was fully funded, 0 if not.

Maxiking phase 1: 1
Maxiking phase 2: 1
Maxiking phase 3: 0
Taqueria Monterrey: 0
Amexpo: 1 (all phases)
MHW3 Bomber: 1
CincoMarket: 1

Prospera's market growth in Bolivia:

Measurement:

- Number of new SMEs or existing ones new projects applying for funding per quarter (around 2 per quarter)
- Growth rate of total investment on the platform (passed in a year from 0bs as we started operations in June 2024 to 270,000bs to July 2025) (Total new investments on Prospera (from May 2024 to July 2025= around 80 in total between 'big fishes", small investors and recurring investors)

Total volume of transactions per quarter (Bs invested per quarter):

2nd quarter of 2024: 40,000bs
3rd quarter of 2024: 80,000bs
4th quarter of 2024: 65,000bs
1st quarter of 2025: 30,000bs
2nd quarter of 2025: 95,000bs

SME-SPECIFIC VARIABLES

- **Business age:**
  Maxiking: More than 5 years
  Amexpo: More than 5 years
  Taqueria Monterrey: 1 year
  MHW3 Bomber: 1-3 years
  CincoMarket: 1 year
- **Business sector (Categorical: retail, services, manufacturing, tech, etc.):** Certain industries (e.g., technology, services, exports) may attract more investors if consistent with data.
  Maxiking: Retail
  Amexpo: Minery
  Taqueria Monterrey: Services
  MHW3 Bomber: Importer (Retail)
  CincoMarket: Retail
- **Revenue size before funding (Continuous: Bs per year):** Higher-revenue SMEs may be more likely to secure funding.
  Amexpo: more than $500,000
  Maxiking: $100,000
  Taqueria Monterrey: Less than $50,000
  MHW3 Bomber: Between $50,000 and $100,000
  CincoMarket: Between $50,000 and $100,000
- **SME Location (Categorical: La Paz, Santa Cruz, Cochabamba, etc.):**

Maxiking: La Paz, El Alto, Santa Cruz, and Tarija
Amexpo: Potosí
MHW3 Bomber: Santa Cruz
Taqueria Monterrey: Santa Cruz
CincoMarket: La Paz

INVESTOR SPECIFIC-VARIABLES

- **Investor risk tolerance (Categorical: Low, Moderate, High):**

Amexpo: Low Risk
Maxiking: Low-moderate risk
MHW3 Bomber: Moderate risk
CincoMarket: High risk
Taqueria Monterrey: High risk

- **Investor previous experience (1 = Has prior investment experience, 0 = No experience):**

Amexpo: 1
Maxiking 1 and 0s
MHW3 Bomber: 1
CincoMarket: 1
Taqueria Monterrey: More 0s than 1s

Appendix F

Sergio Rocha's Interview Transcripts (Translated and Curated)

Interview with Sergio Rocha

Sergio Rocha: The first phrase that comes to mind is "rigid regulation." Let me give you some context about what has happened in the Bolivian case.

Bolivia has always had a somewhat outdated legal framework for banking. Our first banking law was a product of the Kemmerer Mission, a group of North Americans hired by the government of Hernando Siles because financial activity wasn't properly regulated before then. This was despite the fact that banks already existed; the Banco Nacional de Bolivia was established in the 19th century, and the Banco Mercantil in the early 20th century, but there was no adequate regulation. President Siles saw the need to regulate the sector and brought in the Americans to create a law that remained in effect, believe it or not, until 1993.

Until then, the law was patched up with supreme decrees—the "Bolivian way" of doing things. These were temporary fixes to regulate basic issues or specific activities, but they were insufficient. The evolution of banking and financial activities was immense and outpaced the legislation.

Then, in the 1990s, a government with a distinctly liberal orientation introduced the Law of Banks and Financial Entities, Law 1488. This law was a turning point. Before it, several banks had failed due to the lack of regulation. The absence of proper oversight allowed bankers of that era to engage in mismanagement, such as related-party lending, which led to a shock in the banking sector. This highlighted the urgent need to modernize regulation.

Under the liberal framework of the time, the new law was implemented. Its main objective was the proper regulation of financial intermediation, establishing a key prohibition: financial intermediation activities could not be carried out without prior state authorization. This required obtaining a financial operating license from the then-Superintendency of Banks and Financial Entities. While it created a framework for strengthening the financial system, it didn't impose obligations regarding equity reinforcement.

From that point on, banking regulation became strict and restrictive. Activities involving fundraising (capturing funds) and lending (placing funds) could not be performed without state authorization. This was in 1993 and it set the tone for all future regulation.

Later, during the government of Evo Morales, which began in 2005, the Financial Services Law was enacted. This law had a less liberal slant than Law 1488 but maintained the strict state control. In fact, it introduced robust consumer protection, which the previous law lacked, and even hardened criminal penalties. For instance, it amended the penal code to criminalize unauthorized financial intermediation.

So, these two laws, despite their political differences—one liberal, the other more socially oriented—have both maintained a line of strict regulation. You cannot engage in financial intermediation, meaning capturing or placing funds, without an operating license and without meeting certain capital requirements. You can't start a financial business if you don't have the minimum legal capital stipulated in the law for your specific segment. Law 393, for example, defines various entities like multiple banks, cooperatives, housing finance entities, and community banks, each with its own minimum capital requirement to obtain a license. Additionally, specific regulations are created for each of these activities.

If you look at Articles 118 and 119 of the Financial Services Law, they specify which financial operations are permitted. The law also details which types of operations each financial entity can carry out. Article 120 then states that any other type of financial operation one wishes to develop must be previously authorized and, crucially, regulated by ASFI (the Financial System Supervision Authority). So, for example, an entirely new operation like crowdfunding isn't listed in the law. It falls under the umbrella of Article 120, which means that for it to be implemented, ASFI must first authorize the possibility of such operations and then issue specific regulations for them.

This, of course, creates a regulatory straitjacket. It's not necessarily a bad thing, because you must remember that Article 300 of the Bolivian Constitution declares financial operations to be of public interest. This is because they involve the public's money. Under this constitutional umbrella, the state holds a monopoly on regulation, and no financial operations can be developed without prior authorization and regulation.

So there you have it, a regulatory straitjacket that is healthy, provided that the regulation keeps pace with the evolution of financial operations and that the regulatory body is equipped to manage these new needs.

This brings me to a concern I have, particularly for new ventures like yours, Prospera, and for other young people entering the financial sphere in Bolivia. You know that a supreme decree for Fintechs was recently issued.

Carlos Fernando Chacón: The "Fintech Law," yes. It's a supreme decree, right? It states that fintechs have 40 days to start regulating themselves, but so far, they haven't explained what kind of regulation, what the requirements are, or what this implies for them.

Sergio Rocha: Exactly. The decree mentions the exchange of virtual assets. I think it's primarily focused on that. Here in Bolivia, fintech has mainly developed through payment gateways that support banks. But recently, circumstances have forced us to start working with virtual assets. Previously, the state had completely banned any transactions with virtual assets. Now, with the dollar crisis, they've had to open up. They issued a ridiculous rule saying that everyone can now conduct operations with virtual assets, but at their own risk.

Carlos Fernando Chacón: I remember that. The Central Bank said it, but without ASFI's approval.

Sergio Rocha: And ASFI also issued a rule stating it was at the user's risk, which goes directly against its primary mission under the constitution to regulate financial activity because it's of public interest. You can't just leave the public to fend for themselves.

Carlos Fernando Chacón: And it contradicts Article 120, which says any activity not previously mentioned will be regulated by ASFI. How can they simultaneously say, "We don't know how to regulate it, so it's your own responsibility"?

Sergio Rocha: Exactly. They've seen the boom in crypto, driven by public necessity. I would say that USDT is practically the official currency in Bolivia right now. Everyone is desperately starting to transact with it. So they said, "We have to do something."

The objective is to regulate virtual assets, but the decree lumps everything together: transfers, custody, administration of assets. If you look at Article 3, it refers to virtual assets. Then, almost as an afterthought in Article 5, they talk about blockchain solutions and tokenized assets. And smuggled in there, you find payment platforms, financing platforms, and other enterprise financial technologies.

Carlos Fernando Chacón: It’s like at the end of the law they add, "By the way, these are also regulated." And that's where alternative finance like crowdfunding would fall.

Sergio Rocha: Precisely, under "financing platforms." The current regulated financing is done through banks, IFDs (Financial Institutions for Development), or community banking, which are very small-scale operations for community projects and are already regulated under different frameworks. It seems they've tried to shoehorn crowdfunding into this new decree.

My fear is that they will try to regulate fintechs as if they were banks. This is due to the technical limitations of the regulator. They'll want to impose requirements like a compliance officer and minimum capital, and they'll end up killing the fintech.

Carlos Fernando Chacón: Right, a compliance officer, minimum operating capital... they'll impose a host of things that a fintech, which needs to be agile and digital, cannot comply with. The whole point of fintech is to bypass the traditional financing processes and requirements to be more agile and reach customers directly.

Sergio Rocha: Exactly. So, what's my conclusion? We are currently in a crisis. Everyone knows we are in an economic crisis, but I would also say we are in a normative crisis. The current model is exhausted, and the regulation is exhausted too. New models, like the one you are developing, are emerging, dealing with financing or auxiliary financial services, and there is no regulation for them here in Bolivia.

I believe we are in a transitional phase brought on by this crisis. The political and economic model has run its course, just as neoliberalism did before the new regulations in '93. We are living through a new era now. And this decree is just a patch.

Carlos Fernando Chacón: It's a patch, and we don't know what the real regulation will look like. My impression from reading the decree is that they're saying, "Okay, we'll deal with this now, and we'll look at the other things later." They are trying to immediately address everything related to crypto and digital assets, while acknowledging that other things exist and saying they'll get to them later.

Sergio Rocha: Exactly. The urgent matter right now is to regulate crypto assets in some way. But I don't think they are adequately prepared for that, much less for other types of financial activities.

Carlos Fernando Chacón: Some countries have specific crypto laws. I think as a regulator, you can't just lump everything digital—assets, services, finance—together. There's a huge difference between a payment gateway and a digital financial service. For example, a service that digitizes your tax compliance is also a financial service, but you can't compare it to a bank.

Sergio Rocha: Of course not. It's a different type of service. The FIU (Financial Investigation Unit) went to such an extreme. First, it issued a rule saying anyone transacting with crypto assets would be an "obligated subject." How can you say that when the entire public is transacting with crypto? They obviously rescinded that, but recently they issued a very similar rule again.

This shows you that while a need for regulation has been identified, they don't know how to do it. They are overwhelmed by the urgency of the situation—we are taking on water everywhere—and by their own technical incapacity.

The main conclusion is that financial regulation in Bolivia is in crisis because it is failing to keep up with the new financial technologies that are emerging as a result of the broader crisis we are living through.

Carlos Fernando Chacón: So that's the perspective on the fintech law, crowdfunding, and how they will have to adapt. It seems it won't be enough to have a supplemental decree; a full-fledged fintech law will be necessary. It has to be a proper bill that contemplates all these new models.

Sergio Rocha: Of course, it has to be a law. I completely agree with you. From a legal standpoint, if the constitution—your supreme norm—states that financial activity is of public interest, then you must regulate it through a law. And all aspects related to financial activity must be properly incorporated into that law. You can't just apply patches, especially when you don't fully understand the issue.

Carlos Fernando Chacón: I remember last year when I was at Banco Mercantil, the FIU asked banks to investigate and report people making crypto transactions. Today, that's unthinkable because the whole population uses crypto out of the need for dollars. Is the FIU going to investigate everyone and close all their accounts? Impossible.

Sergio Rocha: And what has the state itself resorted to doing? Since there are no dollars, it has started paying its foreign debt with crypto assets. So, should the state be investigated too? Of course not. It's madness what they are trying to do, and they've been completely overwhelmed.

Carlos Fernando Chacón: Moving to the second part of my thesis, we see that the need for new financial models is overwhelming the regulatory capacity. This is bound to create problems when alternative finance models try to respond to the credit needs of SMEs.

So, my second question is: how does this "strict" regulatory framework you mentioned interact with financing for SMEs from traditional banking? How does this regulation limit access to credit, not because of bank policies, but because of regulatory issues? We see that Bolivia has strict caps on interest rates and on what kind of financial information banks can request. I believe this can affect access to credit for SMEs, both positively and negatively.

Sergio Rocha: Definitely. Let me tell you what has happened. As a product of the social regulation introduced by the MAS government, they have tried to regulate interest rates for certain types of loans.

Let's go back further. During the UDP government in the 1980s, there was an economic catastrophe. When Paz Estenssoro came in with the famous Supreme Decree 21060, he had to apply shock therapy. One of the measures was to liberalize interest rates in the financial sector. Decrees 21060 and 21062 established that both lending (active) and deposit (passive) rates would be determined by the market. This opened up competition among banks, and the market regulated the rates.

This was the case until Law 393. This law maintained the liberalization of interest rates with exceptions for certain types of credit, namely social housing loans. If you want to buy a house and its value is within the range the state sets via a supreme decree, you can access a social housing loan with a regulated interest rate that cannot exceed a fixed percentage. Furthermore, financial institutions are required to allocate minimum quotas of their portfolio to this type of credit.

The same thing happened with the productive sector. They classified businesses as large, medium, small, and micro-enterprises, and for each, they set maximum interest rate ceilings and portfolio quotas for lending to the productive sector.

Of course, medium, small, and micro-enterprises could access interesting rates. But this caused banks to lose interest once they met their quota. They think, "If you are going to regulate my rates, I have no interest in lending more than I have to. I'll meet my quota and that's it, because it's not profitable compared to market rates."

Carlos Fernando Chacón: And what I see is that perhaps the banking system wasn't meeting this need because the regulated rate doesn't reflect the real risk. Maybe the bank would be willing to lend to that client at a much higher rate.

Sergio Rocha: Of course. Microcredit, for example, is expensive, isn't it? It's always expensive because the risk is higher. You don't have secure sources of repayment like you do with a formal company, especially here in Bolivia.

Carlos Fernando Chacón: And there are information frictions. You don't have complete information or collateral.

Sergio Rocha: Exactly. So, this severely affected lending of this type. In fact, just last Friday, a new supreme decree came out that raised the rates, especially for micro and small enterprises. This is an attempt to incentivize financing because we are in a crisis. SMEs are dying for lack of financing. So, the government, in its somewhat irrational way, must have said, "Let's do something." So, they issued this decree to raise the rates a bit. We'll see how it goes and if it incentivizes financial institutions to direct more funds to SMEs. Although, we can't forget the crisis we're in, which has a huge impact. If you have no sales and no activity, you won't generate cash flow, and you won't be a candidate for credit.

Carlos Fernando Chacón: Another thing I haven't seen in Ecuador, Paraguay, Colombia, or Mexico is that in Bolivia, the regulator requires quotas for certain loans. You *have* to grant a certain amount of credit for social housing and for SMEs. At first glance, this might seem like an incentive to increase financing for these sectors, but it could also be perverse and counterproductive.

Sergio Rocha: Of course, it's perverse. As I said, the banks meet their quota and that's it. They have no more interest because the rate isn't practical.

Carlos Fernando Chacón: So, what it does is turn credit from a financial strategy for the bank into a compliance issue, an obligation.

Sergio Rocha: Exactly. A legal obligation. You've distorted the very purpose of financing. I'm no longer financing to make money; I'm financing so the state doesn't sanction me.

Carlos Fernando Chacón: It becomes a kind of public service. "I have to provide this loan at this state-determined rate to this number of people because it's my turn."

Sergio Rocha: That's right. And if you add to that the high levels of informality in our commerce, which require specialized technology and assuming higher, more complicated risks than in other economic segments... Well, the big banks, for instance, aren't very interested in lending to small entrepreneurs or micro-entrepreneurs.

There are, however, institutions that do very well in this niche, like Banco Sol. It's a prime example. It was the most profitable bank last year. It has greater solvency, a higher ROE, etc., more than the big banks.

Carlos Fernando Chacón: Because they focused on a niche that, in Bolivia, can be larger than the large and medium enterprise sectors. They developed an expertise in that type of credit and have been doing it for 30-40 years, since the 80s.

Sergio Rocha: Exactly. But unfortunately, the regulations haven't kept up with the growth of micro-enterprises in Bolivia. Take Prodem, for example. It was a wonderful institution. At one point, it was the first entity to issue smart debit cards and installed ATMs that spoke Aymara and Quechua. It was marvelous. But unfortunately, it was sold to Venezuelan capitals, and now, due to the crisis and lack of incentive, Prodem is fighting for its life.

Carlos Fernando Chacón: Prodem was the group that initially owned Banco Sol, right?

Sergio Rocha: Yes, Prodem was a foundation started by Gonzalo Sánchez de Lozada and others.

Carlos Fernando Chacón: What I've analyzed from the data for Prospera is that in Bolivia, two groups have their credit needs relatively satisfied. One is large companies, because as you said, the big banks aren't interested in lending to SMEs and micro-enterprises, but they will lend to large companies because they are bigger, have the financial backbone to support the credit, and are formal. They will pay you back.

At the other extreme, the needs of micro-enterprises are also met, to a certain extent, by specialized institutions like Banco Sol, Banco FIE, and Promujer. It's the SMEs in the middle that have the least access to financing.

Sergio Rocha: The SME-focused banks, like Ecofuturo, are also struggling.

So, to draw some conclusions: First, there is a misguided regulation with these quotas that, as you rightly said, disincentivizes growth in this financing segment. Second, there is too much informality and no incentive for other entities to acquire the specialized technology needed to serve this segment. So, very few institutions specialize, and while they do well, they are too few. And third, of course, is the current crisis, which hits SMEs and small businesses the hardest.

Carlos Fernando Chacón: And this is also forcing the regulator to make changes it may not be comfortable with.

Sergio Rocha: Exactly. This latest decree was born of urgency.

Carlos Fernando Chacón: People have been talking about a fintech law for a good five years now, saying they are waiting for the right moment. But it seems even five years wasn't enough, because what they've basically said with this decree is: "We are not yet ready to talk about this topic, but we see the need to regulate crypto and digital assets."

Sergio Rocha: Exactly. Now, getting to our topic of crowdfunding and crowd equity. Right now, if the regulation doesn't open up and become more flexible, these models won't be able to enter the market. The word "captación" (capturing funds) is like a bad word here. If you don't have an operating license and aren't regulated, you can't do it.

The new decree talks about "financing platforms." These platforms will inevitably involve "captación," as you know better than anyone. It's undeniable.

So, there needs to be a form of regulation that allows for this "captación" without falling under the extremely rigorous framework that currently exists. These platforms need to be regulated, but not under the same stringent paradigm as banks.

Don't forget that these types of entities raise funds for small projects; their fundraising won't be in the millions. But it is still fundraising. So, there needs to be adequate regulation that moves away from the current paradigm where the regulator sees any "captación" as taking the public's savings and therefore needing intense surveillance to prevent fraud. Of course, there will have to be regulation to prevent scams, but it's lacking right now.

Carlos Fernando Chacón: But it has to be much less intense than banking regulation because it's not the same type of activity. We're not talking about mega-banks making 20,000 loans a day to medium and large companies. Fintechs generally start by focusing on a niche, like crowdfunding for SMEs or for a specific sector like agriculture.

Sergio Rocha: How much is the maximum you've raised for a project? 40,000 Bolivianos?

Carlos Fernando Chacón: Yeah maybe a maximum of 60,000 Bolivianos.

Sergio Rocha: That's nothing. You can't compare that to a bank that raises millions of Bolivianos or hundreds of thousands of dollars in a month. So, there needs to be regulation that is adequate for this segment. There must be regulation, but it must be appropriate.

Carlos Fernando Chacón: So, in conclusion, regarding the connection between regulation, SME credit satisfaction, and the role of alternative finance: the regulator needs to open up and create customized, specialized rules so that alternative financing models like crowdfunding can truly respond to the needs of their target audience.

Sergio Rocha: Definitely. And maybe the path isn't through financial regulation, but through securities regulation. Because with crowdfunding, for example, you are raising capital, but you could also be issuing securities.

Carlos Fernando Chacón: Exactly, that changes things a bit. We're not just in the realm of Law 393; we're also touching on the Securities Market Law, which was created over 30 years ago. Securities as they exist today didn't exist back then.

Sergio Rocha: That law really needs to be modernized. Unfortunately, our stock market activity is minuscule.

Carlos Fernando Chacón: It's minuscule, but I think the law itself is partly to blame. They go hand in hand.

Sergio Rocha: Let me give you an example that's a bit off-topic but relevant. I work at the largest bank in the country, and one of the biggest problems not just for my bank, but for the entire banking sector, is the real estate we hold. When my loan portfolio goes into default, I foreclose on properties and end up acquiring them. Right now, I'm acquiring five or six properties... ...I feel like a real estate agent. I can't have all these unproductive assets that the law says I have to provision for and try to sell within two years. Hundreds of houses, and I can't securitize these assets or generate returns from them. There has to be a legal and financial instrument that allows me to monetize this dead portfolio.

Carlos Fernando Chacón: Exactly, mortgage-backed securities. It's unbelievable that there's no real estate securitization in Bolivia when it's one of the most active markets globally in investment banking.

Sergio Rocha: Exactly. And that's just one example of the limitations of our regulation.

Carlos Fernando Chacón: So, one last question. In the long term, how do you think digitalization and these new financial technologies could change the landscape, not just for fintechs, but for businesses in general in Bolivia over the next 10 years? The role of the regulator here is obviously huge.

Sergio Rocha: Well, you know that one of the most dynamic sectors in the world is the financial sector. There are tons of new models, new methodologies for doing business, all going hand-in-hand with technological development. Take Open Banking—we don't even have a whisper of that here in Bolivia.

These normative paradigms have to be broken because digitalization is a reality. If my regulator is not up to the task, it needs to be changed. Unfortunately, we live in an over-politicized country, and this is part of the politicization that I hope will change with a new government. Hopefully, it will be a liberal-leaning government because liberalization will allow for that opening.

Carlos Fernando Chacón: I get the sense that financial regulation in Bolivia is more of a political issue than a financial or economic one.

Sergio Rocha: It is a political issue. Of course, it should be technical, but it is distorted by political guidelines. You can bet on that. Law 393 has a very heavy political charge, and the rules that ASFI has been issuing lately also have a heavy political charge.

Let me give you an example. The dollar exchange rate is falling because of a rule President Arce issued that now state-owned companies cannot transact with crypto assets. This has affected USDT, which is the benchmark. But there's another rule that says financial institutions cannot buy or sell dollars at anything other than the official rate set by the Central Bank, which is 6.97 Bolivianos to 1 US Dollar.

So, what does that mean? If I have a credit card and need to buy something from Amazon or pay for my ChatGPT subscription, I have to do it in dollars. The bank will take the money from my debit card or credit line at the 6.97 rate, but it has to go and buy the dollars to pay the provider at the real market rate, which might be 15 Bolivianos to 1 Dollar. The bank has to absorb that gap.

So, what does the bank do? It says, "This is illogical." A transaction that should cost me 120 Bolivianos now costs me 255. To regulate that, I have to charge you a commission that equals the difference, because that's my cost. I'm a bank; I don't give away money for free.

But then ASFI comes out with a rule saying, "No, banks cannot charge more than a 3% commission." So, in the end, what do I, as a bank, have to do? Tell the client, "Sorry, you can't use your card beyond this limit." And who is harmed? The user. I can't even subscribe to Netflix, even though I have the money, because the bank won't let me, because ASFI has put a cap on the commission. That rule, which is absolutely absurd, has a political content. As the government, "I have to show that I am regulating."

This not only prevents the financial system from growing, but it also harms it. It threatens the stability of the financial system.

Carlos Fernando Chacón: Exactly. And that answers the biggest questions about Bolivia's position on these new financial instruments. Fintech, at its core, is financial technology that seeks to fix a disruption or friction in the current financial system. Everything is fintech in a way. The fact that contracts went from being written on stone to being written on paper is fintech because it corrected a market friction.

Alternative financing models like crowdfunding and crowd equity are designed to correct these frictions that exist in Latin America regarding financing for SMEs and individuals. But it seems that in Bolivia, the path is different. For the moment, not even the alternatives can fix these frictions as long as the regulation doesn't allow them to.

Sergio Rocha: And the main conclusion you can draw from this is the exhaustion of the model. The exhaustion of this system. It's exhausted. We've reached the end. So, we have to move in a new direction because there's nowhere else to go.

Carlos Fernando Chacón: It can't be stretched any further. The moment will come, and it's already happening out of obligation, where these attempts to patch things up, while not a permanent solution, show that the system is exhausted.

Sergio Rocha: That's right. You don't put a patch on your pants when they're already completely torn.

Carlos Fernando Chacón: Exactly. Well, thank you for your time.

Sergio Rocha: Thank you. Anything you need.

Appendix G

José Díaz' Interview Transcripts (Translated and Curated)

interview with José Díaz

José Díaz: Perfect. Well, I'm José Díaz. I am a lawyer with master's degrees in business law and also in digital law, specializing in Blockchain and Artificial Intelligence. I have completed studies related to the financial sector in the United States, South America, and Europe. I also have 25 years of experience in the corporate sector, particularly in the financial system, covering both banking and the securities market. I had the opportunity to participate in the regulatory development of the framework that currently governs the securities market. I advise brokerage firms, investment fund managers, banks, and issuers on structuring financing through public and private offerings.

Carlos Fernando Chacón: Excellent. So, for the first question, just to get some general context, how would you define the Securities Market Law in Bolivia in a few words?

José Díaz: The Securities Market Law has allowed Bolivia to develop a modern regulatory framework—or at least, it was modern for a time. We have a fairly complete regulatory system for the securities market. Thanks to this law, new players have been introduced, such as investment fund management companies, securitization companies, and central securities depositories.

A key development was enabling securities to be traded and represented through book-entry records, meaning they no longer have a physical, certificated form but are essentially dematerialized. These have been the main contributions of the law. However, it is now time to update and modernize it for better development. It's also important to recognize that our market is fundamentally a debt market, not an equity market. This is more a result of market development than regulation because the framework does permit the trading of both debt and equity.

Carlos Fernando Chacón: Okay, so the prevalence of debt over equity is more of a market demand issue than a regulatory one. On that note, how does this regulatory framework specifically address digital financial intermediation, particularly within the securities market? Because it is still a form of financial intermediation.

José Díaz: Yes. In the securities market, we have direct financial intermediation. Unlike in banking, the intermediary here is the brokerage firm. It essentially connects the two parties directly—the entity seeking funds (the issuer) and the investor. So yes, there is an intermediary.

Regarding the digital aspect, the incorporation of the central securities depository and the dematerialization of securities have been crucial. The fact that securities are represented by book-entries registered at the depository has created significant dynamism in trading, compensation, and settlement on the stock exchange, making these processes much more expeditious. This has also helped with the valuation of securities in various portfolios.

From a technological standpoint, however, there is currently no regulation addressing the tokenization of financial instruments. There is no rule that allows financial assets like stocks or bonds to be represented digitally as tokens. They can be represented as book-entries, which is a system established by law that provides a new way to manage, transfer, and register these securities, but there is no law for digital, token-based representation.

Carlos Fernando Chacón: That leads to my next question. Given these limitations, does the current regulation facilitate or limit financial innovation in securities-based financing? What is the impact of the absence of a law governing this?

José Díaz: There is indeed a limitation right now. Ideally, we would have a law stating that securities can be represented digitally. However, there might be a way to tokenize securities that are already registered as book-entries. This path might not require a new law but rather a change in the regulations issued by ASFI (the Financial System Supervision Authority). Through a modification of these existing regulations, it could be established that digitally represented securities can be traded. The premise here would be that you are not creating a new legal regime, but rather tokenizing a value that is already represented in a book-entry account. This would require addressing some technological and regulatory issues, but it wouldn't necessarily have to end in a new law.

However, new regulations would be needed to allow these securities to be traded on a blockchain platform, which is what tokenization implies. This is something that could be managed at the regulatory level without needing a law, at least initially. My reasoning is based on what has happened in other jurisdictions. With their pre-existing securities market legislation, they have been able to take a step towards new technology by using regulatory sandboxes. These sandboxes help determine the feasibility of making regulatory adjustments without immediately needing to pass a new law. So, there could be a preliminary step before legislation that makes it feasible to trade securities in a digital world.

Carlos Fernando Chacón: Of course. Recently, there has been talk of the "fintech law" that ASFI announced. They haven't provided much information yet, other than a deadline for fintechs to adapt to it, without explaining the specifics. It seems to be just about registering as a fintech and that's it. What is your perspective on this? Do you think it will help create new financing models, or could the regulation become so strict that it actually discourages the emergence of these new investment and financing models?

José Díaz: That's a very good question because that is the risk: that the new regulation, instead of promoting new financing vehicles, becomes an obstacle to their development. That's why it's important to look at experiences abroad and consider developing a regulatory sandbox first. A sandbox is like a pilot program for developing operations and transactions in an environment that includes issuers, clearing and settlement entities, and investors. It helps to establish how much of the existing regulation can be applied and what new rules are necessary.

In my opinion, the first step should be a regulatory sandbox. Unfortunately, a good sandbox requires the willingness of the regulatory body. And in this case, it's not just the financial system regulator, but also tax authorities. All actors in this new ecosystem should be part of a sandbox project. This would be a preliminary step to ensure that the resulting regulation is balanced and promotes the development of these new tools, rather than creating obstacles.

Carlos Fernando Chacón: Going back to the fintech law, in the case of a platform like Prospera, the goal is not to be a complete substitute for traditional financing, but to be an alternative for SMEs and, on the other side, an investment alternative for ordinary people. This all depends on the fintech law and the investor protections it requires. Drawing from your experience with foreign regulations, like in Paraguay or Colombia, what specific criteria do you think would be beneficial if adopted in Bolivia's fintech law?

José Díaz: Unfortunately, and I say this deliberately, the most orderly way to do things would be to first have a data protection law. It's fundamental. Bolivia does not have one. Serious regulatory frameworks, like those in Europe or Singapore, are built on a foundation of data protection. The recent supreme decree only refers to "fintechs," but you need to regulate the *activity*, not just the company type.

The regulation must cover both locally created fintechs and those from other countries that want to operate here. For example, in other countries, a foreign fintech must establish a local branch to provide services. That kind of regulation should be established. Some might argue for open regulation for foreigners—I read an article today where someone from the government proposed this. It depends because what investors seek, and what must be protected, is security. If you own a token on a platform and that platform disappears, who do you complain to?

So, you need to regulate things like minimum capital, control of information management, and technological development, all based on the principles of technology and tokenization. There should be prudential regulations and safeguards to ensure the activity is secure for the investor. One thing the regulation absolutely must include is control for anti-money laundering and counter-terrorism financing (AML/CFT). That is a basic international standard. Beyond that, you need technological and operational safeguards to provide security to the investor.

As I said, we don't have a data protection law, and this needs to be managed comprehensively, including tax issues. It requires a very orderly and systematic development. I believe it will happen gradually, but much depends on the will of the regulator. Unfortunately, we are far from having good regulation in this area. The key is the regulator's willingness to move towards a framework that is well-adjusted to our reality and doesn't hinder the development of these financing alternatives.

Carlos Fernando Chacón: Now, moving from the fintech law to the securities market regulation itself, how would you evaluate Bolivia's regulations compared to more flexible ones in the region, like Paraguay or Mexico? With the current absence of a fintech law, does the securities market regulation allow for the emergence of these types of fintechs, or are there still gaps that would discourage their operation?

José Díaz: The current securities market framework does have limitations. Regulations would need to be adjusted to accommodate these new tools. However, I believe we have a very good foundational development that only requires adjustments, not the creation of an entirely new regulatory framework or new laws, specifically concerning the operation of these entities. I would call them "adjustments" rather than "new regulations". Of course, this is aside from the need for a data protection law, which can be developed over time. There is a good base right now to make adjustments so these instruments can operate under the existing securities market regulation.

Carlos Fernando Chacón: This seems to contrast with the banking regulation from ASFI, which is much stricter for debt and credit intermediation. In that area, it’s not about adaptations; a total restructuring is needed. But for the securities market, you see it more as implementations that can be built on the existing base. Perhaps it's a regulatory framework that is more open to new implementations without having to change its foundations. This could be a viable alternative for crowdfunding or other alternative financing models.

Since we're talking about the securities market, we must also talk about investment. For these models to succeed, they depend not only on the need for financing but also on the protection and security offered to investors to encourage them to participate. Do you think the current rules offer sufficient protection for individual investors on existing platforms, and would they be sufficient for new digital platforms? Or are more specific regulations, like the data protection law you mentioned, needed?

José Díaz: A data protection law is an important element, though I wouldn't say it's an absolute precondition. However, even today, I believe our securities market regulations have all the necessary provisions to protect investors, comparable to any other market. First, there are significant technological requirements. We already have an entity, the central securities depository, that operates with advanced technology for book-entry registration.

Second, regarding information management, there are requirements for periodic financial information and the disclosure of relevant events. The market standards for this are quite high, with penalties for non-compliance. There is also extensive information that an issuer must provide to investors during an issuance. This existing framework is practically comparable to what you see elsewhere. If you look at token offerings in other countries, you'll see many similarities in the information disclosure requirements. For instance, they have a "white paper," a document required by regulation that contains all the information about the company, the project, and the issuance conditions. This is equivalent to what we call a "prospectus" in our regulations, and they have basically the same structure.

The legally protected interest is a very important concept to keep in mind. In the banking sector, it is "savings." In the securities market, it is "information". Information is what gives the investor the opportunity to make good decisions. Therefore, it must be sufficient, truthful, and timely. We have all the regulations in place to ensure these principles are met.

Carlos Fernando Chacón: To close this part on risk and investor protection, from a regulatory standpoint, what aspects do you consider essential for a digital platform like Prospera to build trust and security in the market under the current framework?

José Díaz: I would say that Prospera, as a platform, should require the issuers or those raising financing to comply with information standards. Providing sufficient, truthful, and timely information is fundamental. Transparency is key.

Also crucial is safeguarding the operation itself—the clearing and settlement, ensuring that the investment amounts and all issuance conditions are crystal clear and are complied with. Then there are the technological safeguards to prevent hacking, cyberattacks, and everything else that comes with managing technology today. Basically, it would have to comply with all of that, even in the absence of a specific regulation dictating it, by always aiming to protect the investor's interests and security. Another fundamental element is KYC (Know Your Customer). This is essential for aligning with global standards and preventing these vehicles from being used for money laundering or financing terrorism. Complying with these norms is a fundamental factor for such platforms.

Carlos Fernando Chacón: To conclude, what would be your recommendations for the future of regulation? What are the next necessary regulatory steps to support the development of alternative financing platforms in Bolivia?

José Díaz: It's fundamental to start developing a data protection law; I know there were drafts. Second, regulate not just the fintechs, but the operational framework within which they can develop. Fintechs will also work with issuers who may already be regulated by the Securities Market Law, but there is a gap concerning digital assets and tokens, especially in tax law. These are elements that need to be addressed.

My recommendation is that any new regulation or legislation should emerge from a regulatory sandbox, an exercise that has been successful in many countries. A pilot program could run for one or two years to identify, based on practice, what elements need to be regulated. In this scenario, actors would operate with certain regulatory exemptions in a real but controlled environment. This is the best way to identify the regulation that best fits our reality, our regulatory authorities, and the actors who will participate in this space in our country.

Carlos Fernando Chacón: So, you believe there needs to be a dialogue between regulators, traditional financial institutions, and fintech startups to foster a more favorable regulatory sandbox?

José Díaz: Exactly. There are examples in Colombia, Spain, and Mexico. Colombia has done a regulatory sandbox, as have Chile and Brazil. Brazil has very good regulations in this area.

Carlos Fernando Chacón: It's no surprise that Brazil is the leader in fintech in Latin America, followed by Mexico. Finally, my last question: what specific recommendations would you give to a fintech platform seeking to operate and scale within the current Bolivian regulatory framework, especially given the current unfavorable economic climate?

José Díaz: One would have to analyze the situation. A platform starting out could perhaps avoid the securities market for now. An alternative is to operate through contracts. You could structure agreements with the issuer based on a revenue-sharing model. The financing would be linked to the profit a company generates, but not through the issuance of shares. It would be done through investment contracts, or revenue share agreements. If it's done through contracts, it doesn't fall under the Securities Law because you are not dealing with securities. It's simply a contract where someone gets a share of the company's profit without it being through an equity stake. There is also no financial intermediation in that model because there is direct access to the company for the investor through the platform.

This model could exist outside of regulation, except for the fintech itself, which could be subject to regulation under the new supreme decree. But not the entire activity. I think the government is proceeding very carefully, as its decree was not very ambitious and only refers to fintechs, and was likely more aimed at digital assets, which are seeing unusually high demand given the current situation in Bolivia.

Carlos Fernando Chacón: Well, with that, we have a clearer idea of the situation regarding the relationship between the securities market law, fintechs, and the new regulations. We see how actors can operate now and what might happen in the future. Perhaps ASFI will manage to implement a reasonable regulation that provides both investor protection and the flexibility for companies to develop successfully. The demand for these alternative financing methods exists because of frictions in the current market. If there were no such frictions, there would be no demand from companies seeking financing or from investors looking for new options.

José Díaz: Exactly. For example, an interesting phenomenon is happening with tokenization because it democratizes access to investment. I could be an ordinary citizen. I was just looking into the tokenization of livestock. I know nothing about cattle, absolutely nothing. But a platform offers me the chance to invest in livestock tokenization with a ticket of just $100. So, I might say, "Okay, I'll risk $500," or a student might say, "I'll risk $100". Someone with more money might risk $1,000. You can't easily do that in the securities market today. You have to go through a brokerage firm, and all the intermediaries are, in a way, restricting access.

Carlos Fernando Chacón: It doesn't allow for democratization, in other words.

José Díaz: Exactly, it doesn't democratize access to investment. Here, any citizen can participate. Now, I do have to be informed. I need to know that the issuer isn't a pirate who will disappear tomorrow. If I invest $100 and it turns out the issuer doesn't exist and the platform is gone, what happens to my money?

Carlos Fernando Chacón: So, investor protection has to be more focused on that—verifying the issuer's identity—rather than asking if the issuer has the backing of a bank, which is a requirement you can't ask of a fintech anywhere in the world.

José Díaz: Exactly. The fintech has to control the issuer; there must be safeguards. Not necessarily guarantee funds, but it should have a small fund to cover any issues that might be attributable to its responsibility. Most regulations you review on these topics cover a series of these factors. What's interesting is that this is genuinely creating a possibility for both those who need money and the ordinary investor to access different investment activities with fewer hurdles.

Carlos Fernando Chacón: Exactly. Well, with that, we'll conclude. Thank you so much for the opportunity. This has provided much more clarity on the securities ecosystem in Bolivia and the factors that facilitate or hinder alternative financing.

Appendix H

Sergio León's Interview Transcripts (Translated and Curated)

Interview with Sergio León

Carlos Fernando Chacón: First, thank you for your time. I know you have a very full schedule, so I appreciate the opportunity. Let's start with a brief introduction from you.

Sergio León: Okay, Fernando, it's a pleasure. I'm Sergio León. I am a lawyer by profession with two master's degrees in business law and commercial business. I practice law in Paraguay, where I am a partner at a law firm called VC Legal. We specialize in helping companies establish themselves in both Bolivia and Paraguay, leveraging our expertise to provide the best landing solutions for businesses in either country.

Carlos Fernando Chacón: Excellent. To begin, let's talk about the financial challenges for small and medium-sized enterprises (SMEs) in Paraguay. In the current context of the traditional financial system, what do you consider the main financing challenge for SMEs in Paraguay?

Sergio León: I believe the main challenge is simply reaching the SMEs. Traditional banking in Paraguay has not developed programs that aim to reach, cover, and lend money to SMEs. They haven't done so because the Paraguayan banking sector is currently in a comfortable position. They lend to or do business with a small circle of powerful, multi-sector business groups. The entire Paraguayan banking system targets a few large clients, overlooking the SMEs and smaller companies down the line. As a result, these companies have had to turn to alternative means.

In Paraguay, there is a type of business known as "casas de crédito" (credit houses). These are not formally regulated by the Central Bank of Paraguay, but they are the ones that often end up funding SMEs. The other alternative for SMEs is to find investors on their own based on their business performance. As you can see, in the absence of a formal process, these credit houses, due to the higher risk, charge higher interest rates. This often becomes a vicious cycle, because at the beginning of its life, an SME has to face high costs to access capital.

Carlos Fernando Chacón: That sounds similar to what I've heard in interviews about Bolivia, where there is a strong microcredit and microfinance sector. However, they cater to a different segment—micro-enterprises, which are even smaller than SMEs. What happens is that SMEs get stuck in the middle. At one end of the spectrum, you have large companies that can secure funding without a problem. At the other end, you have micro-enterprises with a whole ecosystem built to support their financing needs. The SMEs are caught in between with few options.

Sergio León: Yes, that's correct. A similar situation occurs in Paraguay, except that even micro-enterprises do not receive adequate attention here.

Carlos Fernando Chacón: So, the microcredit sector isn't as developed as it is in Bolivia?

Sergio León: No, it's actually a bit more complex here.

Carlos Fernando Chacón: On the other hand, one area where Paraguay is much more advanced than Bolivia is in its regulation for fintech and innovation. Speaking of fintech regulation and crowdfunding in Paraguay, could you give us an update on the current state of these regulations? How do you see it compared to neighboring countries, especially since Paraguay is often cited as a pioneer in fintech law?

Sergio León: As I was mentioning, Fernando, I believe that in the specific case of crowdfunding, particularly real estate crowdfunding, the practice of gathering investors was already happening in Paraguay even before formal platforms existed. It's an interesting phenomenon. Since traditional banks are not very involved in these types of projects, what entrepreneurs would do to construct a building, for example, is find a developer, who would then in turn find investors. These investors would contribute funds to build the project, and once it was sold, the money would be returned to them. This investment practice is deeply rooted in Paraguay.

While this isn't necessarily crowdfunding in the modern sense, I see similar characteristics, just without the technological platform. This has served as a foundation for crowdfunding to take root in Paraguay. And while there has been progress, as you mentioned, the legislation has not necessarily kept pace. Crowdfunding has been classified as a fintech activity, and regulation in Paraguay for fintech is still nascent, starting with a disposition on the protection of financial data. Today, crowdfunding operations are conducted because there is no express prohibition against them. However, the scope of the regulations, specifically regarding data protection, user protection, and other areas, is still under discussion to ensure it becomes a properly regulated sector.

This regulation falls under the purview of the Superintendency of Securities, which is part of the Central Bank of Paraguay. But as I said, the specific regulations are still being debated. Nevertheless, crowdfunding operations are happening in Paraguay, with platforms and investors, but they operate more on a case-by-case basis, drawing from isolated resolutions that exist in the sector.

Carlos Fernando Chacón: So, there isn't a direct regulation that covers crowdfunding, like in Mexico, which has a specific crowdfunding law.

Sergio León: Mexico's example is one to follow, and the Paraguayan bill was, in fact, based on Mexican regulations.

Carlos Fernando Chacón: My next point, which you've already somewhat answered, was whether there was a specific legal framework or a main bill under discussion. It seems that it's still being debated and there isn't a specific law for crowdfunding yet. Given that it's a nascent market and Paraguay already has a fintech law infrastructure, I assume a regulation for these models will be implemented sooner or later. From your perspective, what are the main challenges of this new regulation being discussed in Paraguay?

Sergio León: In all these discussions about fintech, the regulator's main concern always ends up being the user—the investor who will actually make the investment—and ensuring the mechanism works. Of course, data protection is also a key concern, preventing that data from ending up in the wrong hands. And since everything is managed through a platform, the security and robustness of the platform itself are also major issues. These are the topics that typically worry the regulator in these types of businesses.

Sometimes, the fear of technological evolution leads the regulator to want to cover everything with regulation, but they don't always fully understand how the mechanism works. So, I believe the challenge with fintech is always to provide the regulator with the right tools, explain what it's about, what the benefits and impacts on the market will be, and show that it's an alternative financing mechanism that everyone could access with the right platform. In a way, it democratizes finance. These issues are central for the regulator to understand so they can create a regulation that benefits the sector, rather than one that ends up being a hindrance or only serves a specific segment.

Carlos Fernando Chacón: What role will entities like the Superintendency of Securities, or the Central Bank of Paraguay play in the supervision and development of the fintech and crowdfunding ecosystem in the country? In Bolivia, for example, ASFI tries to regulate everything as financial intermediation under the Financial Services Law, but sometimes the Central Bank issues decrees that contradict ASFI's regulations, showing a lack of coordination. How is it in Paraguay?

Sergio León: In Paraguay, the positive aspect is that there is a single entity, the Central Bank of Paraguay, and under its board of directors are the superintendencies. In the specific case of fintech, it has been delegated by regulation to the Superintendency of Securities. As I mentioned, they currently operate based on internal resolutions, like Resolution Number 8 from 2021, which provides the legal backing for fintech operations. However, it is crucial that the new regulation is approved soon.

Another responsibility of the superintendency is information and education. I believe that financial education carried out through these platforms must be a key objective and responsibility of the regulator. This is the only way we can have a larger number of informed participants—people who can make a decision to invest or not with full knowledge of what they are doing, whether the entities are regulated, and so on. This will build investor confidence and help these alternative mechanisms develop alongside traditional financing and even stock market mechanisms. The authority has a leading role to play in getting this off the ground in a better way.

Carlos Fernando Chacón: What do you identify as the main barriers—regulatory, institutional, or even market-related—that currently hinder the growth of crowdfunding and fintech as financing alternatives for SMEs in Paraguay, which face a credit shortage? We can talk about the development of capital markets, investor confidence issues, which is a big topic in Bolivia, financial literacy, or even informality.

Sergio León: It's not too different from the rest of Latin America. First, having clear information about where and how I am going to invest. Second, having confidence that the investment I make will definitely provide a return according to the expectations or promises of the crowdfunding sector itself. This is why the most visible examples of crowdfunding success in Paraguay are in real estate. Why? Because you invest against supposed square meters, so you have a tangible relationship. You know you are investing and will receive a certain number of square meters, and when those are sold at a certain price, you will get a return. This simple financial exercise is what is currently working best in Paraguay because you have something tangible. You see the construction project grow, and you know you have a certain percentage in it.

But this model tends to attract investors who already know something about finance or crowdfunding. What about the rest of the people? Or, as is the subject of your thesis, what happens when a less-reputable company wants to raise capital? Investors might say, "I don't know this company very well," or "Is the mechanism I'm using regulated?" A series of questions and doubts arise that can prevent the mechanism from being fully executed, and in the end, the SME doesn't achieve its goals, and the economy isn't stimulated.

So for me, in addition to the regulatory part, which is always very important, financial education is crucial. We should have information—videos, etc.—that explain how this works, what the mechanism is, and what to expect. Then, surely, we will be able to see a variety of crowdfunding projects in different sectors, not just real estate.

Carlos Fernando Chacón: Of course. The beauty of crowdfunding is that you can finance projects that might not get funded by the traditional banking system. The tricky part is that to finance these projects, you need a double demand: demand from the company that needs financing and demand from the investor who wants to invest in that project. You have to be able to generate demand on both sides. With that in mind, what factors or conditions do you think could facilitate or accelerate the development of these alternative financing models in Paraguay?

Sergio León: I think that in Paraguay, due to the very facilities the country is offering, it is inviting investors to invest in various sectors. There are no limitations on the type of investment. It’s not like we are only looking for investors for the energy sector or a specific mineral resource. Paraguay is currently open to any type of investment. This means that one side of the equation you explained, Fernando, is more or less covered. People who want to invest are willing to listen to different offers about where to put their money. They are open.

This influx of investors has also had an effect on the local Paraguayans, who are now saying, "It's not just foreigners who should invest in my country. I want to invest too." That's one part. The other part is what you mentioned: which projects could be financed through crowdfunding? I think there is still a deficiency there. As I said, the examples of crowdfunding in Paraguay are heavily identified with real estate. I believe there is an opportunity to show that other types of projects can be financed via crowdfunding, but that will surely require proper structuring and a clear explanation of the project, its impact, how the money will be raised, and what the return for investors will be. I see a business opportunity there for a crowdfunding company that goes beyond just real estate and looks at other projects, like SMEs, which I think could be funded very well through this method.

Carlos Fernando Chacón: Exactly, it could be more diversified. These investors coming to Paraguay are often people with some investment experience, so they are also looking to diversify their portfolios. I see a business opportunity there to allow for that diversification.

Sergio León: Absolutely. An investor who is willing to invest already has a good concept of risk, manages those variables, and is willing to take risks. They have an appetite for their money to yield returns, so they are willing to listen to options. I think there's an interesting opportunity to start presenting these investors with new and varied possibilities.

Carlos Fernando Chacón: Considering the current landscape and regional trends—the problem of SME financing is not unique to Paraguay or Bolivia; Ecuador and even Mexico have similar issues, and crowdfunding is gaining strength across Latin America—how do you envision the future of crowdfunding and the fintech sector for financing in Paraguay in the next five to ten years?

Sergio León: I truly believe that the development of crowdfunding in Paraguay, at the pace it's going, will be significant. With the impulse from the new regulation, which, as I mentioned, is already being socialized and will probably be approved by Congress this year, I think it will get a major boost. Given Paraguay's characteristics—low taxes, the "triple 10" rule (10% max VAT), etc.—I think this will continue to support the good business climate that Paraguay has generated.

You also have to look at the predictability that Paraguay offers. There are no major changes in the macroeconomy; it is very well cared for, and there is an interesting economic stability. This allows any entrepreneur to visualize their business in one, five, or ten years. And when an entrepreneur visualizes that path, they also know that for their venture to grow, they will need stability and will need to access funds. If we can make this a viable financial alternative, I think it could be very interesting. With the openness of Paraguay and the number of companies of all types landing here, it's becoming a really interesting market and a great option for these kinds of solutions. It could become a privileged alternative that entrepreneurs always have in mind and can turn to when they need it.

Carlos Fernando Chacón: If you had to make one or two key recommendations to regulatory policymakers in Paraguay to foster a more robust alternative financing and fintech ecosystem, what would they be?

Sergio León: Look, despite being a lawyer, I am not a fan of over-regulation. I believe regulation should be simple and concrete. For me, the real impact of all this is to help promote and raise awareness of this mechanism. So, I would put a lot of effort into financial education. I would also focus on ensuring that companies developing crowdfunding products are not over-regulated. They should have a basic regulation but be allowed to do the work themselves to create the desired ecosystem. The ecosystem is designed for participants to fund projects, and it's important to protect that relationship. When you start to over-regulate certain aspects, it can kill interest, and the initiative may never take off. On the other hand, if you have relatively simple regulation, the actors get involved, and then you can make adjustments later based on how the market behaves. So, my recommendations are basically: no over-regulation and a strong focus on financial education.

Carlos Fernando Chacón: So, simple, and direct regulation to avoid creating obstacles for companies and allow for agile development, but with an emphasis on financial education to ensure that the investment exercise within crowdfunding is done responsibly. This way, we avoid cases where a lack of financial education leads people to invest in products that are beyond their risk appetite, which is where problems with clients arise.

Sergio León: Absolutely, I completely agree. Thank you for the interview and the space. I hope it has been useful for you to understand what is happening in the reality of Paraguay.

Appendix I

Larissa Mass Pool's Interview Transcripts (Translated and Curated)

Larissa Mas Pool: We have always recognized the financing challenges that fintech aims to address. Traditional banking has many regulations, and it's important to note that these also apply to fintechs in some respects, though not in areas related to innovation or technology. For example, the guarantees a financial institution must provide, whether traditional or digital, are regulated.

When seeking a loan from a traditional bank, you were asked for a number of requirements, not just for regulatory reasons but also for operational ones. A bank calculates risk and won't risk more than it should, which is a collective responsibility to protect all its users. This made financing very complicated and tedious, as the money was very bureaucratic and difficult to access.

Crowdfunding didn't emerge in the 2000s as a new concept; it was a phenomenon already occurring in Europe, particularly in our closest counterpart, Spain. There, the concept of "mecenazgo" (patronage), or collective funding, already existed. People would literally come together to support a common goal. This figure also emerged in response to an economic and financial crisis in Spain in the 90s. So, while the concept wasn't new, the novelty was the method of reaching people. Traditional patronage was usually limited to your immediate circle of family and friends. Crowdfunding expands this circle to practically the whole world through technology and innovation.

This, of course, presented many situations that needed to be regulated because, at the end of the day, you are raising capital. Crowdfunding, which started with this patronage model, became a powerful and structured figure that served for many years. Even before the law was created, these companies existed, and they began to be required to get licensed. I'm talking about companies like Play Business and Snowball, which are crowdfunding firms dedicated to financing SMEs for various projects.

During the COVID-19 pandemic, there was no other way to raise capital, as banks weren't very strong in that sense either. So, crowdfunding completely took off here in Mexico. Today, we have over seven hundred companies in the financial technology sector, which highlights the need to move away from traditional banking for financing these SMEs that are on the verge of reaching the next level but can't access credit due to bureaucracy or other issues. These crowdfunding platforms also end up creating communities, which reflects how we relate to each other now—through identification with certain communities.

Carlos Fernando Chacón: What has been the tangible impact on the market? Has there been significant growth in the number of authorized crowdfunding institutions, and more importantly, has this translated into a greater volume of real financing for these types of companies?

Larissa Mas Pool: The growth here in Mexico has been very noticeable, especially in financing. Crowdfunding has diversified into different sectors beyond just SMEs, such as real estate, which is another alternative way to generate capital or liquidity. During the pandemic, we had the opportunity to interview some interesting players, not just from Play Business and Snowball, but also from the real estate sector, like Briq and 100 Ladrillos, which are major players in real estate crowdfunding. Crowdequity was also gaining a lot of traction at that time, allowing smaller players like local construction companies to carry out real estate projects more easily and quickly.

Now, there's an interesting point here. The law establishes certain specifications for crowdfunding; it's not just about anyone wanting to invest. It limits investment to certain forms, such as through debt or equity. This is important because it also touches on cultural aspects. At the time, many people didn't even know what crowdfunding was or that it came from the concept of patronage or collective financing. This lack of understanding led to distrust. When we conducted these interviews and shared them on social media through the Digital Lawyers Association, people would ask, "Is it safe to invest?". They see it as an investment, which is one of the models, but at that moment, the National Banking and Securities Commission (CNBV) was not yet issuing licenses. This wasn't because they didn't want to, but because they were going through a learning curve to understand the business model before they could grant the corresponding licenses.

I believe Play Business and Briq were the most advanced at that time, close to finalizing their procedures to obtain their crowdfunding licenses. This is where it started to gain more importance because they were becoming licensed. In Mexico, being part of a registry means they also have to pay certain guarantees that, in turn, guarantee a part of the investor's investment. That was a crucial moment for the materialization of the sector. Today, many companies have their licenses from the CNBV, and the sector has grown significantly—I would say by about 15% last year. However, there are other models that operate similarly to capital raising but don't fall under the crowdfunding model and aren't regulated by the Fintech Law yet, though they will have to be at some point.

The growth has been so palpable that even traditional banks have had to revolutionize and modernize their platforms and methods for obtaining credit.

Carlos Fernando Chacón: Which I think is ultimately the ideal scenario—that the fintech sector connects with the more established banking sector. In the US, many of the big fintechs come from other institutions, like banks. I think that's a trend that will eventually become the norm because that's where the growth is. The CAGR of the fintech sector this year is around 60% annually, which is incredibly high. It's difficult to use that for long-term growth projections in discounted cash flow models because it's almost an unreal growth rate that will eventually slow down as the industry becomes more established.

Larissa Mas Pool: Exactly. I think that when an economy faces financial difficulties, growth happens faster because a solution always has to be found. Despite the traditional banking sector's efforts to caution people—CONDUSEF, one of the most important institutions for financial prevention, has permanent workshops explaining things—there is still a lot of precaution, especially with crypto-assets. Five years is a short time, but so much has happened in those five years, not just in Mexico but all over the world.

But reality always outpaces regulation. Today, we have a more robust fintech sector, but if you look at the bulk of the companies, many of them do not have a license. What's happening is similar to what has occurred in other sectors where evolution has arrived. The traditional sector feels it has to regulate many things, while the digital sector, being new and often not fully understood even by the authorities, has very flexible regulation. The eternal fight is really about that: "Why do you regulate me so much that I can't even move, but you don't regulate them at all?".

The financial sector has been smarter about this. They've said, "I'm not going to fight, because what I want is to offer a better service, so clients don't leave us.". This is evident in the open banking revolution, which applies not only to financial technology institutions but also to traditional banks.

It seems to be the sector that has adapted best because they already come from a completely digital core. Banks already have a lot of experience and are just adapting, and as you said, they are ending up absorbing several fintechs to stay relevant.

Carlos Fernando Chacón: Of course. Instead of fighting about why their sector is more regulated, banks should take advantage of the liberalized regulation in the fintech sector to benefit themselves by launching new products.

Larissa Mas Pool: Exactly. That's why I say it's one of the sectors that has understood it best because of its background. Other sectors have had a harder time accepting it.

Carlos Fernando Chacón: So, we've seen that the regulation has had very positive results and has really changed the ecosystem in Mexico. But I think every pioneering regulation face challenges. What do you think were the most significant "growing pains" or unplanned adverse effects in the implementation of the Fintech Law in Mexico?

Larissa Mas Pool: The first situation arose right when the law was published. There is a section in the law called "transitorios" (transitional articles). These articles stipulated that various secondary norm had to be modified or created within a period of up to six or even nine years. So, while we were all very happy to have a Fintech Law that at least named certain business models, the secondary regulations were not yet ready. It was like a model law from which different norms and regulations would branch out.

Today, we still have a couple of key circulars, like Circular 9, that explain the procedure well, especially for creation, but also for making these business models sustainable, because creating one is different from sustaining one legally. What has been happening is that, because there is a regulation, there is a tendency to over-regulate. Mexico is currently in a phase of regulatory deceleration. We are understanding that over-regulation will not solve or prevent what it's supposed to prevent, such as fraud or an overproduction of these business models, because that's going to happen anyway. It's like trying to limit the water in the sea; it's impossible.

So, what we are experiencing today is a process of shifting towards a more stable, less burdensome regulation to allow these business models to be sustainable. One of the most important challenges for Mexico in general is over-regulation. There are some things that need to be regulated, and others that don't. The advantage of having our northern neighbor is that the models and investments that come from there also help us shape our regulations to create these spaces for growth without forgetting the importance of regulation, but not over-regulating. That has been one of our biggest struggles. We saw it when the Bitcoin law was published in El Salvador; the contrast was stark. However, if you look at El Salvador now, they are also having their own issues because fully integrating a crypto asset into an economy has its own challenges.

Carlos Fernando Chacón: What aspects of the Fintech Law in Mexico have worked exceptionally well, and which have presented the greatest difficulties or required subsequent adjustments to be effective in practice?

Larissa Mas Pool: I think one of the successes, though it was a complicated process, was dealing with an authority that didn't understand the business model. They didn't understand how the money came in, how it went out, or what the record of that money was. For example, the first time you could buy cryptocurrency in Mexico through traditional means, they didn't ask you for anything. You could literally make a cash deposit from anywhere, and nobody knew where that resource came from. Those were some of the initial mistakes that were later corrected, which I think was a good move.

When the Fintech Law was created, the anti-money laundering law gained significant importance. We started giving more importance to everything involving the client file for money laundering, so much so that a financial intelligence unit was created. Its goal was not to have a problem with how you move your money, but to ensure it was traceable, something that already happened in traditional banking but was new to financial technology. This was a great success in terms of prevention. However, it also added another responsibility to these business models, which is everything related to money laundering. Today, it remains one of the most important compliance obligations. For me, it's much more serious to receive a requirement from the financial intelligence unit than from the public treasury.

Now, all platforms require banked money; you can no longer make cash deposits. They require a KYC (Know Your Customer) process and more information to provide the service.

Carlos Fernando Chacón: Given Mexico's valuable experience, what key lessons or practical recommendations would you offer to countries like Bolivia or Paraguay, which are in a much more nascent stage of their fintech regulation?

Larissa Mas Pool: As we've always identified, regulating is always better than not regulating. Mexico has made some significant mistakes along the way. In the beginning, when the law was being created, the authorities here would approach these business models to understand them. Thanks to this, important relationships were established between the private sector and the government, which even led to the creation of Fintech Mexico, an association that acts as a citizen's roundtable.

One of the recommendations is that authorities must approach the business models to understand what they are about and how they work, without forcing them into a mold they don't fit. We saw this a lot here in Mexico. For example, they didn't understand how OTC (over the counter) models for crypto worked. The tendency was, "I don't understand it, but it sounds complicated and risky, so I'll regulate it," but they did so without any structure. We have learned over the years to undo that over-regulation, although some things that do need regulation are still missing. They regulate the onboarding and anti-money laundering aspects heavily but neglect other important things that could also help the companies.

For countries with newly created legislation, it's about being open to trial and error, but also creating sandboxes that give these business models a chance to be created without sinking them from the start.

Carlos Fernando Chacón: What common mistakes should be avoided when trying to balance the need to foster innovation with the indispensable protection of the investor?

Larissa Mas Pool: In Mexico, CONDUSEF, the government body responsible for protecting citizens in the financial sector, has done a very good job. They created registries like CIPRES, where you can check if a financial technology institution is regulated or not. The official discourse from the CNBV and the Bank of Mexico is that the Mexican government does not guarantee anything related to financial technology institutions. It's a "do it at your own risk" message. CONDUSEF is in charge of consumer protection and does it very well through these registries, platforms, disclaimers, and continuous courses. This is how the general population will learn how to relate to these institutions.

While companies have a much greater acceptance of these new models, the one who runs a bit more risk from not knowing is the investor. I think CONDUSEF does a very good job of disseminating information, which is excellent. This brings together all the pieces—the investor, the platform, and the company—to create the ecosystem.

Carlos Fernando Chacón: I understand that the Mexican law introduced concepts like regulatory sandboxes and open banking mandates. How effective have these mechanisms been in boosting competition and innovation?

Larissa Mas Pool: The sandbox in Mexico has been about 50% effective. It has helped because many business models have been repeated, so this controlled environment where they can test products generated through new technologies is very useful. Many clients have opted to enter this trial model, which involves opening their books completely to the authorities. This isn't bad because the authorities need to understand how your business model works to know how to regulate it, which is the interesting part. However, it does mean making everything transparent, not just your operation but also things that might be unique to your business.

In general, it has served its purpose, which is to be a controlled environment where the authority reviews your test plan, you have supervision, and you get analysis results. You get the opportunity to have your project evaluated to correct issues you might not have foreseen, without the risk of being sanctioned. This is a benefit that reduces risks for the company, increases efficiency in your processes, and helps develop the sector your business model is in.

Carlos Fernando Chacón: What are the trends and next challenges, both regulatory and market-related, facing the sector in Mexico to consolidate its growth and sustainability?

Larissa Mas Pool: Today, we have a fairly robust legislation, and we've seen the growth of different companies. The future is about decelerating over-regulation because if we don't, companies will find gaps and other modalities that are not regulated in the law. No company, in any sector, will open a business where they know the regulation is very complicated to comply with. The important part will be to identify what really needs to be regulated and what doesn't. The advantage of this sector is that it is catering to a part of the population that was not being served, which is the bulk of the population. These models offer what should have been offered many years ago: financial inclusion.

So, even if we have over-regulation, the model is still sustainable because of the market it targets. We need to strengthen the regulations that surround crowdfunding, not just the financial ones but all of them, including tax regulations, to provide them with the tools to make their operations simpler.

I believe that in the near future, crowdfunding platforms themselves will be able to solve much of their regulatory compliance through automated systems, making the most of artificial intelligence, to avoid the burden of manual regulatory work. It's an interesting loop because these ecosystems come together to solve problems that other digital sectors have, thanks to the very over-regulation that exists in Mexico.

A recently published national code of civil and family procedures is now starting to regulate the core of many financial technology businesses, which translates to blockchain. It's beginning to regulate blockchain, tokens, and even the metaverse and electronic signatures. This is very interesting because it's entering an area that involves not just finance but also many other commercial sectors. So, the next three or four years will be very interesting for the future of collective financing institutions

Appendix J

Jorge Colmenare's Interview Transcripts (Translated and Curated)

Interview with Jorge Colmenares

Carlos Fernando Chacón: To begin, could you please introduce yourself, your career, and what you do?

Jorge Colmenares: Okay, Fernando. I am a lawyer from the Externado University of Colombia, with a specialization and a master's degree in commercial law from the same university. I also have a specialization in administrative law from the Pontificia Universidad Javeriana and a master's degree in international sports law from a university in Spain.

I have had a long career. I started in the financial sector at an entity called Financiera Mazdacrédito. Later, I joined the Financial Superintendence, which supervises and controls companies in the financial sector in Colombia. After my time in the public sector, I established my own law firm, where I am a partner. I later returned to the Ministry of Sport, where I once again led the directorate of inspection, supervision, and control. I have advised both public and private entities, and I specialize in both the financial and sports sectors.

Carlos Fernando Chacón: Excellent. From your point of view, what are the defining characteristics of the current regulatory environment in Colombia for the banking and business sectors? Would you describe it as an environment that promotes stability and innovation, or one that faces challenges in different areas?

Jorge Colmenares: I believe Colombia has had a regime of legal certainty in the financial sector for many years, as evidenced by the organic statute of the financial sector. However, we are not immune to the disruption of phenomena like fintech. This has led to the emergence of regulatory sandboxes. Influenced by countries like England and the Netherlands, the state has ventured into applying regulation to these new entities that can be considered disruptive in the financial world.

In this regard, Colombia has made significant progress with sandboxes. A specific space has been established with a series of procedures, plans, and requirements to test innovative technological developments in activities proper to the companies supervised by the Financial Superintendence. It is clear that the regulatory sandboxes in Colombia are aligned with the global trend of applying traditional banking regulations to fintechs and startups that develop innovative products. While fintech is often seen as a disruptive force against traditional banking, it's important to remember that the framework extends beyond just being a "different" kind of bank. For example, the regulation in Colombia on immediate payment systems brings up discussions on how to regulate consumer markets and data processing. This is a new arena that has emerged in Colombia and must adapt to these new financial entities that have burst into the traditional market, like NuBank, which has a global presence. The regulatory bodies have certainly recognized these challenges.

Carlos Fernando Chacón: I know that Colombia has an open finance regulation, I believe it's Decree 1297.

Jorge Colmenares: Yes, 1297. It's the financial architecture for structuring open banking. It has aimed to recognize third parties that can, for example, offer products or services from supervised entities. So, while it has opened the door to open banking, the development has not been as full as the name might suggest. Nonetheless, it's worth noting the "BaaS" (Banking as a Service) ecosystems developed by non-supervised entities.

If you look closely at that decree, you'll see that it applies traditional banking rules and tries to mount them onto these new financial products.

Carlos Fernando Chacón: Regarding the impact of open finance, have there been tangible benefits for SMEs? Has it translated into better access to credit, more personalized products, or a reduction in interest costs?

Jorge Colmenares: I think we must start from the basis of what underlies fintech worldwide: two variables, risk and uncertainty. My firm, for example, set up the compliance for Addi, one of the big fintechs in Colombia. They have an innovative process for approving financial operations, promising approval in two minutes because they have a connection to a database through blockchain and other new technologies. I have noticed a reduction in processing times, but the risks remain. A fintech cannot just lend to anyone because that would increase its risks and condemn it to disappear by lending to third parties who cannot repay their loans.

So, yes, I believe there has been an improvement. It has allowed solutions like Nequi to enter the financial sector. For example, the person who helps us at home can open a Nequi account, which is linked to her phone number, and I can pay her through it. It doesn't require a traditional bank account. From that point of view, there has been a lot of progress. Nequi is a very applicable solution in Colombia. There has been a disruption in many areas, but without losing sight of the fact that the risk in these types of operations cannot be completely mitigated.

Carlos Fernando Chacón: In a few words, what are the most practical challenges that both fintechs and SMEs face in adopting and operating effectively within the open finance model?

Jorge Colmenares: I was reviewing a document for this interview called "Impact of Fintech on Financial Regulation." The author, a recognized professor in Colombia, points out that fintech requires a change of mindset, specifically in two areas: personal data protection and consumer protection. Although there have been advances since this was written a couple of years ago, there hasn't been a full evolution in all areas. For instance, while Colombia has a data protection law, there has been more recent legislation regarding consumer rights in the virtual space, aiming to make processes like the right of withdrawal more agile. What I mean is that in the last three years, there has been an evolution on the part of the legislator and the regulatory arenas to understand that these new open finance products require a change not only in mindset but also in the regulatory frameworks themselves. I am a proponent of the view that these models should be different from traditional banking and have a space for private self-control. That should be the ideal scenario, and in compliance, that's the framework: I create my own self-regulation to mitigate risks. However, in economies like Colombia's, you cannot leave the private sector completely unregulated, and the state must intervene in many cases.

Carlos Fernando Chacón: Let's talk about the capacity of fintech as a source of financing for companies in Colombia, especially for SMEs. Lending fintechs and crowdfunding have emerged as alternatives to traditional banking across Latin America. How robust is the current regulatory framework for these platforms in Colombia? Do you believe it adequately protects both the SMEs seeking financing and the investors looking to diversify their portfolios?

Jorge Colmenares: The state has certainly been developing regulations to foster the growth of these disruptive ideas while trying to protect the financial consumer. For example, Decree 1220 was issued to regulate issuance in the securities market and cooperative investment financing, which addresses crowdfunding. There has been regulation, but given the exponential growth of these new technologies, the regulation may not be keeping pace with the movement itself.

Carlos Fernando Chacón: I think that's a problem seen across Latin America, and perhaps globally. It's very difficult for regulators to keep up with financial innovation.

Jorge Colmenares: The thing is, we can't compare ourselves to England or the Netherlands.

Carlos Fernando Chacón: True, but even in the United States, it's shown that the regulator sometimes fails to keep pace with financial innovation, which is accelerating rapidly. The annual growth rate (CAGR) of fintech worldwide is around 60%. It's a very fast-growing and innovative sector, which obviously presents a challenge for regulators.

Jorge Colmenares: I was reviewing growth reports for this interview. In Colombia, the annual growth of startups is approximately 20%, which speaks very well of the performance of these entities in the financial market. Regarding crowdfunding, it's important to note that the government has issued decrees, and the superintendence, as a regulatory agent, has also issued circulars on the subject, such as Circular 14 on crowdfunding through securities. They have also issued circulars on regulatory sandboxes. So, while I won't list the entire regulatory framework, it's clear that the state in Colombia has been attentive to these new technologies.

Carlos Fernando Chacón: The superintendence was a pioneer in the region with these regulatory sandboxes. Do you think they are still an agile and relevant tool for fintechs seeking to serve this market, especially in the area of fundraising for investment or financing, like crowdfunding?

Jorge Colmenares: I believe it is an alternative because we all know the process of obtaining resources from traditional banking. We consider that these new alternatives allow the financial consumer greater access to financial products with more agility and improved timelines.

Carlos Fernando Chacón: The case of Addi, which simplifies the credit granting process to a matter of minutes, suggests that fintechs use alternative risk models to evaluate their clients. How does the superintendence supervise the fairness, transparency, and accuracy of these new proprietary scoring models? Is there a risk of exclusion or algorithmic bias?

Jorge Colmenares: I don't think the superintendence has delved too deeply into that. It has a reputation for being very rigorous with traditional banking but has allowed traditional banks to move towards other, more consumer-friendly models. With these new models, the superintendence has gotten involved, but I don't observe that it gets directly into the algorithmic model, as you put it—how the operation is carried out, what should be controlled, and what qualitative and quantitative aspects should be considered. I believe this has been left more to internal management.

Addi, for instance, won't give you a loan for an apartment or a car. They have focused a lot on providing loans for everyday things people need, like shoes or a cell phone—consumer credits. For example, if you go to an Apple shop in Colombia, you have the option of traditional bank financing or going to Addi, where you'll be approved much more quickly. It's a solution that gives the financial consumer more expeditious access, but for larger needs, I don't think it's the right framework.

Carlos Fernando Chacón: So, the superintendence hasn't really touched these alternative models yet. It makes a clear distinction between them and banking models and doesn't regulate them as such.

Jorge Colmenares: No. However, the superintendence has been very cautious with models that involve raising capital, especially because of the issue of pyramid schemes. This is a topic that both the financial and social superintendencies have addressed jointly. In Colombia, we've had major problems with pyramid schemes that promise incredible returns in a short time. There was an explosion of such companies around 2023, and many people were harmed. As a result, the state has been very decisive in prosecuting this type of capital raising, fitting it into a very extensive regulatory framework.

Carlos Fernando Chacón: Pyramid schemes have been a big problem here in Bolivia too, for the same reason. The regulation from ASFI, our financial system regulator, is very strict, especially with what is called financial intermediation. Raising funds without a license for financial intermediation can easily lead to jail time.

Jorge Colmenares: Yes, it's the same here in Colombia. It has become a criminal issue. It's not just about educating people not to fall for scams; the state also actively combats those who promote them.

Carlos Fernando Chacón: The Colombian regulation for crowdfunding prohibits platforms from advising or guaranteeing returns. However, as someone operating a crowdfunding platform, I believe that curating and classifying projects is necessary. Where is the fine line in practice between informing and advising investors? And do you think investors are sufficiently aware that the counterparty risk falls exclusively on them?

Jorge Colmenares: It depends on the investor. I believe a serious, professional investor has a duty to understand the risk and uncertainty inherent in these operations and must be very diligent in knowing where they are investing, under what conditions, and what guarantees are offered. For example, real estate guarantees are very popular in Colombia. One would think that at this stage, no investor would make an investment without knowing where their money is going, but what happened with the pyramid schemes suggests otherwise. It depends on each investor group and each individual.

Carlos Fernando Chacón: A common criticism I've heard across Latin America is that compliance costs can be disproportionate for fintechs, especially those serving smaller companies. Do you think Colombian regulation is calibrated to differentiate requirements based on the size and risk of the fintech's business model, or is the cost the same for all?

Jorge Colmenares: It's the same cost. I don't think it's differentiated by the size of the company here. The thinking is more about the risk to the end consumer. The debate in Colombia is not about "I regulate according to your size." The regulation is general, and the focus is more on the final financial consumer than on the entity being supervised.

Carlos Fernando Chacón: The decree requires companies to form what I believe are called "cooperative financing societies" to do crowdfunding. The requirements for these seem considerable, similar to any other supervised entity. Do you think this has been a high barrier to entry for new platforms?

Jorge Colmenares: It is a barrier, but I also understand it. Going back to the history and the pillars of these new platforms, there is a theme of risk and uncertainty. In that sense, the legislator has determined that these sectors can be high-risk for the market and has therefore placed a series of requirements that, in my opinion, are well-placed to guarantee a sound regulatory framework and legal security in the market.

One could argue that it's restrictive, but what should come first: preserving the market or guaranteeing that anyone can offer alternative financial services? I believe in Colombia; the decision has been to preserve the financial market and the stability of the financial sector.

Carlos Fernando Chacón: I've read a lot about cross-border payments in Colombia. The data I found suggests that at least 70% of SMEs participate in cross-border payments. With the increasing oversight from DIAN (the Colombian tax and customs authority), what role do you think fintech could play in simplifying foreign exchange and tax compliance? Is more modern regulation needed on this front?

Jorge Colmenares: This issue is closely tied to global risks. These cross-border operations can carry a high risk regarding the origin of the funds. That is one of the challenges in this area. How do we prevent operations like money laundering? This is a huge challenge. In a healthy economy, one would think the risk is mitigated, but in an economy like Colombia's—and I say this not with pride, but with indignation—there is a high flow of money from drug trafficking and other illicit operations. In that sense, all regulations seek to preserve the market. One might ask if we can create transnationals free of so much control. I don't think we are prepared for that at this moment.

Carlos Fernando Chacón: So, this increasing oversight from DIAN is necessary.

Jorge Colmenares: And not just DIAN, but also the Bank of the Republic and the UIAF (Financial Information and Analysis Unit), which is like a prosecutor for all financial operations. All of this is aimed at preventing these new emerging markets from being permeated with illicit resources.

Carlos Fernando Chacón: The success of crowdfunding and other alternative finance methods is conditioned on the financial education of the client and the population. What do you think is the gap in financial and digital education in Colombia, both for SMEs and for the general population? And whose responsibility is it to close this gap?

Jorge Colmenares: That's a very good question. These new technologies and alternative financial products involve a shared responsibility among different market actors: not just the state and the regulated entity, but also the fintech itself, its investors, its partners, and the market as a whole. I believe that by working together on educational campaigns, we can preserve a healthier, more transparent market that provides legal security to the consumer. In Colombia, I think we have a long way to go. These phenomena have grown a lot through word-of-mouth and social media. People hear that they can easily access financial products, like credit cards with no financial cost, but they don't necessarily understand how an entity under these conditions works. So, without a doubt, there is a lot of work to be done on financial education.

Carlos Fernando Chacón: Looking to the future, if you could propose one key adjustment to the regulatory framework to safely accelerate financial inclusion through technology, what would it be? And what international regulatory trend should we be observing more closely in Colombia?

Jorge Colmenares: That's a difficult question. At the international level, one could say we should look at the English model, but we have to consider that England has a different legal system (common law) than Colombia (civil law). However, I do believe that one topic that can be brought to the table is the application of compliance frameworks to these models. I'm not just talking about compliance to prevent money laundering, but also, for example, compliance related to restrictive market practices. Could actors in these markets collude to distort the market?

We should think about a compliance framework that ensures this emerging financial market is not used for practices that restrict competition. I think these compliance issues are very important, and the state should perhaps offer incentives. To the extent that the internal regulatory framework is better and clearer, it will increase market tranquility. From my point of view, one of the many things that can be brought in and implemented is this idea of compliance applied to these new products.

Carlos Fernando Chacón: It seems Colombia is much more advanced than many other South American countries regarding fintech regulation.

Jorge Colmenares: Undoubtedly. We have made progress in areas related to cryptocurrency operations, which is one of the expressions of fintech. People tend to think fintech is just mobile banking, but we have advanced in crypto, cybersecurity, and biometrics. I think Colombia has been a pioneer, and we have continued to build a legal ecosystem around these new trends.

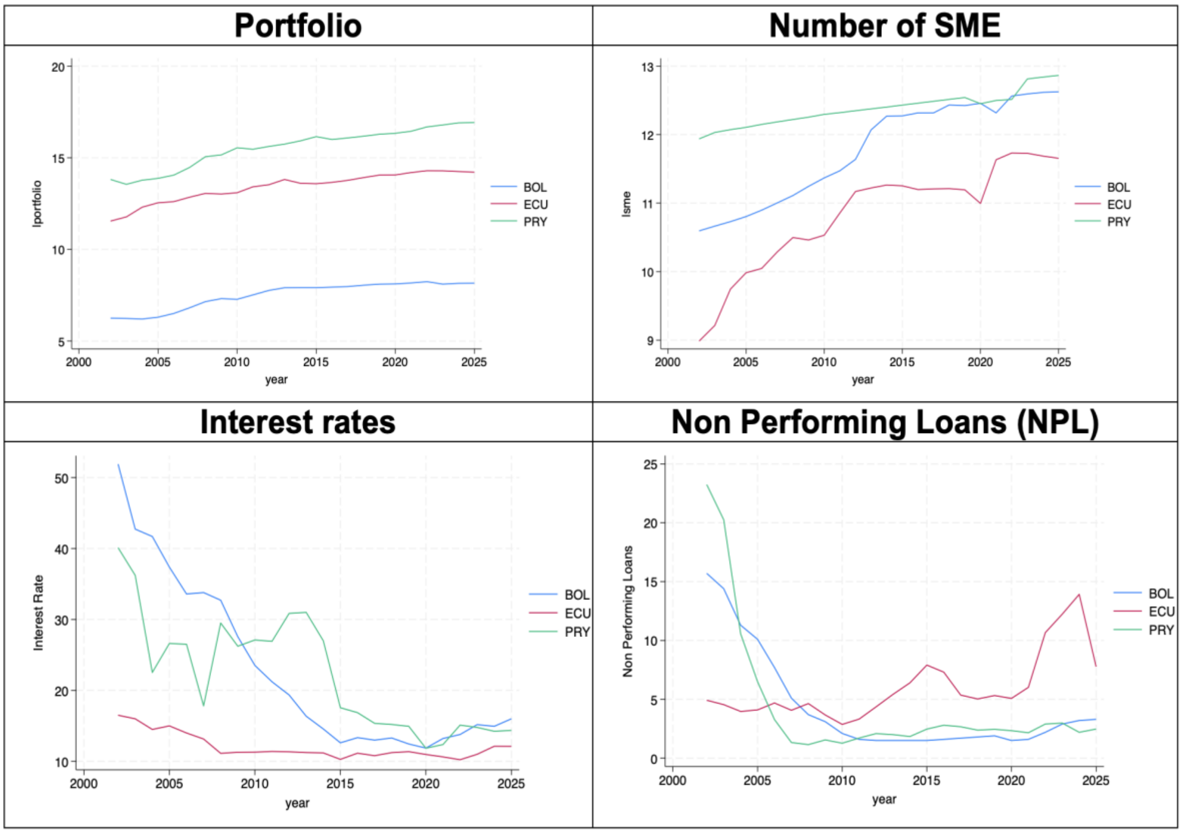
Carlos Fernando Chacón: For example, Bolivia recently passed a fintech regulation, primarily to regulate crypto assets, but not out of a drive for innovation. It was due to the current economic situation and the dollar crisis. The most effective way for people to get dollars is through USDT, so the regulation was created out of that market necessity. It seems Colombia is a step ahead, already thinking about how to refine the regulation to allow for new models like open finance.

Jorge Colmenares: The regulatory journey in Colombia has advanced significantly in the last five years, but we still have a long way to go. Although we have based our model on innovations from countries like England, the Netherlands, and Ireland, and have made a lot of progress, we still have work to do. But I am pleased to hear that we are recognized for our efforts in this area. We hope that with all the active agents in this ecosystem, it will continue to grow in a more regular and healthier way for the market operations.

Carlos Fernando Chacón: Well, that will be all. Thank you again for your time. I sincerely appreciate it, as I know how difficult it is to find these time slots in your busy schedule. Thank you for these 45 minutes

Appendix K

Portfolio, Number of SMEs, Interest Rate, and NPL Performance



Appendix L

Unit Root Test, Levin-Lin-Chu Test

In levels

Portfolio

```
. xtunitroot llc lportfolio, lags(1) trend

Levin-Lin-Chu unit-root test for lportfolio
-------------------------------------------
H0: Panels contain unit roots              Number of panels  =      3
Ha: Panels are stationary                  Number of periods =     24

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 9.00 lags average (chosen by LLC)
--------------------------------------------------------------------
                     Statistic      p-value
--------------------------------------------------------------------
 Unadjusted t        -3.4092
 Adjusted t*         -1.1528         0.1245
--------------------------------------------------------------------
```

Number of SME

```
. xtunitroot llc lsme, lags(1) trend

Levin-Lin-Chu unit-root test for lsme
-------------------------------------
H0: Panels contain unit roots              Number of panels  =      3
Ha: Panels are stationary                  Number of periods =     24

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 9.00 lags average (chosen by LLC)
--------------------------------------------------------------------
                     Statistic      p-value
--------------------------------------------------------------------
 Unadjusted t        -3.4882
 Adjusted t*         -0.6219         0.2670
--------------------------------------------------------------------
```

In first differences

Portfolio

```
. xtunitroot llc dlportfolio, lags(1) trend

Levin-Lin-Chu unit-root test for dlportfolio
--------------------------------------------
H0: Panels contain unit roots              Number of panels  =      3
Ha: Panels are stationary                  Number of periods =     23

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 9.00 lags average (chosen by LLC)
--------------------------------------------------------------------
                     Statistic      p-value
--------------------------------------------------------------------
 Unadjusted t        -7.3865
 Adjusted t*         -3.0730         0.0011
--------------------------------------------------------------------
```

Number of SME

```
. xtunitroot llc dlsme, lags(1) trend

Levin-Lin-Chu unit-root test for dlsme
--------------------------------------
H0: Panels contain unit roots              Number of panels  =      3
Ha: Panels are stationary                  Number of periods =     23

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 9.00 lags average (chosen by LLC)
--------------------------------------------------------------------
                     Statistic      p-value
--------------------------------------------------------------------
 Unadjusted t        -6.2948
 Adjusted t*         -2.9364         0.0017
--------------------------------------------------------------------
```

Appendix M

Unit Root Test; IM-Pesaran-Chin Test

In levels

Portfolio

```
. xtunitroot ips lportfolio, lags(1) trend

Im-Pesaran-Shin unit-root test for lportfolio
---------------------------------------------
H0: All panels contain unit roots           Number of panels  =      3
Ha: Some panels are stationary              Number of periods =     24

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                   sequentially
Time trend:   Included

ADF regressions: 1 lag
------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------
 W-t-bar               0.3800       0.6480
------------------------------------------------------------------------
```

Number of SME

```
. xtunitroot ips lsme, lags(1) trend

Im-Pesaran-Shin unit-root test for lsme
---------------------------------------
H0: All panels contain unit roots           Number of panels  =      3
Ha: Some panels are stationary              Number of periods =     24

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                   sequentially
Time trend:   Included

ADF regressions: 1 lag
------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------
 W-t-bar               0.4086       0.6586
------------------------------------------------------------------------
```

In first differences

Portfolio

```
. xtunitroot ips dlportfolio, lags(1) trend

Im-Pesaran-Shin unit-root test for dlportfolio
----------------------------------------------
H0: All panels contain unit roots           Number of panels  =      3
Ha: Some panels are stationary              Number of periods =     23

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                   sequentially
Time trend:   Included

ADF regressions: 1 lag
------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------
 W-t-bar              -3.2344       0.0006
------------------------------------------------------------------------
```

Number of SME

```
. xtunitroot ips dlsme, lags(1) trend

Im-Pesaran-Shin unit-root test for dlsme
----------------------------------------
H0: All panels contain unit roots           Number of panels  =      3
Ha: Some panels are stationary              Number of periods =     23

AR parameter: Panel-specific                Asymptotics: T,N -> Infinity
Panel means:  Included                                   sequentially
Time trend:   Included

ADF regressions: 1 lag
------------------------------------------------------------------------
                    Statistic      p-value
------------------------------------------------------------------------
 W-t-bar              -2.1557       0.0156
------------------------------------------------------------------------
```

Appendix M

Cointegration Test, Correlation and Multi Collinearity Test, and Hausman Test

Pedroni Test

Cointegration Test

```
Pedroni's cointegration tests:
No. of Panel units: 3        Regressors: 3
No. of obs.: 72              Avg obs. per unit: 24
Data has been time-demeaned.
A time trend has been included.
```

Test Stats.	Panel	Group
v	.9872	.
rho	.4675	.854
t	-1.225	-2.804
adf	1.056	1.823

```
All test statistics are distributed N(0,1), under a null of no cointegration,
and diverge to negative infinity (save for panel v).
```

PDOLS

```
Pedroni's PDOLS (Group mean average):
No. of Panel units: 3        Lags and leads: 2
Number of obs: 57            Avg obs. per unit: 19
Data has been time-demeaned.
```

Variables	Beta	t-stat
lsme_td	3.202	-3.51e+13
ir__td	-.4071	2.38e+13
npl_td	1.374	-2.71e+13

Correlation

```
. corr lportfolio lsme ir_ npl
(obs=72)
```

	lportf~o	lsme	ir_	npl
lportfolio	1.0000			
lsme	0.2275	1.0000		
ir_	-0.3061	-0.0771	1.0000	
npl	-0.0595	-0.2712	0.4547	1.0000

Multicollinearity VIF Test

```
. vif
```

Variable	VIF	1/VIF
npl	1.09	0.918426
ir_	1.09	0.919479
dlsme	1.00	0.997124
Mean VIF	1.06	

```
.
```

```
. hausman fe re
```

	Coefficients (b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
dlsme	.3096686	.3651972	-.0555286	.
ir_	.0090021	.0040716	.0049305	.0015829
npl	-.0237789	-.0154315	-.0083473	.0025547

```
                 b = Consistent under H0 and Ha; obtained from xtreg.
  B = Inconsistent under Ha, efficient under H0; obtained from xtreg.

Test of H0: Difference in coefficients not systematic

    chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
            =   8.05
Prob > chi2 = 0.0450
(V_b-V_B is not positive definite)
```

Appendix O

Autocorrelation Test (Woolridge Test), and Breusch Pagan Test for Random Effects

```
. xtserial dlportfolio dlsme ir_ npl

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
    F(  1,       2) =      0.049
           Prob > F =      0.8452
```

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        dlportfolio[country_id,t] = Xb + u[country_id] + e[country_id,t]

        Estimated results:
                         |       Var     SD = sqrt(Var)
                ---------+-----------------------------
                dlportf~o |   .0229915       .1516296
                        e |   .0155077       .1245299
                        u |          0              0

        Test: Var(u) = 0
                             chibar2(01) =     0.00
                          Prob > chibar2 =   1.0000
```

BIBLIOGRAPHY

1. Abraham, F., & Schmukler, S. L. (2017). *Addressing the SME finance problem* (Research & Policy Briefs No. 9). World Bank Group.
2. Agrawal, A., Catalini, C., & Goldfarb, A. (2013). Some simple economics of crowdfunding. *Journal of Economic Perspectives*.
3. Alliance for Financial Inclusion. (2025). *Closing the gender gap: A case study of Paraguay*. AFI.
4. Arrellaga, N. (n.d.). *Nicolás Arrellaga*. Innovators Under 35. Retrieved from
5. Banco Central de Bolivia. (2016). *Ley de Mercado de Valores de Bolivia*.
6. Bank for International Settlements. (2020). *The dawn of fintech in Latin America: landscape, prospects and challenges* (BIS Papers No. 112).
7. Brigard Urrutia. (2018, October 17). *Colombia: New crowdfunding decree*. International Financial Law Review.
8. Cámara de Senadores de Bolivia. (1977). *Código de Comercio* (Law decree No. 14379).
9. Cámara de Senadores de Paraguay. (1983). *Ley del comerciante* (Law No. 1034).
10. Asamblea Nacional del Ecuador. (2020). *Ley Orgánica de Emprendimiento e Innovación*. Registro Oficial Suplemento N° 151.
11. Banco Central del Paraguay. (2021). *Regulación de las actividades Fintech en Paraguay*.
12. Congreso de Colombia. (2011). *Ley 1480 de 2011: Estatuto del consumidor*. Diario Oficial 47.265.
13. Congreso de los Estados Unidos Mexicanos. (2014). *Ley de instituciones de crédito*. Diario Oficial de la Federación.

14. Congreso de los Estados Unidos Mexicanos. (2018). *Ley para regular las instituciones de tecnología financiera*. Diario Oficial de la Federación.

15. Congreso Nacional de Bolivia. (1998). *Ley del mercado de valores N° 1834*.

16. Congreso Nacional de Paraguay. (1996). *Ley N° 861/96: General de bancos, financieras y otras entidades de crédito*. https://www.bcp.gov.py/userfiles/files/Ley861.pdf

17. Congreso Nacional de Paraguay. (2016). *Ley N° 5787: Que establece medidas de protección a los usuarios de servicios financieros*. https://www.bcp.gov.py/userfiles/files/ley-5787.pdf

18. Estado Plurinacional de Bolivia. (2013). *Ley N° 393: Ley de servicios financieros*. Gaceta Oficial del Estado Plurinacional de Bolivia.

19. Superintendencia de Bancos del Ecuador. (2020). *Norma que regula las actividades fintech en Ecuador*. Resolución SB-2020-0003.

20. Castillo-Vergara, M., Alvarez-Marin, A., & Placencio-Hurtado, D. (2023). Competitiveness and Innovation in Small and Medium-Sized Enterprises (SMEs) in Ecuador. *Sustainability, 15*(8), 6790

21. Chambers and Partners. (2024). *Fintech 2024: Mexico*.

22. Chambers and Partners. (2024). *Fintech 2024: Peru*.

23. CMS Grau. (2020, March). *Crowdfunding legislation enacted in Peru*. CMS Law-Now.

24. Confederación de Empresarios Privados de Bolivia. (2017). *Inversión y crecimiento en Bolivia: Desencuentros recurrentes*.

25. Confederación de Empresarios Privados de Bolivia. (n.d.). *¿Qué impide la inversión privada?*

26. Crowdfunding Ecuador. (n.d.). *Crowdfunding Ecuador*.

27. Dentons. (2025, May 13). *Bolivia regulates Fintech*.

28. Doerr, J. (2018). *Introduction to OKRs: Objectives and key results*. O'Reilly Media.

29. Economic Commission for Latin America and the Caribbean (ECLAC). (2023). *Regulación de la industria de financiamiento participativo (crowdfunding) en las Américas*. United Nations.

30. El Economista. (2024, June 4). *Crowdfunding mantiene potencial de crecimiento a pesar de las altas tasas*.

31. El Economista. (2024, May 21). *Snowball se expandirá a EU*.

32. Fernández, P. (2019). *Valuation and common sense* (7th ed.). IESE Business School, University of Navarra.

33. Fundación Milenio. (2024). *El estancamiento económico y déficit de inversión*.

34. Greenberg Traurig. (2018, April). *FAQs Concerning Mexico's New FinTech Law*.

35. Guamán Aguiar, S. O., & Saltos Zúñiga, P. E. (2023). Crowdfunding como mecanismo de financiamiento para emprendimientos en Ecuador. *Proyecciones, (23)*.

36. IDC Online. (2024, April 25). *La necesidad en México de un mercado secundario de crowdfunding*.

37. Infobae. (2024, November 2). *Crowdfunding: ¿Qué es y cómo está transformando el voluntariado y el apoyo comunitario?*

38. Inter-American Development Bank. (2020). *MSME Financing Instruments in Latin America and the Caribbean During COVID-19*. IDB.

39. Inter-American Development Bank. (2023). *MSME financing instruments in Latin America and the Caribbean during COVID-19* (IDB Technical Note IDB-TN-2404).
40. Inter-American Development Bank. (2023). *Alternative finance (crowdfunding) regulation in Latin America and the Caribbean: A balancing act* (IDB Working Paper IDB-WP-1342).
41. Inter-American Development Bank. (n.d.). *MSME financing gap in Latin America and the Caribbean*. IDB.
42. International Finance Corporation. (2019, March 21). *IFC Boosts Financial Access for Women-owned SMEs in Ecuador with Loan to Banco Internacional*. IFC.
43. International Finance Corporation. (2022, June 10). *IFC Financing of up to $100 Million to Sudameris Supports the Expansion of Access to Credit for SMEs in Paraguay, with a Focus on Women-owned Enterprises*. IFC.
44. International Finance Corporation. (2023, November 24). *IFC Invests in Banco Continental to Increase Lending to SMEs and Women-led SMEs in Paraguay*. IFC.
45. International Finance Corporation. (2025, January 20). *IFC and Banco Pichincha Support Sustainable Development in Ecuador*. IFC.
46. Iurenovum. (2024). *Fintech in Ecuador: A legal analysis*.
47. Legal500. (2024). *Ecuador: Fintech*.
48. Legalink. (2019, November). *Equity Crowdfunding & Peer-to-peer Lending: Colombia*.
49. Organisation for Economic Co-operation and Development. (2018). *Financing SMEs and Entrepreneurs 2018: An OECD Scoreboard*. OECD Publishing.

50. Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*. John Wiley & Sons Inc.

51. Owens, J. V., & Wilhelm, L. (2017). *Alternative data transforming SME finance*. World Bank Group.

52. Paysafe. (2020, April 27). *PaysafeCard continues expansion in South America with launch in Paraguay*.

53. Pérez-Campoverde, R., García-Vallejo, G., Morales-García, M. D., Sánchez-Rady, A., & Montalván-Villacís, R. (2025). Artificial Intelligence in Ecuadorian MSMEs: Current State, Barriers, and Opportunities for Business Management. *Applied Sciences, 16*(6), 443.

54. ResearchGate. (2020). *Peer to Peer Lending in Developing Countries: A Case Study of Paraguay*.

55. Sánchez-Báez, E. A., Fernández-Gámez, M. A., & Rojano-Aguilar, A. (2023). Impact of COVID-19 on the sales of MSMEs in Paraguay: The mediating role of supply chain and investment. *Revista ABRA, 43*(67), 20-40.

56. The Crowd Space. (n.d.-a). *Crowdfunding Platforms in Bolivia*.

57. This Week in Fintech. (2025, June 1). *TWIF Latam June 1*.

58. U.S. International Development Finance Corporation. (n.d.). *Ecuador – Uncollateralized MSME Lending*. DFC.

59. VIXIO Regulatory Intelligence. (2023, August 15). *Ecuador's First Fintech Regulation Brings New Rules For Payment Service Providers*.

60. Vouga Abogados. (2023, November 2). *Advances in Fintech Regulation in Paraguay: Crowdfunding and Lending*.

61. World Bank Group. (2021). *Challenges of Public Credit Guarantee Schemes in Latin America during the Pandemic*. World Bank.

62. World Bank Group. (2023). *Financing solutions for micro, small and medium enterprises in Latin America* (World Bank Technical Paper).

63. World Bank. (n.d.-b). *SME Finance*.

64. Prospera Web Bolivia. (2025). *Prospera Bolivia*.