

September 2016

HARNESSING THE FINTECH REVOLUTION

HOW DIGITAL INNOVATIONS ARE REVITALIZING MSME FINANCE IN LATIN AMERICA AND THE CARIBBEAN











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ABOUT THE ORGANIZATIONS

The Inter-American Investment Corporation (IIC), a member of the Inter-American Development Bank (IDB) Group, is a multilateral development bank committed to supporting the private sector in Latin America and the Caribbean. The IIC finances sustainable enterprises to achieve financial results that maximize social and environmental development for the region. With a portfolio of \$7 billion under management and 330 clients in 20 countries as of 2016, the IIC works across sectors to provide innovative financing and advisory services that meet the evolving demands of its clients. For more information, visit www.iic.org.

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ABBREVIATIONS

FI	Financial institution
FX	Foreign Exchange
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IIC	Inter-American Investment Corporation
IT	Information technology
LAC	Latin America and the Caribbean
MOOC	Massive Open Online Course
MPOS	Mobile Point of Sale
MSME	Micro, small, and medium-sized enterprise
P2P	Peer-to-peer

EXECUTIVE SUMMARY

While micro, small, and medium-sized enterprises (MSMEs) are considered to be strategically important for the vast majority of financial institutions in Latin America and the Caribbean (LAC), most financial institutions face

A gap in finance for MSMEs in LAC that stands at approximately \$250 billion substantial barriers to serving them. The result? A gap in finance for MSMEs in LAC that stands at approximately \$250 billion. This gap is due to severe information asymmetries, the prevalence of informal business practices, high costs of underwriting relative to available margins, heterogeneity of the market, impediments to MSME growth and productivity, and regulatory constraints. These issues have starved the MSME segment of the capital needed to grow and improve productivity, directly affecting the two-thirds of the region's workforce

that MSMEs employ. Such problems have also deterred financial institutions from tapping into this market as a source of long-term business value. Until now.

Today, the spread of digital technologies among MSMEs and their customers is transforming the dynamics of MSME finance. Massive amounts of data generated and processed by these tools can be used to better understand the MSME market, assess credit-worthiness, and manage risk more effectively. The emergence of new technological solutions presents a unique set of both opportunities and challenges for financial institutions in the region.

Today, the spread of digital technologies among MSMEs and their customers is transforming the dynamics of MSME finance

Specialized financial technology companies, or "fintechs," have made waves in recent years by developing solutions targeting the bottlenecks afflicting traditional financial mechanisms. Advanced analytics platforms are leveraging Big Data drawn from digital footprints to conduct credit assessments faster and at lower costs than ever before. Non-traditional sources of information available through digital technologies are also helping to create more robust credit risk profiles and enhance our understanding of complex MSME markets. Digital automation can streamline underwriting processes, as well as organizational decision making, again lowering costs for financial institutions.

Fintechs are also demonstrating that supporting MSMEs' business management capacities can strengthen brand loyalty and create opportunities for cross-selling. The evolution of virtual communications and training tools has opened new revenue streams through enhanced value-added services. Stronger interaction with MSME clients improves confidence needed for lending and can help banks identify which products and services are best suited to individual clients. As the growing use of electronic payments solutions brings more consumers and businesses into the digital fold, online platforms can also facilitate the provision of vital working capital based on expected cash flows and accounts receivable.

The fintech revolution is quickly changing the global landscape, generating new opportunities for MSMEs to access financing with terms that fit their needs. Worldwide investment in fintech is expected to surpass \$30 billion in 2016, over 30 times the amount invested in 2010. Little has flowed to LAC thus far, but a dynamic, albeit nascent, fintech

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sector is emerging in the region nonetheless. Local crowdfunding and P2P lending platforms, as well as electronic payments providers, have gained notable success. The majority of LAC fintech ventures have emerged in larger markets in the region, including Brazil, Mexico, Colombia, Argentina, and Chile. International firms have begun seeking opportunities in LAC as well, establishing partnerships and launching pilot initiatives to test and refine their solutions, with promising results thus far.

Whether local or global, partnerships have been key to scaling up promising fintech solutions. In LAC, however, collaboration has been more difficult. This is, in part, simply a result of the stage of the market's development. But it is also due to hurdles specific to the region's financial institutions, including greater rigidity of governance structures, difficulty faced by fintechs in identifying the appropriate contact or point of entry, and complexities of ensuring compatibility of innovative fintech solutions with legacy IT systems.

The disruption caused by the fintech revolution has important implications for financial institutions. This report identifies a number of ways financial institutions can adapt to changing market conditions and foster greater innovation to better serve the needs of MSMEs while driving business value and managing risk:

- Establish dedicated innovation teams and flexible governance structures: Concerted efforts to create
 more flexible governance structures can improve capacity to adopt new technologies quickly and manage
 partnerships with promising fintechs. Establishing dedicated innovation teams can centralize this coordination
 and streamline decision making, which is important to keep up with the speed of changes in the market.
- Implement advanced and alternative analytics tools: Advanced data analytics are critical to risk management,
 operational efficiency, and expansion of MSME portfolios. Alternative sources of information can contribute
 to more robust risk profiles while helping banks move away from cumbersome collateral requirements or
 prohibitively high interest rates. Analytics can sharpen accuracy of acceptable loan sizes, prices, and maturities,
 resulting in greater MSME coverage.
- Use Big Data to better understand MSME needs: Digital tools can systematize, centralize, and disseminate relevant knowledge and lessons learned from specific MSME clients.
- Leverage online channels to expand and enhance value-added services: Digitization has paved the way for
 a transformation in MSME services. Online tools are essential for MSME satisfaction and engagement, while
 generating vital information about client behaviors and needs.
- Take cyber-security seriously: In the wake of highly visible cyber hacks in developed markets, people
 everywhere are anxious about the security of information provided online. Financial institutions can ramp up
 efforts to ensure client data is secure and provide concrete assurances in their systems. When steps are taken to
 bolster cyber-security, it is important to let clients know; instilling confidence in the safety of client information is
 imperative to boosting adoption of digital banking tools.

- Invest in collaboration and experiment with innovative ventures: Partnerships with fintechs can benefit both
 sides. Banks provide extensive market reach and can facilitate growth of promising fintechs, while proving the
 viability of a given fintech solution at scale. When established, dedicated innovation teams can seek out the best
 opportunities for collaboration in alignment with business priorities. Leading banks are also supporting fintech
 competitions to identify top-tier talent and solutions, which can feed internal incubation programs that produce
 further synergies.
- Become active innovators: Financial institutions in LAC that can systematically transform their approach to
 innovation will benefit the most from the fintech revolution. Active innovators see fintech's potential to transform
 banking the way Uber has impacted transportation, Airbnb has disrupted travel accommodations, and Amazon
 has revolutionized commerce. Innovation is embedded in institutional strategy and culture, and support
 structures are built to foster innovation throughout the organization.

These recommendations are based on global experiences in markets where financial innovation has evolved quickly. Change has materialized more slowly in LAC, but it is clearly underway. In spite of increased capital controls, current conditions are ripe for financial institutions to innovate in order to better serve the MSME market. The opportunity to gain a competitive edge as an early mover is substantial, as are the risks of maintaining the status quo.

However, innovation does not come solely from financial institutions. The broader financial ecosystem is essential to fostering innovation in MSME finance. In addition to financial institutions, fintechs, public-sector agencies, and academia can strengthen this supporting environment in the following ways:

Fintechs • Reconfigure strategies for entering new markets in LAC in consideration of the region's distinctive features, as well as the incentives and business drivers of local financial institutions. **Public-sector** Leverage convening power to promote dialogue among various stakeholders. Monitoring agencies the evolution of digital technologies and the implications for global financial markets can help public agencies make timely and informed decisions. • Integrate modern digital systems in public agencies to support business formalization, technological adoption, and strong public databases. Improve access to information through more robust credit registries to lower costs of MSME lending. Establishing movable asset registries has proven effective in expanding access to credit for MSMEs. Balance priorities related to improving digital capacities with those tied to implementation of macro prudential regulations. Carefully consider implications of expanded access to information with other regulatory issues, including: (i) consumer privacy; (ii) fraud protection; (iii) anti-money laundering (AML) mechanisms; (iv) crossborder capital flows and systemic stability; and (v) cyber-security. **Academia** Focus research efforts on the evolution of the fintech market and innovation programs in LAC financial institutions. Generate empirical evidence on the financial and economic impact of greater integration of digital financial tools, especially for the MSME segment.

With more and better information, improved communications, accelerated data management capacities, and streamlined processes, banks that serve MSMEs can generate profits and sharpen their overall competitiveness. The MSME market has tremendous potential to drive long-term business value for financial institutions in LAC. If the approach to innovation can be recalibrated, the fintech revolution can bring transformative opportunities to the region's financial markets, MSMEs, and economy as a whole.

1. INTRODUCTION

The speed of technological change is having a disruptive impact throughout the global economy. More devices are connected to the internet than ever before and people everywhere are turning to digital tools to manage everyday tasks. We talk to our cars to navigate us to new destinations and play our favorite music. We book hotels, flights, and transportation at the click of a button. We transfer money to relatives overseas in an instant. We send emails from 30,000 feet. Our lives are quickly changing in the midst of this digital revolution, shaping the way we do business and connect with one another. Our daily texts, Tweets, and posts create a trail of data that has never before been harnessed.

While the reach of this phenomenon extends around the world, the financial services industry is considered to be the industry ripest for disruption. The rise of online banking portals, foreign exchange, transfers, and e-commerce sites are reducing the volume of cash transactions every day. Massive amounts of data derived from these platforms as a result of changing behaviors are transforming the economy and opening new doors in the realm of financial services.

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This paradigm shift has become particularly apparent in its impact on financing for micro, small, and medium-sized enterprises (MSMEs). The increased use of digital technologies among MSMEs and their customers is generating a

The increased use of digital technologies among MSMEs and their customers is generating a wealth of new data that can be used to better understand the MSME market, assess credit-worthiness, and manage risk more effectively

wealth of new data that can be used to better understand the MSME market, assess creditworthiness, and manage risk more effectively. A growing number of financial technology companies, also known as "fintechs," are developing innovative tools to do precisely this. As a result, traditional financial institutions are faced with both a unique challenge and an enormous opportunity.

This report aims to evaluate the effects of the fintech revolution for the financial services industry in Latin America and the Caribbean (LAC), with a focus on the implications for MSME finance. It analyzes how new technologies are solving traditional challenges to MSME financing around the world and provides an overview of the emerging fintech landscape in the LAC region. It also explores the opportunities presented by fintech to open the MSME market as a profitable business segment and driver of long-term value for financial institutions. And it considers why some incumbent financial institutions in LAC

have been slow to adapt to the changes brought on by the digital disruptors, when compared to other regions. We then propose strategies that can help financial institutions leverage innovative fintech solutions in order to expand their MSME portfolios and carve out competitive advantages in this underserved segment. Lastly, we recognize the implications for other stakeholders and offer recommendations intended to facilitate the evolution of innovations in the broader financial ecosystem.

¹ Given the variability in definitions of MSMEs across countries, sectors, and institutions throughout the LAC region and the world, we do not attempt to establish a preference in this report for one definition over another. Rather, MSMEs are referred to in a somewhat general sense, and references to empirical evidence related to the MSME sector may employ different technical definitions according to the original source. The lack of a precise definition is a subject for another discussion, the generalization employed in this report should not materially detract from the narrative. Unless otherwise noted, references to MSMEs in this report primarily pertain to the formal sector.

The report draws on both primary and secondary research conducted by Oliver Wyman and the IIC. Primary research consisted of more than 20 interviews with executives from regional financial institutions, public sector regulators, and MSMEs, as well as financial technology firms and international investors. Extensive desk review was used to complement and verify the insights gleaned from primary research. We hope this report will shed light on the implications of the fintech revolution for MSME finance and act as a point of reference to galvanize innovation throughout the financial services industry in LAC.



2. BACKGROUND

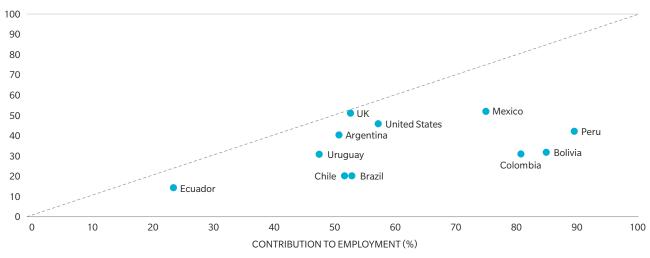
2.1. THE GAP IN MSME FINANCE

The MSME sector is a vital engine of economic growth and development. Worldwide, there were about 40 million MSMEs in 2013, of which some 70 percent were domiciled in developing countries.² In Latin America and the

In Latin America and the Caribbean, MSMEs represent approximately 99 % of private sector businesses and account for 67% of the workforce Caribbean, MSMEs represent approximately 99 percent of private sector businesses and account for 67 percent of the workforce. However, MSMEs are six times less productive than large firms and contribute far less to overall GDP in comparison to their peers in developed markets.³ Exhibit 1 shows that while MSMEs account

for a wide range of employment levels across LAC countries (from less than 25 percent in Ecuador to more than 90 percent in Peru), their contribution to GDP is consistently underweight throughout the region.

Exhibit 1: MSME contributions to employment and GDP, selected Latin American and benchmark countries CONTRIBUTION TO GDP (%)



Source: MSME Country Indicators, IFC; Relatório FOROMIC Uruguai 2010, SEBRAE.

Productivity and growth potential are stymied in part by a dearth of appropriate financing options. An estimated shortfall of between \$210 billion and \$250 billion in MSME financing exists. As shown in Exhibit 2, LAC had the second-largest credit gap for formal SMEs in the world in 2011, just behind the Middle East and North Africa. While East Asia and the Pacific has about 3.5 times more formal SMEs than LAC, they have access to more than 10 times the amount of outstanding credit.

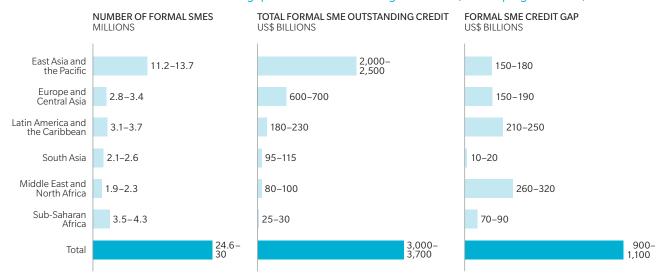
² Access to Credit among Micro, Small and Medium Enterprises. International Finance Corporation (IFC). 2013.

^{3 2013} Latin American Economic Outlook: SME Policies and Structural Change. OECD Development Centre and the Economic Commission for Latin America and the Caribbean (ECLAC). 2013.

⁴ IFC Enterprise Finance Gap Database.

 $^{5 \}quad \text{The acronym "SME" used by the OECD report is inclusive of micro, small, and medium-sized enterprises in its definition.} \\$

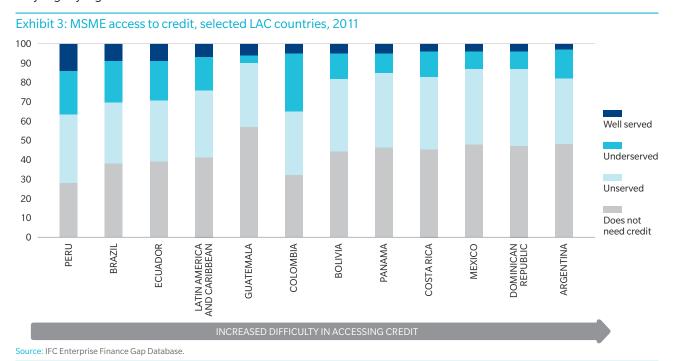
Exhibit 2: Formal SME Sector – Total credit gap relative to outstanding SME credit, developing countries, 2011



Source: Closing the Credit Gap for Formal and Informal Micro, Small, and Medium Enterprises. International Finance Corporation. The World Bank Group. 2013.

In addition to the discrepancies seen in comparison to other developing regions, the difficulties MSMEs face in accessing credit are just as apparent when compared to rich countries. In OECD countries, MSMEs receive 25 percent of total credit, whereas they receive only 12 percent in LAC.⁶

Varying degrees of access to credit illustrate the sector's needs more acutely and can inform actions aimed at satisfying them. On average, over 50 percent of MSMEs have no access to finance or are underserved and less than 10 percent of MSMEs say that they are well-served. While compositions vary across selected countries in the graph below, the proportion of well-served MSMEs is consistently under 10 percent, with the exception of Peru, where it is only slightly higher.



6 2013 Latin American Economic Outlook: SME Policies and Structural Change. OECD Development Centre and the Economic Commission for Latin America and the Caribbean (ECLAC). 2013.

In addition, more than one third of MSMEs in the region consider the barriers to access credit to be major or severe (see Exhibit 4). That is to say that those that are unserved or underserved are not aware of alternatives that can provide the amount or type of financing they need to grow their businesses. Many MSMEs are considered underserved where credit is technically available, but tied to inadequate terms. MSMEs require patient capital. These firms typically have few acceptable forms of collateral to offer banks that need to mitigate their risk exposure.

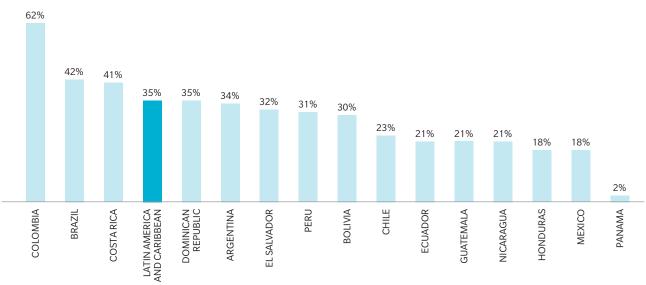


Exhibit 4: Percentage of MSMEs with major/severe barrier to credit, 2011

Source: IFC Enterprise Finance Gap Database.

The severity of such barriers to appropriate financing options stifles MSME growth, employment and productivity. Apart from their broader economic impact, these barriers hinder business growth for financial institutions themselves. Where MSMEs receive financial and non-financial support to grow, their financing needs grow along with them, creating a multitude of cross-selling opportunities as firms gradually become larger and more sophisticated.

The scope and depth of these gaps in the region clearly demonstrate that traditional approaches to MSME finance are falling short. Considering the size of the MSME segment and the level of demand throughout the region, it can seem perplexing that existing market actors (such as financial institutions and non-bank financial intermediaries) have not been able to seize the apparent business opportunity. To better understand why, the following section examines the obstacles – primarily those faced by financial intermediaries – in greater detail.

2.2. TRADITIONAL CHALLENGES TO SERVING MSMES

Financial institutions find it difficult to meet MSMEs' needs; individual loan volumes are considered too small and transaction costs too high to create sufficient value. In addition, MSMEs represent a heterogeneous group of businesses in terms of industry, size, and business model, making it difficult to fully understand their needs and potential for growth. Legacy models of credit risk analysis typically used for large corporates or other business segments are seldom applicable to MSMEs. Indeed, 56 percent of financial institutions recognize they have internal barriers to serving the MSME segment.⁷

As a result, MSMEs are often forced to rely on scarce retained earnings, family borrowing, or less scrupulous informal lenders. Alternatively, they may simply choose not to make the investments needed to enhance efficiency, productivity, and growth. Where financial institutions do offer certain products and services to MSMEs, they tend to remain insufficiently flexible, overly expensive, or otherwise out of reach. Interest rates can be prohibitively high – as much as twice the rate applied to large firms in some countries – and collateral guarantees that raise the cost of business failure discourage many MSMEs from seeking a formal loan.

There are a number of reasons these challenges arise. In order to craft effective innovation strategies, it is important to understand what lies at the root of these problems. The following are typically the most obtrusive barriers to providing appropriate financing options to MSMEs in LAC:

1. Information asymmetries and business informality

Like any analysis, credit assessments are based on relevant information – in this case, information about a borrower and his or her commercial venture that can be used to determine the perceived risk and, correspondingly, acceptable size, price, tenor, and other terms of the potential loan exposure. Larger companies and institutional borrowers tend to have well defined management structures and reporting processes, which standardize the way in which information is gathered, organized, and reviewed. This allows FIs to conduct accurate and cost-effective credit assessments. In contrast, few MSMEs are organized this way. Even those with formal systems in place can be substantially different amongst one another, creating similar impediments hindering financial institutions' capacity to analyze the company efficiently. Informal business management practices and underdeveloped reporting standards further increase the costs of due diligence using traditional credit assessment methodologies. Higher costs for the bank are ultimately transferred to the price of the loan, diminishing the repayment capacity of the borrower and increasing risk for the lender.

Business informality further affects FIs' abilities to make reliable assessments. While in most places the process has become easier in recent years, the associated costs and time required to formalize a business remain significantly higher than in developed markets. The average cost to start a business in LAC was 31 percent of income per capita in 2015, compared to 3.2 percent for high-income OECD countries. It takes approximately 30 days to start a business in LAC versus eight days in high-income OECD countries.

⁷ El Missing Middle y los Bancos: 7th Survey to Banks in Latin America and the Caribbean. MIF, IIC, IDB. 2014.

⁸ Políticas para la formalización de las micro y pequeñas empresas. FORLAC, International Labor Organization. 2014.

⁹ Doing Business 2016. World Databank. The World Bank Group. 2016.

85% 84% 76% 72% 71% 71% 69% 67% 64% 62% 61% 52% 41% LATIN AMERICA AND CARRIBEAN BOLIVIA MEXICO CHILE PANAMA GUATEMALA COSTA RICA ARGENTINA BRAZIL EL SALVADOR PERU COLOMBIA URUGUAY PARAGUAY ECUADOR

Exhibit 5: Percentage of informal firms, selected LAC countries, 2010

Source: IFC Enterprise Finance Gap Database. 2011.

The high cost of formality discourages many from registering their businesses in LAC. In 2010, 62 percent of formal firms surveyed reported competing against unregistered or informal firms in LAC. ¹⁰ In major markets like Brazil, Colombia, and Mexico, this figure was around 70 percent. The prevalence of informality among MSMEs exacerbates information asymmetries caused by inadequate reporting standards and accountability. Without verifiable financial statements, credit history, tax returns, or banking records, lenders lack the information they need to make reliable credit assessments using traditional methodologies.

Moreover, contract enforcement becomes more difficult and costly in the event of borrower default, increasing risk and the cost of portfolio supervision. This ultimately translates to higher interest rates or collateral requirements, or outright denial of the credit application. Informal MSMEs may even avoid seeking bank credit altogether for fear of divulging information that would require them to register and assume the associated costs and taxes. This creates a vicious circle whereby informal businesses cannot acquire the capital needed to gain the scale that would enable them to pay the high cost of formalization and produce the information that could allow banks to provide financing for growth.

10 IFC Enterprise Survey. 2011.

2. Costliness of the underwriting processes and relatively low margins

The loan underwriting process for MSMEs is widely recognized as a cumbersome, expensive, and time-consuming process. Most banks in LAC still process MSME loan applications manually. In many instances, this amounts to weeks or even months before a credit decision is made, by which time the firm's financing needs may have changed considerably.

To be sure, the thoroughness of manual credit assessments, as well as the associated personal relationships established with borrowers, can be important deterrents of risk for financial institutions. At the same time, however, such thoroughness increases the per-unit cost of transactions relative to potential returns on smaller loans. It can be understandably difficult to justify such a lengthy and costly process for loans that, individually, generate much smaller returns compared to larger ones.

The manual nature of the MSME underwriting process is partially a result of legacy systems (regarding both information technology and organizational processes) predominant in most financial institutions in the region. When paperwork is filled out by hand and reviewed by local branches or isolated business units, it prevents banks from aggregating important information that can be useful in the future.

The limitations of outdated digital information systems and of human capital needed to perform advanced data analytics hampers banks' abilities to make decisions. Even information already available in legacy systems that has proven to be effective in understanding MSME behavior and risk profiles, such as transactional data from existing clients, adds limited value in the absence of analytical processing power. Without the capacity to derive strategic insights from such information, there is little incentive to expend time and effort on expanding MSME portfolios.

3. Complexity of MSME market analyses and segmentation

One of the defining characteristics of the MSME segment is its diversity. It spans a wide range of industries and employs a variety of business models. Some small businesses arise out of necessity and have little organizational structure or strategy to speak of. Others are launched to exploit unique market opportunities and are marked by talented staff, efficient operations, and innovative product and service offerings.

The challenge for many banks is to determine where individual MSMEs fall on this spectrum without a standardized analytical model to guide them. In the absence of such a model, many banks apply the same due diligence processes for large corporate clients as they do for MSMEs. Banks may also simply repackage retail products tied to the financial assets of the MSME owner or collateral guarantees. ¹¹ In either scenario, the financing terms offered are rarely appropriate for the unique needs of individual MSMEs.

The heterogeneity of the MSME market also limits banks' abilities to understand the needs of MSME clients, so banks often struggle to segment the market effectively. This is particularly disadvantageous where profitability is driven by market penetration – banks rely heavily on their ability to gain loyalty among MSME clients and to cross-sell a broader suite of products and services. A superficial understanding of the market often compounds the difficulty of creating attractive products and services for MSMEs, limits banks' cross-selling capacities, and may ultimately fray client relations.

 $^{11\} Small\ Business\ Banking: Challenging\ Conventional\ Wisdom\ to\ Achieve\ Outsize\ Growth\ and\ Profitability.\ Oliver\ Wyman.$

4. Limits to MSME growth and productivity

As a whole, MSMEs in LAC have been historically less productive relative to large companies than their counterparts in more developed markets. ¹² Much of this gap may be explained by lower levels of technological adoption (mainly in production and process management), including a more manual nature of operations, and limited economies of scale. However, it is also a result of insufficient financing to invest in equipment, personnel, and business operations needed to gain scale and improve productivity and efficiency.

Lower levels of business education among MSMEs can stifle productivity as well. Smaller companies tend to have fewer opportunities for formal education that can contribute to firm productivity and build confidence among lenders: 50 percent of employees in large corporates have access to higher education in LAC, compared to 27 percent in medium-sized enterprises and only 15 percent in microenterprises.¹³

Given the complexity of segmenting the MSME market, these conditions can create the perception of high exposure to performance risk in the event of an economic shock. But even firms with highly competent management can be exposed to such risks in the event of a shock to a key link in its value chain. Understanding how to differentiate these risks through firm-level assessments in a cost-effective way remains a critical challenge for financial service providers.

5. Opportunity cost and regulatory constraints

With higher credit assessment costs relative to large corporates or other preferred investment sectors, MSMEs are often less attractive clients in the short term. The larger expected returns from high volume transactions (assuming there is sufficient demand), as well as usually lower probabilities of default, constitute the opportunity cost of allocating capital to MSMEs. Higher capital requirements associated with Basel III compliance add further scrutiny to the use of scarce financial resources.

Despite these difficulties, however, the vast majority of banks still recognize the strategic importance of the MSME sector for their businesses. Over 90 percent of banks surveyed in LAC have an active SME strategy and 75 percent

The vast majority of banks still recognize the strategic importance of the MSME sector for their businesses have a dedicated SME department. ¹⁴ Commitment to the segment continues to gain momentum; growth of outstanding SME loan portfolios has ranged from 10 percent to 15 percent in Brazil, Chile, Mexico, Colombia and Argentina over the past four years. ¹⁵ Banks appear to be beginning to realize the potential for profit and long-term business value waiting to be tapped in the MSME market. To be successful, they will need to find new ways to overcome the challenges that have inhibited their ability to provide these firms with appropriate financing options. The current wave of technological disruption is

opening new doors that will change the way these challenges are addressed in the digital era.

^{12 2013} Latin American Economic Outlook: SME Policies and Structural Change. OECD Development Centre and the Economic Commission for Latin America and the Caribbean (ECLAC). 2013.

 $^{13 \ \}textit{Small businesses, large gaps: Employment and working conditions in MSMEs in LAC.} \ In ternational \ Labor \ Organization. \ 2015.$

 $^{14\} Banks\ and\ the\ Missing\ Middle:\ 7^{th}\ Survey\ to\ Banks\ in\ Latin\ America\ and\ the\ Caribbean.\ MIF,\ IIC,\ IDB.\ 2014.$

¹⁵ Financing SMEs and Entrepreneurs 2016: An OECD Scoreboard. OECD Publishing, Paris. 2016; Relatório de Economia Bancária 2014. Brazilian Central Bank, 2014; INDEC and Argentina's Central Bank.

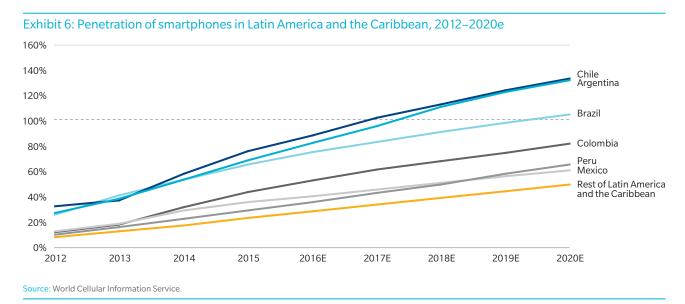
2.3. ACCELERATING TECHNOLOGICAL CHANGE

The development of new digital technologies and rapid expansion of technological infrastructure are altering the global financial landscape. LAC is no exception: More than 344 million people, or 55 percent of its population, are now connected to the internet. ¹⁶ LAC also has more fixed broadband internet subscribers than any developing region in the world aside from East Asia, the most populous area on the planet. ¹⁷ As internet speeds improve and more advanced infrastructure is introduced in the region, these numbers will continue to climb. And they will climb fast. The speed of technological change today has become one of the most disruptive forces in history.

Technological change is having profound effects on the financial industry. As commercial transactions move online and digital technologies become increasingly affordable, banks and alternative finance providers are able to develop

Technological change is having profound effects on the financial industry manifold applications with extraordinary capacities. Increasing usage of mobile phones to send and receive payments, as well as rising engagement in social media, creates new sources of information that allow banks to efficiently analyze borrower behavior and, thus, identify feasible lending opportunities while mitigating risk. The use of smartphones is spreading quickly in LAC too, as seen in the chart below. Increasing smartphone

penetration is enabling banks to better serve MSMEs by making it easier to connect and communicate with clients.



The ubiquity of technology in our lives today now drastically amplifies the economic impact of new advances. Innovations are emerging around the world that feed off of these new capabilities and the massive quantities of data being generated by and channeled through modern technological devices and applications. The ability to achieve scale through the power of digital technologies is greater than ever before, resulting in innovative business models and the emergence of new players in the financial ecosystem.

¹⁶ Internet World Stats. Data as of November 30, 2015.

¹⁷ World Development Indicators, World Databank 2016. The World Bank Group

3. HOW FINTECH IS SOLVING TRADITIONAL CHALLENGES TO MSME FINANCE

Specialized financial technology companies have developed innovative applications for financial markets. Many of these firms have been successful in unbundling various services traditionally provided by financial institutions. By leveraging digital technologies, fintechs find innovative ways to improve client support, raise capital, facilitate electronic payments, and analyze Big Data.

Fintechs are nimbler than incumbent financial institutions, allowing them to adapt to market needs quickly. As most are startups in relatively uncharted waters, they have not been subject to the same regulatory scrutiny as banks.

This does not mean that incumbents cannot generate the capacity to serve changing market demand as well, but they do need to be cognizant of their differences with fintech companies in order to develop informed digital strategies.

While many fintech solutions have been initially focused on consumer banking and lending, there are myriad applications for MSMEs as well. The efficiencies gained through the adroit use of modern technologies are creating more attractive financing options for MSMEs around the world. Innovations in MSME finance are deepening our understanding of a heterogeneous market, reducing operating costs and increasing margins, strengthening risk management capacities, and improving MSMEs' business acumen and growth potential.

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Individually, these innovations are disrupting financial markets in various ways. Together, they are contributing to a broader evolution in the marketplace. For financial institutions, making the best use of fintech trends will depend on how well they are aligned with their own capabilities and local market dynamics.

This chapter reviews the leading areas of global innovation in MSME finance that are addressing the challenges outlined above.

3.1. ALTERNATIVE DATA AND ADVANCED ANALYTICS

The spread of digital technology has created a wealth of information that can be used to analyze behavior and assess risk in new ways. Fintechs are tapping into alternative metrics from mobile phone usage patterns, social media impressions, and contractual details that are providing fresh insights. The use of cutting-edge software and advanced algorithms allows Big Data drawn from these sources to be processed and synthesized quickly to better assess MSME banking needs, repayment capacity, and firm reliability.

As e-commerce activity ramps up and more businesses accept electronic payments from customers, transaction histories can be used to gauge firms' revenue streams over time. Transactional data provides a more complete

Transactional data provides a more complete picture of the credit capacity and health of MSMEs, as most are dependent on cash flows rather than fixed assets or investments

picture of the credit capacity and health of MSMEs, as most are dependent on cash flows rather than fixed assets or investments. Lenders can also use transactional data to estimate future cash flows of the business. The digitization of this information makes it readily available, trackable, and comparable, contributing to far more timely and reliable analyses compared to the isolated use of paper-based financial records. When combined with a client's limited credit history or collateral assets, this information can improve risk management for lenders and lower the cost of borrowing for MSMEs.

Social media platforms are providing additional data that can be used to assess potential borrowers' creditworthiness. About 200 social media usage indicators have

been identified that can contribute to credit risk analysis. In the US, incorporation of this information into credit assessments can improve accuracy of early warning and credit models by up to 20 percent.¹⁸

One example of a fintech helping to bridge the information divide is First Access Market. With consent from users, First Access draws on a combination of demographic, geographic, financial, and social information from mobile phones, utility contracts, and other sources to create risk scores and credit recommendations in real-time. The model has been successful in Africa thus far, helping unbanked and underbanked populations gain access to credit and raising lenders' profit margins up to 10x.

In addition to tapping into alternative sources of data, fintechs are venturing to create new data themselves. Entrepreneurial Finance Lab (EFL), for example, is using new psychometric techniques to assess risks of lending to borrowers without formal credit histories. The firm administers an online psychometric evaluation tool that can be used to determine an MSME's likelihood of repayment based on behavioral characteristics gleaned from the answers provided by its owner/management. EFL's credit scoring methodology enables its customers to reduce credit risk, increase portfolio size, and decrease costs and time to lend.

Many of these alternative analytics are most valuable as complementary elements of traditional credit assessments as they help develop more robust client risk profiles at a fraction of what it would cost to compile such information manually.

Importantly, the ability to draw on Big Data to assess MSME credit risk also reduces the degree of reliance on collateral guarantees. For small businesses, such collateral is often impossible to provide and may automatically disqualify it from being considered for a loan from a traditional financial institution. The fintech solutions that facilitate Big Data analysis from alternative sources of information present a significant opportunity to expand MSME portfolios at a lower cost than was previously possible, while maintaining acceptable levels of risk.

18 Oliver Wyman analysis

3.2. PROCESS AUTOMATION

Fintechs are streamlining the convoluted and often redundant nature of manual underwriting processes. Moving

Fintechs are streamlining the convoluted and often redundant nature of manual underwriting processes from complex paper-based loan applications to simplified versions available online can dramatically reduce operating costs associated with serving the MSME segment. Online loan applications can immediately filter the information provided to determine eligibility and mark red flags that warrant further review by lenders. Statistical modeling software then helps facilitate credit decisions by analyzing the information provided by prospective borrowers. While these technologies do not remove the human element of

risk assessment in all cases, they speed up loan approval and underwriting processes by synthesizing applicant data in real-time, thus allowing credit officers to hone the focus of their analyses.

Some fintech companies provide fully automated underwriting processes that rely on access to and analysis of both traditional and alternative data sources. These platforms are designed to quickly gather, manage and model Big Data in order to reduce processing times and associated underwriting costs. Compared to the weeks- or months-long timelines associated with manual underwriting processes, these solutions are able to reduce credit decision times to mere minutes or even seconds. With integrated capacity to process transactions, the platform can then disburse funds directly to a borrower's account. Flexible structures independent of rigid bank systems allow these companies to modify the underlying technological processes and analytic configuration as needed.

Automation, and the resulting disintermediation of the loan underwriting process, is generating opportunities to improve traditional MSMEs banking services for financial institutions through partnerships or internal system upgrades. At the same time, it is making room for a unique brand of competition from online small business lenders such as Kabbage and OnDeck Capital in the US, and Funding Circle in the UK.

3.3. VALUE-ADDED SERVICES AND VIRTUAL SUPPORT TOOLS

MSMEs with less sophisticated business acumen can benefit from training tools to help them develop and implement strong management practices, including certified accounting standards, financial planning, and inventory management controls. The internet provides channels allowing MSMEs to access these resources at much lower costs compared to in-person trainings. It also provides access to information that MSMEs can use to analyze market trends and enhance productivity. In light of MSMEs' demand for online support and business education tools in the region, this connectivity is far from arbitrary.

Financial institutions can leverage the power of the internet to enhance educational tools and value-added services. Providing this kind of virtual support can contribute to the expansion of MSME portfolios that generate healthy

returns, while managing risk in a number of ways. First, it can prepare prospective borrowers to receive credit by supporting the development of business plans and growth strategies, as well as the expectations for repayment. Second, more educated and competitive MSME borrowers are less likely to default on their loans. Third, they provide additional opportunities to generate revenue. Implementing multi-product strategies that include additional services can generate 30 to 50 percent more bank revenue than lending alone. ¹⁹

Financial institutions can leverage the power of the internet to enhance educational tools and value-added services

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Massive Open Online Courses (MOOCs) are one way of delivering curated content to MSME borrowers. MOOCs are increasing in popularity due to their modular structure, scheduling flexibility, and online evaluation tools. ConnectAmericas Academy, an initiative of the IDB, has registered nearly 12,000 entrepreneurs and business managers in LAC for its courses since 2014. The content of the courses, developed in conjunction with private-sector experts from the IIC, aims to improve MSME business management practices, competitiveness, and productivity. Whether developed internally or through strategic partnerships, offering virtual content solutions like these can help banks capture relevant data to supplement profiles of existing and potential future borrowers, allowing banks to enhance coverage models further still.

Online support tools create highly visible and effective points of interaction with MSMEs. Strands Finance is one such fintech offering a white-label solution designed to enable MSMEs to better understand and manage their finances. By allowing financial institutions to provide MSME clients with valuable technology to improve financial management practices, Strands' software bolsters customer loyalty, while generating data that can be used to enhance the quality of risk assessments. Similarly, London-based BCSG offers a broad range of MSME support tools that help banks generate targeted insights and develop deeper client relationships at each stage of the business lifecycle.

Online client engagement also bolsters banks' abilities to cross-sell. As MSME profiles become more robust, including information pertaining to company performance, business acumen, or user interests, Big Data analytics can identify products and services that would be most appealing to the client at a given point in time. This not only extends coverage and increases the probability of generating additional revenue, it also improves client satisfaction and, ultimately, retention. As such, providing virtual support to MSME clients along with access to relevant knowledge products can strengthen brand loyalty. To overlook the importance of such loyalty would be short-sighted; as MSMEs continue to learn and grow, so too do their financing needs and long-term business value.

3.4. CROWDFUNDING AND P2P LENDING

Well aware of the difficulties financial institutions face in serving the needs of MSMEs, many fintechs are eager to step in and fill the gaps in the market. Because these companies do not accept deposits and have fundamentally different organizational structures, they are typically able to avert the requirements levied on large financial institutions by regulators that can affect their ability to serve MSMEs. Online platforms are so new and change so quickly that many existing regulatory frameworks have yet to catch up to the pace of innovation.

Examples of MSME finance solutions emerging in relatively unregulated market niches include crowdfunding and peer-to-peer lending platforms. These online platforms facilitate funding of MSMEs by listing their "campaign" (essentially a description of the proposed funding activities) in a centralized location and aggregating relatively small contributions from a large number of individual lenders. There are a number of different models being used around the world, and significant efforts have been made to adopt legislation allowing for more sophisticated crowdfunding systems, such as equity investment and marketplace lending platforms. But the concept for almost all of them is effectively the same: democratize financing and investment by letting the "crowd" decide which campaigns are worth funding and open digital channels to facilitate the flow of information used to make these decisions.

3.5. PAYMENTS

Increasing usage of electronic payments solutions expand opportunities for MSME revenue generation while creating an important financial footprint. Non-cash merchant transactions demonstrate records of sales volumes over time, which can provide banks with a means for verifying revenue streams and, correspondingly, contribute

The size of the opportunity in payments is significant; the global market for person-to-business retail payments was estimated at nearly \$19 trillion in 2015

to the confidence needed to extend credit. The size of the opportunity in payments is significant; the global market for person-to-business retail payments was estimated at nearly \$19 trillion in 2015, \$2 trillion of which was from LAC where only 28 percent of transactions were electronic.²⁰

Mobile point-of-sale (MPOS) technologies are leading this transformation in the MSME segment. In the US, fintech startup Square launched a smartphone-compatible MPOS device that can process cards as well as near-field communication payment tools like Apple Pay and Android Pay. In its first quarter of 2016 earnings statement, Square reported

gross processing volume of \$10.3 billion.²¹ The company has innovated further by providing over \$153 million in loans to over 23,000 small businesses through Square Capital, using merchant transaction histories to determine loan eligibility and recovering funds directly as a percentage of sales processed through the Square MPOS.

As consumers increase their use of credit and debit cards, these kinds of tools are becoming increasingly powerful. The proportion of adults in LAC developing countries who own a debit card increased from 29 percent in 2011 to over 40 percent in 2014. In Chile, that number doubled over the same period, to 54 percent. And in Brazil, the most populous nation in the region, debit card penetration reached nearly 60 percent. ²² As more and more consumers turn to bank cards as their preferred mode of payment, and as smartphone technologies become more affordable, retail businesses will become increasingly inclined to accept non-cash payments. Complementary analytical applications, such as Square's, can then process the data generated by these transactions in order to provide valuable insights for financial planning, inventory management, and sales strategies. This knowledge can help MSMEs improve efficiency and become more competitive, consequently improving opportunities to acquire external financing.

Moreover, the transition to non-cash payments offers opportunities for banks to improve customer loyalty and cross-selling. Red Zebra, for example, offers a customer analytics application that MSMEs can use to target promotions based on spending patterns. This is tied to a bank reward points program that allows customers to earn added rewards by using the bank's card for purchases at participating stores. Merchants thus improve sales while banks drive card usage and both improve customer loyalty.

²⁰ Innovation in Electronic Payment Adoption: The case of small retailers. World Economic Forum and The World Bank Group. 2016.

²¹ Square reports \$379 million in revenue for Q1 as gross payment volume spikes 45%. Venture Beat. 2016.

 $^{22\} Global\ Financial\ Inclusion\ Database.\ The\ World\ Bank.\ 2016.$

3.6. VALUE CHAIN FINANCE

The impact of digitizing transactions goes beyond retail consumption. Electronic invoicing platforms, for example, are providing increasingly accessible financing solutions for buyers and suppliers in the MSME value chain. These non-bank platforms can streamline factoring solutions, allowing MSMEs to sell accounts receivable to third-party financial institutions more efficiently. Receivables are sold at a discount to generate often critical working capital for the business, allowing them to cover payroll expenses, pay suppliers, or invest in new inventory without having to wait 30 to 90 days or more to receive payments for outstanding invoices. Specialized fintechs are facilitating the online market for accounts receivable, integrating digital document scanning applications, and coordinating amongst multiple financial institutions to monitor the sale of receivables to mitigate risk. California-based BlueVine, for instance, provides flexible invoice factoring that allows MSMEs to get cash the same day.

Similarly, reverse factoring, also known as supply-chain finance, optimizes cash flow by allowing businesses to extend payment terms to suppliers while providing the option for suppliers to get paid early. The buyer thus optimizes working capital and the supplier boosts its cash flow, resulting in reduced risk throughout the supply chain. Both factoring and reverse factoring solutions provide financing options for MSMEs without the constraints of traditional capital requirements.

3.7. FNHANCED MARKET INTELLIGENCE

In addition to providing MSME data to lenders, fintechs are developing analytics platforms that can provide MSMEs with valuable market intelligence. These technologies process Big Data to glean business insights in real-time that would take enormous effort to develop independently. SizeUp, for instance, aggregates market and customer data from various sources to help businesses see how they compare to competitors in their industry and identify the best places to target publicity. Growing prevalence of solutions like these could improve MSME competitiveness and increase access to finance.

Furthermore, fintechs can help banks develop more robust data ecosystems by aggregating and organizing the massive amounts of client and market information they produce. This information can help banks better understand their MSME clients, which is particularly valuable in light of the segment's heterogeneity mentioned earlier. Understanding the needs and idiosyncrasies of the MSME segment, and, importantly, sub-segments, can help banks create more attractive financial and non-financial offerings. It can also enhance their ability to target these offerings and cross-sell complementary products and services over time. But without technological systems in place to efficiently collect and process relevant information, it remains excessively costly to convert the raw, often isolated data into useful, synthesized knowledge.

4. THE EMERGING FINTECH LANDSCAPE IN LAC

4.1. OVERVIEW OF REGIONAL FINTECH INVESTMENT

Financial technologies, in various forms, have reached nearly every corner of the globe. The speed of the market's growth has been increasingly dramatic in recent years. Globally, total investment in fintech companies leapt from \$3.2 billion in 2012 to \$15 billion in 2014 and to more than \$24 billion in 2015. The annual jumps in total fintech investment in 2014 and 2015 represent increases of over 200 percent and 60 percent, respectively. Through the first half of 2016 investment grew further still, about 30 percent compared to the second half of 2015.²³ Most investment has targeted digital payments and online lending solutions, though a considerable amount went directly to technologies designed to support SMEs. The graph below provides a more granular breakdown of global fintech investment by segment.

12%

Other

SME Services

Crowdfunding

Online Lending

Financial Management

Payments

Exhibit 7: Worldwide distribution of fintech investment by segment

Source: Statista Inc. and Oliver Wyman analysis.

While fintech investment and activity have increased significantly in the US and Europe, they have gained less traction in LAC to date. Over 75 percent of all fintech investments are made in the US,²⁴ whereas LAC receives less than 1 percent.²⁵ The lion's share of this investment has so far been concentrated in larger cities located in the more developed economies in the region (typically those with the largest populations). Although empirical data on specific fintech investments in LAC is sparse, our discussions with market participants indicate that Brazil and Mexico host the largest presence of fintechs in the region, followed by Argentina, Chile and Colombia. With the exception of Chile, these are the only countries in the region with populations over 40 million (Brazil and Mexico have a combined population north of 320 million). The presence of fintechs in LAC consists of a mix of international companies with local presence in select countries and local companies serving specific market niches with more limited reach.

The contours of the current landscape are largely driven by the size of the local market, banks' appetite for innovation, and availability of high quality tech talent. While the market size and technological penetration is attractive in most countries in the region, opportunities are often overlooked in smaller markets. The appetite for pursuing innovation initiatives among incumbent financial services firms has been lacking relative to those in other markets to date.

The quality of local tech talent is improving, but is not as developed as it could be. However, it should be expected to continue improving with the evolution of tech clusters in the region and poses less of a constraint as labor becomes increasingly mobile.

4.2. SNAPSHOT OF LOCAL FINTECH PLAYERS

While overall investments are relatively lower in LAC, a number of successful fintech ventures are starting to garner significant attention across various sectors. Here we take a quick look at promising regional players with a focus on those operating in the MSME space. This is not meant to be an exhaustive list – the amorphous nature of the fintech market makes that impractical – but rather to outline the shape of a growing market.



Source: Fintech Innovation Radar Chile, Colombia and Mexico, Finnovista, 2016; Report Fintechlab: A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! FintechLab, Brasil 2016; Oliver Wyman analysis. A revolução Fintech já começou! Finte

Several platforms, such as Prestadero and Kubo Financiero in Mexico and Cumplo in Chile, entered into the peer-to-peer (P2P) lending space for MSMEs in 2011–2012. Afluenta also joined the P2P arena from Argentina in 2011; initially focused on individual lending, it has steadily increased the percentage of MSME borrowers in its portfolio and expanded into Peru, Mexico, and Colombia. P2P platforms have even begun seeking opportunities in less developed markets in the region, including startup Nexoos in Paraguay. On the equity crowdfunding side, Crowdfunder.mx has emerged in Mexico through a partnership with US-based Crowdfunder. Also in Mexico, Vakita Capital partnered with Play Business in a show of support for startup crowdfunding. Equity crowdfunding has also gained a foothold in Chile and Brazil, through platforms like Broota and Startmeup, respectively.

Crowdfunding has become a popular area for emerging fintechs in LAC, but it is by no means the only one. Bolstered by a partnership with US-based Prime Revenue, eFactor network has become a leading provider of electronic factoring services in Mexico. Through their Supply Chain Finance (SCF) platform buyers can upload approved invoices (accounts payable) for payment at a future date. Suppliers can then view these receivables online, and may trade select receivables for discounted early payment based on the buyer's credit rating, while financial intermediaries are able to fund the early payment requests.

Payments fintechs are also on the rise. Señor Pago, Billpocket, and Clip have developed MPOS technologies that are gaining significant traction in Mexico. In Brazil, roughly a third of all fintech companies are operating in digital payments and transfers. ²⁶ Pagseguro and Guiabolso are attracting particularly keen attention. Nubank, based in Sao Paolo, received a \$200 million debt injection in April 2016 to support its payments app for smartphones. ²⁷ The app is connected to Nubank cards, generating receipts sent to customers' phones in real-time and enhancing security by allowing users to block and unblock their card directly from their smartphone if it is ever misplaced or stolen. Payments solutions are by far the predominant fintech sector in Brazil, as seen in the chart below.

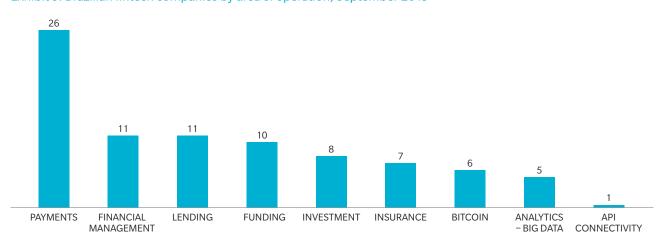


Exhibit 9: Brazilian fintech companies by area of operation, September 2015

Source: Radar FintechLab Brasil. Clay Innovation. September 2015.

 $^{26\} Report\ Fintechlab: A\ revolução\ Fintech\ j\'a\ começou!\ Fintech\ Lab.\ 2016.$

 $^{27\} Latin\,American\,Private\,Equity\,and\,Venture\,Capital\,Association.$

The size and connectivity of the Brazilian market, as well as the relatively high capacity of local human capital, has enticed a number of fintechs to launch initiatives in other areas too. InToo is one Brazilian company providing an online platform where MSMEs can see offers from various financial providers at the same time, allowing them to compare loan terms and choose the products or services that best fit their needs.

In addition to home-grown fintech startups, LAC is starting to see increasing interest from global fintech companies. PayPal, for example, has recently teamed up with Mexico's América Móvil, a major telecommunications provider, to develop a new mobile wallet platform that will allow users to pay for items at local retailers directly from their smartphones. The partnership will allow PayPal to reach 140 million users in Mexico and Brazil alone.²⁸

EFL has also had success with psychometric credit scoring pilots in Peru, which have encouraged it to expand its model into other countries in the region. In partnership with Equifax, the largest credit-scoring firm in the region, layering the psychometric credit-scoring methodology with traditional credit bureau data reduced MSME default rates by 50 percent while maintaining acceptance rates. EFL received initial support from the IDB, facilitating the provision of either a Risk Sharing Guarantee, a Partial Credit Guarantee or a direct senior loan to support expansion of financial institutions' MSME loan portfolios.

Despite the laudable advances of fintechs in Latin America and the Caribbean to date, there is still massive potential for further growth. This potential is widely recognized by fintechs with operations outside the region, which are exploring their best options for entering the LAC market. However, enthusiasm for robust fintech investment in the region remains tepid.

4.3. CHALLENGES TO FINTECH EXPANSION AND PARTNERSHIPS IN LAC

The current macroeconomic conditions combined with the evolution of technological capabilities has created a favorable atmosphere for fintech in LAC. Relatively well-defined regulatory frameworks add to the region's attractiveness and the viability of fintech solutions. However, the anemic investment in fintech in the region stems in large part from a stark disconnect between banks and fintech firms, as partnerships are often considered the most effective means of testing, tweaking, and scaling fintech solutions. Here we identify some key reasons why the coordination between incumbent financial institutions and tech-driven startups has yet to take off.

• Rigid governance structures in financial institutions

Throughout most financial institutions, decision-making processes tend to be convoluted and difficult to maneuver. In general, banks are used to performing a specific set of activities for which these structures are important. Standardized processes help to ensure accountability and can be deeply embedded in a bank's organizational DNA.

 $28\ Pay Pal\ plans\ Latin\ America\ growth\ with\ Am\'erica\ M\'ovil\ alliance.\ Banking\ Technology.\ 2016.$

Fintech solutions are designed to fundamentally challenge existing paradigms. Identifying and implementing new solutions that can improve bank performance requires an openness to change and organizational support to develop new ideas. But few financial institutions in the region have established a dedicated innovation team that can play this kind of role, serving as a filter to identify which solutions fit their business strategy and organizational priorities. Even where formal innovation teams do exist, the decision processes applied to the evaluation and adoption of new technologies or innovation initiatives can still be unclear. Moreover, when a great fintech solution is identified by someone within the organization, the hoops they need to jump through to arrive at the launch phase can be discouraging, especially for ambitious and forward-thinking staff.

Point of entry: Access to the right contact at the bank

The daunting size and complexity of banks' organizational structures can also make it difficult for fintech companies to know where to start. Many fintechs expressed frustration in trying to identify the appropriate counterpart at financial institutions in the region with whom they could discuss possibilities for collaboration. Without clearly structured and identifiable innovation teams, trying to find an initial point of contact can seem an insurmountable task in light of the size of many financial institutions. If a fintech has developed a Big Data analytics solution that improves credit scores for MSMEs, for example, should it reach out to MSME portfolio managers, IT, business development, outreach and partnerships, or corporate strategy? The answer typically varies from bank to bank, hampering fintechs' ability to pursue a uniform outreach strategy. The issue is further complicated where such teams or points of contact lack the influence to make or facilitate decisions, which can lead to months-long delays before a solution can be tested, even where an initiative is strategically aligned and of clear value to the business.

· Compatibility with banks' existing IT systems

For the past 20 years, LAC banks have been focused on establishing organized, efficient, and stable IT infrastructures. This is a continuous effort that requires constant updates to core systems that allow the bank to operate efficiently and protect customer data. Significant time and resources are invested in establishing, maintaining, and updating these systems. The prospect of incorporating new innovations is therefore closely scrutinized. Where the success of a fintech solution relies on inputs derived from banks' information systems, its compatibility with existing data architectures is paramount. New technologies that are incompatible with or would require significant changes to existing IT infrastructures can be hard to sell, despite their potential benefits, especially where they would compete for resources with traditional systems.

• Procurement requirements and limited track records

Most banks have very structured procurement processes marked by numerous requirements from potential providers, such as a robust set of supplier references. These requirements were established to ensure the quality of products and services purchased by the bank and to help manage potential risks. Consequently, banks are often unable to collaborate with a fintech company until they mature and are able to provide proof of previous results. This forces the fintech to seek partnerships elsewhere, likely with competitors, and dampens the underlying purpose of promoting innovation. Alternatively, the bank and fintech are forced to find a temporary work-around, resulting in significant delays before a new pilot program can be deployed.

Regulation

Regulators consistently struggle to keep pace with the speed of innovation. Given the intense scrutiny financial institutions face, they may be wary of investing in fintech solutions operating in murky regulatory waters. The possibility of engaging in activities that could be perceived to fall in a regulatory grey area has the potential to derail partnership conversations.



5. REVOLUTIONIZING MSME FINANCING STRATEGIES

Despite difficulties in scaling their solutions, fintechs offer the means to seize clear opportunities in the MSME market. The size of the financing gap combined with increasing adoption of digital technologies among MSMEs demonstrate the segment's potential for significant value creation. Financial institutions in the region plainly recognize the importance of MSMEs for their business, but few have developed modern strategies to offer financing that meets their unique needs. So, how can they leverage the emergence of fintech to better serve the segment?

Here, in consideration of the implications of the 21st century digital revolution and the challenges to fintech expansion in the region, we explore the most salient elements of MSME financing strategies that can help banks leverage fintech innovations to their advantage. Transformative financial innovation strategies will result in expanded MSME coverage, enhanced customer service and client retention rates, and improved cross-selling capacity. Implementing the right technologies can help banks do this while still managing risk effectively and maintaining profitable cost structures.

5.1. RECOMMENDATIONS FOR BANKS

1. Establish dedicated innovation teams and flexible governance structures

Rigidity of financial institutions' governance structures can slow decision-making processes and stifle innovation. In order to facilitate the adoption of new technologies, banks can establish dedicated innovation teams responsible for seeking out and piloting promising solutions. Successful pilots can be scaled up in coordination with other areas of the bank for long term management. Buy-in from senior level management is important for such units to attain the requisite autonomy for decision making. Banks with defined innovation teams with delineated responsibilities and processes are also helping to create a culture of innovation that permeates the organization. Where such cultures exist, new ideas are welcomed, employees are more collaborative, and creativity is given room to grow. The more a culture of innovation is embedded in the organization, the easier it becomes to implement and manage change.

Even in leading financial institutions in developed markets, where there is greater impetus for innovation, coordination can be disjointed. Digital innovation teams may be established to seek opportunities in certain areas, but strategies are not necessarily aligned with activities in other divisions. Coordinated innovation efforts are particularly important in the context of MSME finance. New initiatives – to develop mobile payments technologies, for example – that are integrated with MSME banking strategies and related innovation programs will fare far better than those that arise in isolation. Ensuring effective internal communication, as well as establishing cross-functional teams with clear mandates for collaboration, can contribute to more coherent innovation structures. Naturally, the creation of such teams requires tailored recruitment strategies and commitment to human capital development.

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Dedicated innovation teams can be critical to navigating the waves of digital disruption. A well-defined team can serve as a visible, centralized point of initial contact for fintechs. This clarity reduces complexity for the fintech and allows banks to coordinate effectively among different functional areas to vet and test new solutions. Furthermore, they create the flexibility and agility needed to experiment with cutting-edge technologies and have the authority to move forward with promising prospects. This agility should extend to corresponding procurement processes as well: Prolonged timelines can stifle even the most promising partnerships.

Specific strategies for testing and adopting new technologies (partnership, acquisition, service contracts, internal accelerators, VC funds, etc.) will logically vary based on the characteristics and priorities of each financial institution, as well as the nature of the fintech in question. Regardless, innovation teams can ensure the initiatives pursued have clear business value and improve the organization's ability to satisfy (or, ideally, exceed) customer needs and expectations.

2. Data, data, data: Implement advanced and alternative analytics tools

One of the first places banks should look to innovate is in the implementation of technologies that can aggregate, organize, and interpret client and marketplace data. The increasing use of digital technologies has made this a highly attainable capacity and, ultimately, critical to risk management, operational efficiency, and expansion of MSME portfolios. Alternative sources of information are initially most valuable when used as complementary data points for the creation of more robust risk profiles. However, they can also help banks move away from cumbersome collateral requirements or prohibitive interest rates that have traditionally deterred MSMEs (particularly in the services sector) from acquiring financing needed to drive growth and productivity. Advanced analytics can sharpen the accuracy of acceptable loan sizes, prices, and tenors, resulting in greater MSME coverage.

3. Bolster efforts to understand MSME needs

Advanced analytical technologies can also contribute to a deeper understanding of MSME clients. In addition to insights gleaned from new data points and syntheses, organizational processes need to foster constant feedback cycles that inform MSME value propositions. Digital surveys offer fast, efficient means of aggregating data that can be incorporated in a customer-centric engagement model. Direct interaction of loan officers with MSMEs will remain an important source of insight, but is insufficient in the current digital environment. When such information is confined to specific divisions or, worse, individual loan or investment officers, its potential value fails to materialize. Financial institutions that can leverage digital tools to systematize, centralize, and disseminate relevant knowledge and lessons learned from specific MSME clients or segments will amplify the value created throughout the organization.

4. Expand and enhance value-added services

Digitization of information and growing adoption of digital tools, particularly internet-connected tools, have paved the way for a transformation in MSME services. Not only are online tools essential for MSME satisfaction and engagement, they can also generate vital sources of information about client behaviors and needs, further deepening banks' understanding of the market. Moreover, growing internet penetration in the region is extending the reach of knowledge products provided online. Banks can carve out a competitive edge by investing in the curation, creation, and management of online knowledge products designed to enhance MSMEs' business capabilities. At the end of the day, an MSME client's success is the bank's success; businesses that are better able to plan their operations, production schedules, and finances are better equipped to repay their loans on time.

5. Take cyber-security seriously

While internet usage and digital adoption continue increasing in LAC, reluctance to provide sensitive personal and financial information remains palpable. For MSMEs in particular, exposing financial performance information, in addition to the concerns surrounding account access, is understandably worrisome. High-profile digital hacks on companies in the US and other countries with more advanced financial systems have further exacerbated this sensation in recent years. Financial institutions can support the use of digital mechanisms by ramping up efforts to ensure client information is secure. Concrete customer assurances demonstrate further confidence in their systems.

Investing in technologies and talent that support banks' confidence in their ability to make such assurances is a logical parallel step. Indeed, some of the most promising fintech innovations today are emerging in cyber-security. ING Netherlands recently implemented an advanced Big Data analytics solution provided by Israel-based ThetaRay to detect possible SME lending fraud, as well as threats related to money laundering and cyber-attacks.²⁹ Leading innovators will go so far as to hire top-tier hackers to constantly seek out weaknesses and develop fixes in real-time. Although the focus here is on prevention, banks should also have a detailed plan in place to respond to a range of potential incidents.

Lastly, when IT infrastructure with sound cyber-security systems are in place, let your clients know. The value of cyber-security reaches far beyond MSME finance, across products and segments, enhancing the impact of cross-advertising. Instilling confidence in the safety of client information is imperative to boosting adoption of digital banking tools among MSMEs.

6. Invest in collaboration and experiment

Partnerships between banks and fintechs are proving to be the preferred method of adapting to the digital revolution in financial services. Both sides have unique value to offer. Banks provide extensive market reach and can facilitate growth of promising fintechs while proving fintech solutions' viability at scale. In return, partnerships dull the threat of direct competition from fintechs while allowing banks to benefit from their ability to operate in a more agile fashion. Furthermore, partnerships can help banks learn from fintechs without assuming the same level of risk. Many fintechs are able to operate outside the weight of regulatory scrutiny placed on traditional financial institutions, providing the opportunity for banks to co-develop innovative financial solutions for MSMEs that benefit from both bank expertise and modern technological knowhow.

 $29\ ING\ deploys\ The taRay's\ analytics\ solution\ for\ fraud\ detection\ in\ SME\ lending.\ Banking\ Technology.\ 2016.$

The precise nature of such partnerships and related strategies may vary according to the idiosyncrasies of different markets. As discussed previously, finding the right partnership fit is often the most difficult task. In some cases, dedicated innovation teams can seek out promising prospects for collaboration. This requires extensive research, coordination with various business units to identify areas of opportunity, and participation in global conferences to identify corresponding solutions.

A number of leading banks in developed markets like Singapore, Germany, the UK, and the Nordic countries are directly supporting local and international competitions to attract and filter top-tier fintech talent and solutions.³⁰ This allows banks to cost-effectively bring together the best ideas from around the world by providing incentives to leading innovators in the fintech space. Competitions can help financial institutions identify relevant technologies that can generate value for MSME clients and further develop these solutions with support from internal experts.

Partnerships may also emerge through innovation incubators and accelerators. Santander's InnoVentures lab, a \$100 million fund launched in 2014, sought to get closer to the wave of disruptive innovation in the fintech space and transfer the knowledge and value created through these partnerships to Santander's global customer base. Alternatively, and in addition to its own venture fund, BBVA has pursued a number of acquisitions to gain traction in the fintech market: it acquired Holvi, an online-only bank for entrepreneurs and SMEs based out of Finland, valued at around \$100 million (the actual value was not disclosed, but the comparison was made to BBVA's 2014 acquisition of US-based Simple – another online banking service – at \$117 million).

As the experience of Santander and BBVA shows, a commitment to innovation can carry significant price tags. Finding the right partnerships requires diligent focus and significant resources. But their experience also reveals the value placed on gaining access to and understanding of new technologies that are prone to evolve at a pace far faster than that which traditional financial institutions are able to manage change. External digital applications can incorporate sleek, intuitive designs that engage users and prompt real-time feedback, further enhancing the value added to MSME clients and facilitating cross-selling. Some ventures will be successful, others will not. One thing is certain: Those with a timid innovation strategy based on immediate cost-savings will watch the digital revolution whirl by, eroding competitiveness and margins in the long term.

7. Become active innovators

While the above recommendations are intended to be both pragmatic and actionable, financial institutions in LAC that can systematically transform their approach to innovation will benefit most. Despite growing recognition of the changes brought on by the fintech market, many Fls in the region seem to maintain a traditionalist perspective – they don't believe financial technologies will profoundly affect the business in the near term and thus are content to maintain the status quo. **Traditionalists** will tend to focus innovation efforts on upgrading technologies that support existing business operations and processes. Another group can be considered **aspiring innovators**: They generally see a need to innovate and have buy-in from select pockets of staff. However, these banks have limited capacity to pursue new initiatives as insufficient buy-in from senior management and inadequate organizational structures impede innovative ideas from gaining traction.

30 Banco Santander, BBVA, UBS, and BNY Mellon are just a few examples of banks leading innovation competitions.

In contrast, **active innovators** recognize the paradigmatic shift underway in the financial industry and position themselves to take advantage of emerging fintech innovations. These banks see radical changes on the horizon similar to those seen in music, publishing, and travel over the past 20 years. They see fintech's potential to transform banking the way Uber has impacted transportation, Airbnb has disrupted travel accommodations, and Amazon has revolutionized commerce. Innovation is embedded in institutional strategy and culture, and support structures are built to foster innovation throughout the organization.

Active innovators have well-crafted innovation strategies that are aligned with business priorities. Teams work together to identify opportunities to bolster innovation support structures and closely coordinate with management in crafting plans pursue them. In addition to the incubation initiatives led by Santander and BBVA, mentioned above, examples from larger financial institutions include Citi Innovation Lab (also Citi Ventures), and Wells Fargo Innovation Lab, which actively seek, finance, and cultivate fintech prospects.

Some banks in LAC are indeed making progress towards becoming more active innovators. Those that have been slower to adapt could still benefit greatly by following suit. However, at the increasing pace of tech-powered change in financial markets, the window to gain a competitive edge through early-mover active innovation strategies is quickly fading. As that window fades, the costs of a passive approach to innovation are becoming increasingly apparent.

5.2. THE DANGER OF THE STATUS QUO

Without substantive changes in the core business of the financial industry for decades and profits remaining relatively steady over time, maintaining the status quo seemed rational to many. Financial institutions are used to sitting in a powerful position in the market. Barriers to entry were high, and competition was limited. In an innately risk-averse industry, the inclination to wait and see how others adapt to changing circumstances is steep.

But in the midst of a global digital revolution, banks can no longer afford to be complacent. Fintech newcomers are proving their ability to unbundle specific services that were once part of incumbent institutions' suite of offerings. By targeting one subset of traditional offerings, they become highly specialized and employ digital technologies to maximize efficiency. Individually, they may not seem threatening; the volumes currently in play for each firm are easily overshadowed by the trillions of dollars managed by traditional financial institutions. Collectively, however, their impact on the financial industry is poised to be significant.

The MSME space is particularly ripe for fintechs to carve out a niche with tailored products and services unencumbered by the onerous capital and physical network requirements of incumbents. Small businesses are looking for financing that fits their needs; their willingness to try new ways of acquiring such financing continues to grow alongside the alternative financing market as well as their own use of digital tools. The widespread distrust of incumbents in the wake of the 2008–2009 financial crisis exacerbates the uncertainty of customer loyalty today.

6. STRENGTHENING FINANCIAL ECOSYSTEMS

While there are manifold ways financial institutions can leverage the coming waves of disruption to their advantage, various stakeholders will play key roles in shaping the digital transformation in LAC. To neglect the impact these actors can have on the shape of the supporting ecosystem would be remiss. Here we review some of the ways fintech companies, public-sector organizations, and academia can strengthen the ecosystem to cultivate innovative financial solutions for MSMEs.

6.1. REFINING FINTECHS' MARKET ENTRY STRATEGIES IN LAC

First, fintechs themselves should work to understand the nature of MSME banking in LAC more thoroughly. Idiosyncrasies of local markets and regulatory frameworks may necessitate significant adaptations to fintech solutions that have been previously successful elsewhere. Blind replication would be ill-advised. For local companies and new entrants alike, understanding business drivers and incentives from the bank perspective will help fintechs craft more effective pitches when seeking out partnerships. Recruitment of MSME portfolio managers or other bank executives may be one way to enhance this understanding of local realities and help fintechs to refine their value propositions.

As demonstrating initial results in countries with similar markets will help dissolve risk anxiety among clients, fintechs should consider how to lower costs for first-movers. A successful pilot in the region is likely to build more confidence than successes elsewhere.

6.2. THE ROLE OF THE PUBLIC SECTOR

Public-sector agencies are also critical to improving financing options for MSMEs. They have the convening power to bring relevant players to the table to engage in constructive dialogue, and can serve as trusted knowledge brokers. They also have the ability to directly affect policies that promote productivity and access to finance for MSMEs. Considering the proportion of employment and diversity of economic activity represented by MSMEs in LAC, governments should see substantial benefits to strengthening support for this sector.

To address the problem of information asymmetry, government organizations should aim to aggregate and disseminate data related to MSMEs. Development of more robust credit reporting systems, through public credit registries or otherwise, should aim to incorporate more detailed information on more borrowers, particularly in the MSME sector. Improving access to this information is paramount to reducing the cost of MSME transactions through more efficient and reliable assessment mechanisms.

The establishment of movable asset registries has proven effective in expanding access to credit for MSMEs in emerging markets where many banks restrict acceptable collateral to immovable assets such as property and

The establishment of movable asset registries has proven effective in expanding access to credit for MSMEs buildings. Movable asset registries require firms to declare the machinery, accounts receivable, inventory or other non-fixed assets pledged by a firm to secure a loan, making this information available so that banks can easily see which assets are already considered collateral for existing debt obligations. When Romania introduced an electronic movable asset registry in 2000, for example, firms in sectors with high usage of movable assets increased productivity by 5 percent, sales by 9 percent, and profitability by 7 percent in the first five years.³¹

The public sector can leverage digital technologies to support business formalization as well. According to the World Bank's 2016 Doing Business report, there is a strong positive correlation between new firm density and access to electronic business incorporation platforms.³² The report also recognizes Costa Rica as one of the most improved countries in the world in improving access to credit through a number of digitally-based reforms, including the creation of a secured transactions system and an expanded collateral registry. Costa Rica also promoted the use of its electronic tax filing and payments system. The use of online tools to streamline formal business registration processes can significantly lower costs and time required to start a business. Combined with appropriate incentives, increased use of these tools can generate valuable data that can be used to expand MSME access to finance.

Especially where digital tools are less prevalent, the public sector often struggles to keep up with the pace of technological change, resulting in policies that, by the time they are enacted, may already be out of date. To improve the speed with which these agencies address corresponding changes in the market, a variety of stakeholders, including incumbent financial institutions, telecommunications firms, consumer protection groups, business and technology associations, fintechs, and other relevant groups should be proactively engaged in ongoing dialogue. Government agencies typically have the convening power needed to foster productive discussions with the necessary parties, where it is important to remain transparent and objective. Ensuring broad participation across sectors is key to promoting an inclusive dialogue.

An interesting example of public-private engagement has manifested itself in Mexico, where the Association of Crowdfunding Platforms (AFICO) was established to promote industry best practices and transparency, while creating a unified voice with which to communicate their interests to the public sector and other stakeholders in the financial ecosystem.

³¹ Unlocking the Value of Movable Assets. Chicago Business School. 2014.

 $^{32\} Doing\ Business\ 2016: Measuring\ Regulatory\ Quality\ and\ Efficiency.\ The\ World\ Bank.\ 2016.$

The implications of modern financial innovation should be seen to justify related action as a priority on the agendas of public agencies in most countries. Fintech is promoting business formality, transparency, and financial literacy. Innovations in MSME finance, in particular, generate significant benefits for businesses, consumers, and the broader economy. It is encouraging to see public agencies in some LAC countries are beginning to recognize the overlap of these results with their own objectives. In addition to the positive impact of expanding MSME finance on productivity, growth, and job creation, moving towards a digital economy can facilitate tax collection, reduce overhead costs, combat money laundering and crime, and better inform socioeconomic policy. Consequently, some regulators have designed initiatives to amplify synergies from growing digital adoption. *Modelo Perú*, for example, was launched in October 2015 as a partnership between the government, financial institutions, telecom companies, and large payers and payees to build a shared infrastructure for mobile payments as part of an effort to boost financial inclusion for both individuals and businesses.

At the same time, addressing digital disruption in the financial sector will naturally encounter competing priorities, particularly post-crisis issues such as the implementation of Basel III standards. While the urgency of these reforms is clear, the implications of the developing fintech market highlight the need to maintain a balance between these priorities. Specifically, the implications of the following issues on financial systems and corresponding regulatory frameworks should be followed closely: (i) consumer privacy; (ii) fraud protection; (iii) anti-money laundering (AML) mechanisms; (iv) cross-border capital flows and systemic stability; and (v) cyber-security.

Regulators that pay close attention to the evolution of the market in LAC will be better equipped to address issues related to new digital capabilities and activities. Staying abreast of these issues is not to say that all new activities need added regulation – many innovations have been successful precisely because they are not subject to certain constraints. Rather than simply restricting or prohibiting activities that are not well understood, constant monitoring should facilitate informed decisions on specific areas and means of intervention. Building internal capacity, in addition to analyses of global experiences with digital financial innovations, can contribute to the development of appropriate and timely responses to disruptions in local markets. While "one-size-fits-all" solutions may be tempting from a regulatory standpoint, the ecosystem is ultimately strengthened more by evaluating how these issues affect fintechs, financial institutions, consumers, and businesses in local markets. Intervention should occur only as needed to ensure consumer protection, systemic stability, and competitive markets.

Lastly, there is an opportunity for regulators to coordinate throughout the region (and, ideally, the world) to ensure regulations addressing digitization of financial services and transactions are as straightforward and harmonized as possible.

6.3. DATA AGGREGATION AND MARKET RESEARCH

There is an alarming paucity of data available to gauge the financial needs and constraints of MSMEs more precisely. The more that is known about alternative finance mechanisms and their effects, the greater our capacity to strengthen the supporting ecosystem in a way that allows the best possible financing options to emerge for MSMEs. Aggregating data from financial services providers of all kinds is therefore crucial to informing decisions in both the public and private sectors. Consistently collecting data can impact the quality of decisions made in real-time. Providing incentives for MSMEs to adopt digital technologies is a good place to start, as usage creates data contributing to more robust and reliable market assessments.

There is a clear opportunity to drive the conversation forward through deeper and broader engagement of the academic community in Latin America and the Caribbean. Impartial analyses can promote substantive discussions throughout the ecosystem and guide strategies for financial institutions and fintechs. Academic institutions can gain widespread recognition by expanding research efforts in the alternative finance space with a specific focus on LAC. Several universities are already pursuing such programs in advanced markets. In 2009, the University of California – Berkeley's Haas School of Business launched the Center for Innovative Financial Technologies (CIFT), which "aims to develop and share deep understanding of how new technologies impact global electronic markets, investment strategies, and the stability of the global economy." Similarly, the University of Cambridge established the Centre for Alternative Finance "to conduct cutting-edge, interdisciplinary, rigorous, and critical research on all aspects of alternative finance. It aims to have high impact not only on academic thought leadership, but also on policy decision making and business practice globally." Given the nascent stage of the alternative finance market in LAC, there is still an opportunity for local and regional academic institutions to establish thought leadership positions in this dynamic and increasingly relevant field.



³³ Haas Launches Center for Innovative Financial Technologies. Haas Business School, 2009.

 $^{34 \} See \ https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/about-us/alternativ$

7. CONCLUSION

It is clear that new technologies, capabilities, and business models can improve financial institutions' abilities to serve the MSME market. With more and better information, improved communications, augmented data management capacities, and streamlined processes, serving MSMEs can generate profits while sharpening banks' overall competitiveness. Although incumbents have achieved minimal penetration to date, this largely untapped

With more and better information, improved communications, augmented data management capacities, and streamlined processes, serving MSMEs can generate profits while sharpening banks' overall competitiveness

market in LAC presents tremendous potential to drive profits and long-term business value. In order to tap into this potential, however, financial institutions need to recalibrate their approach to innovation.

Larger financial institutions in the region seem to recognize both the value of MSMEs and the impetus for developing innovations that allow them to serve this sector more effectively. However, there is a disconnect that separates the focus on MSMEs from the focus on financial innovation. Most attempts to address the changing dynamics of the digital economy have been sporadic and uncoordinated. Revamping MSME strategies for a digital world will require greater agility in collaborating with fintechs. Partnering with fintech companies is increasingly seen as the most promising approach. For fintechs to be enticed, banks need to streamline processes in a way that allows for greater experimentation and speeds deployment of new technologies.

Understanding the nature of traditional constraints to serving the MSME segment is vital to crafting strategies that effectively leverage new technologies. There is no silver bullet to alleviate all the challenges to providing MSMEs with appropriate financing solutions. Some financial technologies help tackle multiple issues simultaneously, while others target more granular constraints that can open the door to a variety of business opportunities. MSME innovation strategies should be tailored to identify, test, and scale innovations that help banks understand and serve their MSME clients better. Corresponding objectives should balance cost reduction and risk management with client retention and cross-selling.

Perhaps the most relevant implication of the fintech revolution in LAC is the transformation of the MSME finance market itself. Market trends reviewed in this report show growing penetration of digital technologies among both MSMEs and consumers. The fact that the market is not yet saturated should be seen as an opportunity to gain a foothold in the market by establishing trust with clients and building brand loyalty.

Improving MSMEs' productivity and access to credit can have a lasting effect on economic development in LAC. Accounting for two-thirds of the workforce and representing a panoply of productive sectors, stronger MSMEs can boost sustained growth through diversification of economic activity and greater resilience to economic shocks. In addition to direct benefits for MSMEs, promoting financial innovation can produce synergies that spill over to other areas of the economy as well.

The capacity and availability of modern digital technologies are helping to solve traditional challenges to MSME finance in a meaningful way. The evolution of digital ecosystems has reached a point where such financing options can be offered in a competitive market. Those that can harness the energy of the fintech revolution will gain a decided advantage in the digital world.

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