

Excerpts from **Impact of Early Stage Equity Funds in Latin America**



VOX
CAPITAL

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ABOUT THE MULTILATERAL INVESTMENT FUND

Our Vision

The Multilateral Investment Fund is the innovation lab for the Inter-American Development Bank Group. It conducts high-risk experiments to test new models for engaging and inspiring the private sector to solve economic development problems in Latin America and the Caribbean. The MIF addresses poverty and vulnerability by focusing on emerging businesses and smallholder farmers with the capacity to grow and create economic opportunities.

What we do

The Multilateral Investment Fund (MIF), a member of the Inter-American Development Bank (IDB) Group, is the largest provider of technical assistance for private-sector development in Latin America and the Caribbean. Our core beneficiaries include micro and small businesses, small farms, and poor and vulnerable households.

We design and finance pilot projects to test pioneering approaches to building economic opportunity and decreasing poverty. We evaluate the results and the impact of our projects to identify replicable solutions that can be scaled up by the public and private sectors.

We are committed to sharing the lessons learned from our work so that others can benefit.

Using small projects, we have achieved sustainable transformation in the thinking and behavior of people, policymakers, organizations, and businesses in areas such as microfinance, remittances, venture capital, and training for youth.

Who we are

The MIF was created in 1993 by 21 donor countries. Sixty-five percent of the financing we provide is in the form of grants, 25 percent is equity, and 10 percent is loans. We provide the loan and equity alone or in combination with grants—as well as expert advice. With this wide variety of tools and more than 20 years of experience in the field, we have the flexibility required to tailor solutions to the unique challenges in Latin America and the Caribbean.

We have financed more than \$2 billion in grants and investments for private sector development projects. In all, we have funded more than 1,800 MIF projects with various partners.

Funds for our activities come from contributions made by our member countries—now totaling 39—in Latin America and the Caribbean, North America, Europe, and Asia.

Where and how we operate.

We work on the ground and in partnership—with local, mostly private partners—to help fund and carry out pilot projects. Altogether, we have worked with more than 2,000 local partners, most of which had never previously worked with a development bank. Our partners contribute both a significant portion of the project costs and on-the-ground resources to implement operations.

We also work with global partners that share our goals, such as corporations, foundations, and other multilateral organizations. They pool their financial and other resources with ours to jointly solve development challenges.

In addition, we invest in private financial institutions, which lend the resources to micro and small businesses, and in the rapidly developing venture capital and impact investment industries in Latin America and the Caribbean. Nearly half our staff works out of IDB Group offices in 26 countries in the region. We monitor each project throughout its active stages, perform a thorough evaluation once it is complete, and share lessons learned. Once each pilot is completed, we provide knowledge and tools for the IDB Group or others to scale it up, or to adapt and replicate it for different communities and sectors.

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Contents

I.	Summary	3
II.	Background & Fund Formation	4
	The Economy and Demographics of Brazil.....	4
	Brazil's PEVC Ecosystem	5
	Impact Investing.....	6
	Vox's Origins and Fund Formation.....	7
	<i>Raising Fund I</i>	10
	<i>Creating Vox Labs: A Vehicle for Deal Flow</i>	11
III.	Portfolio Overview.....	12
	Individual Company Thumbnails	13
	<i>Saútil</i>	13
	<i>Balcão de Empregos</i>	13
	<i>Bille</i>	13
	<i>Plano CDE</i>	14
	<i>Tamboro</i>	14
	<i>ToLife</i>	14
	<i>Avante</i>	15
	<i>ProRadis</i>	16
	<i>Magnamed</i>	16
	<i>INBEP</i>	17
	<i>Biva</i>	17
	Financial Results and Impact	18
	<i>Direct Impact</i>	21
	<i>Indirect Impact</i>	22
IV.	The Future	23
V.	Acknowledgements.....	26

I. Summary

In January 2009, Vox Capital, the first impact investment venture capital firm in Brazil, was founded by Daniel Izzo, Antonio Moraes, and Kelly Michel, all of whom had a long history in supporting social causes. Their idea was to invest in scalable companies satisfying two criteria: a high social impact potential and a solid financial return, achieved by addressing the most critical needs of the country's base of the pyramid (BoP) population—education, healthcare, housing, and access to finance. In 2015, the BoP segment included more than 120 million people (60% of Brazil's population), and accounted for 47% of the country's total annual income.⁴ Despite representing such a huge market, this population is highly underserved by both the private and public sectors.

The Vox Capital team initially launched a US\$3 million fund, Paradox Holdings, funded by Potencia Ventures (also founded by Ms. Michel), to test the concept and demonstrate the approach and impact to potential subsequent investors. Following Paradox Holdings' initial success, the Vox Capital team raised a total of R\$84 million (US\$35.5 million⁵) for its Impact Investing Fund I (Vox Fund I), with a final close in January 2014. The investors included development finance institutions (DFIs), international foundations, and Brazilian high net-worth individuals (HNWIs) and families.

As of September 2015, the Vox Capital team had screened over 1,430 investment opportunities throughout Brazil, of which 32% were in education, 21% in healthcare, 8% in financial services, 7% in housing, and 32% in other sectors. From these, it chose to invest in 19 companies, which, according to the firm's estimates, serve more than 150,000 people daily. Nine of these were structured as equity positions directly through Vox Fund I, while 10 were convertible notes issued by Vox Labs, the firm's seed investment program. The Vox Labs effort was established in 2011 to provide funding for promising businesses that were not mature enough to receive equity investments. In total, 83.3% of Fund I's committed capital had been allocated as of September 2015. The equity investments ranged from R\$1,000,000 to R\$10,000,000 (between US\$450,000 and \$4,500,000) per company for Vox Fund I and up to R\$300,000 (US\$150,000) for Vox Labs. As of June 30 2015, Vox's portfolio's net asset value (NAV) stood at 1.08x with a reported unrealized IRR of 3.9%, no exits, and one write-off. Encouraged by generally positive feedback from its investors, which sought both financial performance and social impact, the Vox Capital team started fundraising in 2015 for its second fund, which has a target of R\$120 million (US\$32 million) and will follow a similar investment thesis.

⁴ Internal Vox data and documents.

⁵ In this document, all conversions from R\$ to US\$ are approximate and based on R\$/US\$ exchange rate for the respective date, month or year.

II. Background & Fund Formation

The Economy and Demographics of Brazil

Brazil is the largest country in Latin America, in terms of both land area and population. In 2014, its GDP was over \$2.3 trillion, making it the second-largest economy in the western hemisphere, exceeded only by the United States.⁶ Accordingly, it has been at the center of Latin America's growth story at the beginning of the 21st century.

During the 1980s, Brazil experienced a period of stagflation⁷ during which annual inflation reached nearly 2,000%, driven by high levels of foreign debt. Important reforms in the 1990s helped the economy recover and led to the period of high growth in the 2000s. From 2004-2011, Brazil's average annual GDP growth rate was more than 4.3%, exceeding Latin America and the Caribbean's average growth of 4.1%.⁸

The country's economic growth, coupled with public policies that sought to alleviate poverty and expand access to education and health services, helped lift 35 million people out of poverty from 2003 to 2012, and supported a large expansion of the middle class.⁹ This in turn caused domestic private consumption to more than quadruple over the same period.¹⁰ According to Inter-American Development Bank (IDB) data, consumption was the largest contributing factor to Brazil's GDP growth in all but one of the ten years from 2004 to 2013.¹¹ The country has also seen a rapid increase in internet penetration, which reached 49.3% in 2013 and is projected to surpass 60% by 2018. Furthermore, Brazil leads Latin America in the number of smartphone users, with over 27.1 million in 2013.¹²

Despite these improvements, Brazil still suffers from issues of poverty and inequality. As of 2011, 80% of the population belonged to low income classes, earning less than \$9 per day.¹³ As

⁶ The World Bank, "Brazil," The World Bank, accessed October 15, 2015.

http://data.worldbank.org/country/brazil#cp_wdi.

⁷ A situation in which the inflation rate is high while economic growth slows.

⁸ The World Bank's World Development Indicators, accessed September 27, 2015.

⁹ Economy Watch News Desk Team, "35 Million Brazilians Escaped Poverty Over Last Decade: Study," *Economy Watch*, September 20, 2012.

<http://www.economywatch.com/in-the-news/35-million-brazilians-escaped-poverty-over-last-decade.21-09.html>.

And The World Bank, "Brazil," The World Bank, accessed October 15, 2015.

http://data.worldbank.org/country/brazil#cp_wdi.

¹⁰ The Economist Intelligence Unit, accessed October 15, 2015.

¹¹ In 2009, imports contributed more to GDP growth than did consumption. (Inter-American Development Bank, "Latin Macro Watch: Brazil," Inter-American Development Bank, accessed November 3, 2015)

<http://www11.iadb.org/en/research-and-data/latin-macro-watch/latin-macro-watch-country-profiles,18579.html?show=0&country=BRA>

¹² U.S. Media Consulting, "The Data Every Latin American Digital Marketer Needs," Latin Link, accessed October 15, 2015, <http://latinlink.usmediaconsulting.com/2015/02/the-data-every-latin-american-digital-marketer-needs/>.

¹³ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

of 2012, over 64% of the population did not have access to banking services.¹⁴ While student enrollment has increased, it still falls below OECD averages across all levels, and over half the population between the ages of 25 and 64 have not completed high school.¹⁵ Approximately three-quarters of the population rely on the public health care system, which is plagued by inefficiencies.¹⁶ Housing is another problematic issue for Brazil, with an estimated shortage of 5.8 million units as of 2014.¹⁷

Moreover, since 2011 Brazil's economic growth has slowed. In 2014 the economy grew by less than 0.5%, and it is expected to contract 2.8% in 2015 and by an additional 0.7% in 2016.¹⁸ One of the main factors contributing to Brazil's economic slowdown is lower commodity prices, driven by slowing global growth, especially in China, which had been a major purchaser of Brazil's commodities such as iron ore, beef, and oil. The slowdown has resulted in higher unemployment rates and decreased domestic consumption.¹⁹

Brazil's PEVC Ecosystem

Brazil has the largest private equity and venture capital (PEVC) industry in Latin America. In 2014, domestic and international fund managers raised over \$5.5 billion to invest in the country, accounting for nearly 54% of the region's total capital raised that year, and almost twice the Brazil-focused total in 2013.²⁰ In the first half of 2015, Brazil-focused funds raised an additional \$2.4 billion, 56% of the region's total.²¹

Brazil has similarly dominated the regional industry in terms of investments. In 2014, PEVC firms invested approximately \$4.6 billion across 141 deals in Brazil, of which the information technology (IT) sector accounted for more than half. Other notable sectors for investment included logistics and distribution, energy, and healthcare/life sciences.²² The amount invested in Brazil represented more than half of the region's total that year, yet reflected a drop from 2013 when the \$6.0 billion invested in Brazil represented over 75% of the regional total.²³ In the first

¹⁴ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

¹⁵ OECD, Country Note - Education at a Glance 2014: Brazil, OECD, 2014.

¹⁶ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

¹⁷ Vanessa Barbara, "Brazil's Unaffordable Homes," *The New York Times*, July 30, 2014.
http://www.nytimes.com/2014/07/31/opinion/vanessa-barbara-brazils-unaffordable-homes.html?_r=2.

¹⁸ The Economist Intelligence Unit, accessed October 15, 2015.

¹⁹ Central Intelligence Agency, "The World Factbook: Brazil," accessed October 15, 2015, <https://www.cia.gov/library/publications/the-world-factbook/geos/br.html>. And Adam Lidgett, "Brazil Recession: Slow Global Growth Blamed on Country's Shrunk Economy," *International Business Times*, August 28, 2015.

<http://www.ibtimes.com/brazil-recession-slow-global-growth-blamed-countrys-shrunk-economy-2072978>.

²⁰ 2015 LAVCA Industry Data.

²¹ 2015 LAVCA Industry Data.

²² 2015 LAVCA Industry Data.

²³ 2015 LAVCA Industry Data.

half of 2015, despite the slowing economy, fund managers invested an additional \$2.3 billion across 69 deals.

Exited investments in Brazil generated \$1.6 billion in 2014, down from \$2.5 billion in 2013.²⁴ Following the downward trend, in the first half of 2015, PEVC funds realized only \$676 million across 10 exited investments.

Looking more closely at early stage investing, Brazil has accounted for over half of the region's VC investments each year since 2012. In 2014, Brazilian fund managers deployed \$389 million across 85 deals, nearly 74% of the region's total.²⁵ Of the \$264 million invested in Latin American VC in the first half of 2015, over 80% flowed into Brazilian companies, with the majority of investments made in the IT sector.

Impact Investing

Impact investments are investments made into companies, organizations, and funds with the goal of generating social and environmental impact alongside a financial return.²⁶ Such investments can be made in both developed and emerging markets. Impact investors challenge the idea that the private sector should focus exclusively on financial returns, and that social and environmental issues are the domain of the public and nonprofit sectors. The impact investing industry has grown in recent years. In research recently conducted by JP Morgan and the Global Impact Investing Network (GIIN), 145 investors and fund managers reported a total of \$10.6 billion in new commitments to impact investments in 2014, and they estimate that this asset class will raise an additional \$12.2 billion in 2015.²⁷ Sampled fund managers collectively managed \$60 billion in impact investments as of the beginning of 2015. Major asset management and PE firms are beginning to enter the impact investing space as well. In early 2015 BlackRock, the world's largest asset manager, announced the launch of BlackRock Impact, a new initiative to consolidate and expand the firm's impact offerings.²⁸ Only a few months later, Bain Capital, a leading global investment firm, announced its plans to launch an impact investment fund under the leadership of former Massachusetts Governor Deval Patrick.²⁹

Brazil's nascent impact investing industry has experienced similar growth. Recent research by the Aspen Network of Development Entrepreneurs (ANDE) examined the history of classic

²⁴ 2015 LAVCA Industry Data.

²⁵ 2015 LAVCA Industry Data.

²⁶ Global Impact Investing Network, "What You Need to Know about Impact Investing," Global Impact Investing Network, accessed November 15, 2015, <https://thegiin.org/impact-investing/need-to-know/#s1>.

²⁷ J.P. Morgan and Global Impact Investing Network, *Eyes on the Horizon: The Impact Investor Survey*, J.P. Morgan and Global Impact Investing Network, May 5, 2015. <https://thegiin.org/assets/documents/pub/2015.04%20Eyes%20on%20the%20Horizon.pdf>.

²⁸ Jessica Toonkel, "Exclusive: BlackRock to Ramp Up Impact Investing," *Reuters*, February 9, 2015, <http://www.reuters.com/article/us-blackrock-impact-exclusive-idUSKBN0LD18W20150209>.

²⁹ Bain Capital, "Former Massachusetts Governor Deval L. Patrick Joins Bain Capital to Launch New Business Focused on Investments with Significant Social Impact," *Bain Capital Press Release*, April 14, 2015. <http://www.baincapital.com/newsroom/former-massachusetts-governor-deval-l-patrick-joins-bain-capital-launch-new-business>.

impact-oriented VC fund managers (that is, excluding groups such as the MIF that invest in fund-managers) that entered the country. The first formally defined impact investment player in Brazil was Oikocredit, a microfinance fund from the Netherlands that began investing in the country in 2003.³⁰ Between 2003 and 2009, impact investing in Brazil grew very slowly, with projects such as the IFC's Inclusive Business Models Group and the IDB's Opportunities for the Majority program.³¹

Domestic investors began exploring the impact investing sector in 2008, but Brazil did not produce a dedicated domestic impact investor until 2009, when Vox Capital was founded.³² At that time, there were still few players and little coordination in that space. Between 2012 and 2013, the number of impact investors active in Brazil nearly tripled from seven to twenty, nine of which are domestic.³³ From 2003 through the end of 2013, a total of \$76.4 million was invested in 68 impact-oriented businesses, and investors reportedly planned to invest an additional \$89-\$127 million in 2014.³⁴

In May 2014, the ANDE report identified 22 impact investors active in Brazil, 40% of which were closed-end funds, 10% business accelerators, 10% open-ended or evergreen funds, and the balance family offices and other types of entities.³⁵ Nine of the firms were domestic investors, and the rest international. More than half of the investors aimed to produce financial returns comparable to those of conventional VC funds. Most of the funds are quite small; the eight Brazilian impact investment funds that provided financial data collectively managed approximately US\$177 million as of May 2014 and targeted industries such as financial inclusion, education, healthcare, renewable energy, housing, water and sanitation, and waste management.³⁶ Looking to the future, the domestic fund managers planned to raise an additional US\$150 million in 2014 and 2015.

Vox's Origins and Fund Formation

In 2008, Daniel Izzo, Antonio Moraes, and Kelly Michel realized that they shared the same vision: to start Brazil's first impact investing fund. The fund would invest in companies

³⁰ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

³¹ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014: 12.

³² Multilateral Investment Fund, *Vox Capital Impact Investing Fund I: Donors Committee Memorandum*, Multilateral Investment Fund, 2012.

³³ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

³⁴ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

³⁵ Unlike closed-end funds, evergreen funds have no set time limits, but rather continuously invest and fundraise from a single vehicle. (Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014)

³⁶ Aspen Network of Development Entrepreneurs, LGT Venture Philanthropy, Quintessa Partners, and University of St. Gallen, *Mapping the Impact Investing Sector in Brazil*, Aspen Network of Development Entrepreneurs, 2014.

satisfying two criteria: a high social impact potential and a solid financial return, achieved by addressing the most critical needs of the country's BoP population.³⁷ Members of the team had been working toward this vision for some time—for some of them, most of their lives. As Mr. Moraes noted:

When I was 16, I was very inspired by my great-great grandfather's story. He was a pioneer and created a new industry in Brazil. I realized I wanted to help reduce social inequality in Brazil and I wanted to be an entrepreneur. Brazil has thousands of problems but the most pressing one, in my opinion, is deep social disparity. Later on, during my undergraduate studies, I determined that I want to combine the profitability and efficiency of the business world with the ability to create social change. My undergraduate thesis was a business plan for a social impact fund - the idea eventually matured a few years later. Most of my business school colleagues had a dream of earning their first million [dollars] before their 30th birthday; I set myself a goal to impact at least one million people before I turned 30.

In addition to their passion for social investments, three co-founders had prior experience in the field. Mr. Izzo had implemented corporate programs focusing on the BoP population while he was working for Johnson & Johnson. He was also an angel investor in Tekoha, a business focused on handicrafts. Ms. Michel had founded Artemisia, a business accelerator and an impact hub in Sao Paulo, in addition to Potencia Ventures, a social impact investing vehicle, through which she had made over 15 investments in businesses targeting the BoP between 2002 and 2009. Mr. Moraes co-founded the Votorantim Group's Family Fund, his family's investment vehicle, and made several investments in Brazilian social enterprises.

The founders met through mutual networks. In early 2008, Mr. Izzo contacted Ms. Michel with the idea of starting a social impact fund. Ms. Michel already knew an investor who was willing to provide capital to support social impact businesses in Brazil, and was looking for a partner. She also knew Mr. Moraes from a network of HNWI's, who were interested in social impact investment, and invited him to join the project as well.

At the time, Brazil had no social impact funds. Mr. Izzo said, "The three of us were the only ones thinking about creating a social impact investment fund in Brazil. At the time, the term didn't even exist in the country. We knew we wanted to invest in companies that would generate social impact."

³⁷ According to GIIN's Impact Program Discussion Paper from January 2015, "Tracking reach to the Base of the Pyramid through impact investing", the 'Base of the Pyramid' is not strictly defined and is used by Development Finance Institutions (DFIs) and businesses without specific definition. As such it generally refers to 'low-income people' and 'poor people.' For more please see Ashley Caroline and Joe Shamash, *Tracking Reach to the Base of the Pyramid through Impact Investing: Impact Programme Discussion Paper*, United Kingdom: Department for International Development, January 2015.

<http://www.theimpactprogramme.org.uk/wp-content/uploads/2015/01/TRACKING-REACH-TO-THE-BOP-for-PDF-final-CA2-.pdf>.

Vox Capital began investing in January 2009 with US\$3 million in funding from Ms. Michel's Potencia Ventures, which played a key role as the seed investor in the fund. Initially, the Vox fund team wanted to focus on businesses that developed scalable solutions for the most pressing problems of the Brazilian BoP population—education, healthcare, housing, and access to finance.

According to data from the Secretariat for Strategic Affairs of Brazil and internal Vox documents,³⁸ the BoP population comprises social classes C, D, and E, defined as families with a total monthly income below US\$1,500 for an average family of 3.7 people. In 2015, the BoP segment consisted of more than 120 million people, or 60% of the Brazilian population, who accounted for 47% of the total annual income in Brazil.³⁹ Despite representing such a huge market, this population has been underserved by both private and public sectors. For example, data from Plano CDE, one of Vox Fund I's portfolio companies, showed that as of 2014, 70% of the BoP population has received only elementary school education, 50% lacked access to any type of credit, and 75% relied entirely on public health services.⁴⁰

The team chose Sao Paulo for Vox Capital's headquarters. Over the years, this city has become the center of business and investment for both Latin American and Brazilian companies, as well as the center of the Brazilian VC industry. Located in the Southeast region, it has the largest number of start-ups and, by numbers, was the biggest market for the BoP socioeconomic segment, making it an ideal location for the fund to tap those opportunities.

The Vox Capital team managed the initial US\$3 million of capital through Paradox Holding, its first investment fund. This fund was essentially a "proof-of-concept," operating with the goal of building a track record to demonstrate its approach and impact to potential subsequent investors. As Mr. Moraes noted, "The target was to invest in five to seven businesses during a three-year span to test the concept and to determine the optimal model for impact investing. Eventually, we would choose among providing debt, seed equity, and series A financing."

None of the three founders had ever run a fund before, so the test phase was also a period of learning by doing. Ms. Michel commented, "At the beginning, it was difficult to find the right companies to invest in, as Vox didn't have the brand recognition nor the network of relationships with other fund managers that it has today." During that phase, the fund did not receive any 'conventional' management fees. According to Mr. Izzo, "The fees were barely enough to cover the operational costs."

The five initial deals, although small, played a critical role in Vox's further growth, as the team built an initial track record and gained valuable experience.

³⁸ Internal Vox data and documents.

³⁹ Internal Vox data and documents.

⁴⁰ Internal Vox data and documents.

Raising Fund I

In 2011, based on the success with the "proof-of-concept," Paradox Holdings, the Vox Capital team started raising its Vox Impact Investing Fund I (Vox Fund I). The process took almost 30 months, from the initial talks with potential investors in July 2011 to the fund's final close in January 2014. Perhaps the key challenge was the fact that the team was "very young"—at 33, Mr. Izzo, the CEO, was the eldest—and lacked significant investing experience, as it was composed primarily of first-time fund managers.

Between 2011 and 2012, Vox received formal certification from the Comissão de Valores Mobiliários (CVM) – the Brazilian SEC – allowing it to become a fund manager. "At that time, we were a 'no-profit,' not a non-profit, and we wanted to create a sustainable, scalable business model," said one of the partners, "and for that we needed a proper fund structure." The fund charged an annual management fee of 2.5% of committed capital during the investment period. Thereafter, the fee was based on the aggregate cost of current investments. Of the 2.5%, 2.25% came to the fund itself, as 0.15% went to BTG Pactual, the fund's administrator, and 0.10% went to CM Capital Markets, the management company.

The performance fee (carried interest) was set at the standard 20% level with a 6% hurdle rate. Distributions were based on the European waterfall method in which LPs received their entire committed capital and the hurdle before GPs received carry. To show their commitment to the social impact cause, however, Vox's founders made an unconventional move —by contract, they would be entitled to only half of their carry share (10% rather than the agreed 20%) if the fund failed to achieve a Global Impact Investment Rating System (GIIRS) Fund Ratings score of at least three stars out of five.⁴¹

In September 2012, Vox Capital's Fund I had its first close of R\$24 million (US\$6.3 million), launching the first Brazilian impact investing fund regulated by CVM. By the final close in January 2014, Vox had raised a total R\$84 million (US\$35.5 million). The LPs included three development finance institutions (DFIs)—IDB's MIF, the Development Bank of Latin America (CAF), and the Brazilian Innovation Agency (FINEP) — which together provided 44% of committed capital. Thirty-five Brazilian high net worth individuals and families provided 32% of committed capital, while two international foundations, Instituto Alana and Ms. Michel's Potencia Ventures, supplied the balance.

While the team was raising the fund, they recruited two new individuals to augment their skill sets. Gilberto Ribeiro, with experience in the mining and financial industries, joined the team in March 2011 as a partner in charge of investment evaluation, financial control, and portfolio management. In September 2012, Erik Cavalcante, who had founded and managed Brazil's first alternative VC-backed telecom company, joined the team as a partner responsible for portfolio

⁴¹GIIRS Ratings are a well-known international standard for impact measurement. They are rigorous, comprehensive, and comparable ratings of a company or a fund's social and environmental impact.

management and operational improvement. His background complemented Vox's need for credibility among entrepreneurs and experience in running start-up businesses. "It seemed most suitable to bring on board a person who had been a VC-backed entrepreneur," said Mr. Cavalcante.

Both of the additions to the team were looking for new challenges and were deeply passionate about social impact. Along with their skills and experience, they were a complementary fit to the existing Vox team, creating a five-partner group. Over time, the team shrank to four when one of the founding partners, Ms. Michel, moved to London to expand her impact investing focus. Since then, she has only been involved with Vox as an LP. As of August 2015, Vox's staff of nine included the four partners and five others, including associates, interns, and administrative staff.

Creating Vox Labs: A Vehicle for Deal Flow

For VC funds, a pillar of a sustainable business model is deal flow. Initially, deal sourcing at Vox was done mostly through the founders' personal networks and existing relationships with members of the business community. Some of the opportunities came as cold calls by prospective companies, while others were sourced through Vox's participation in VC/entrepreneurship events organized in Sao Paulo.

As Vox's brand recognition rose, it encountered more potential investees, but few met the firm's parameters. "In analyzing these opportunities," Mr. Moraes commented, "we found that many had good entrepreneurs and good business models with promising potential, but they were too immature." In response, the team started Vox Labs in 2011. This seed stage program would act as a platform for deal sourcing, working alongside incubators and accelerators, and providing financing to help its companies mature into candidates for equity investment.

According to one of the partners, Vox Labs was envisioned as a very "hands-off" platform that would consume only 1% of the team's time and 2.3% of the fund's capital (US\$800,000). To achieve the team's time allocation target, the firm partnered with third party accelerators – Artemisia, Instituto Quintessa, 21212, and Pipa. The estimated investment per company was planned to range from R\$50,000 to R\$300,000 (US\$20,000-\$125,000), but the actual amount tended toward the higher end of that range, averaging between R\$150,000 and R\$300,000 (US\$60,000-125,000).

Vox Labs investments were structured as convertible debt to reduce risk. The portfolio company pays interest of 1% of the principal per month over a period of up to 12 months with a repayment grace period of up to one year. By the end of the grace period, Vox can either i) convert both the principal and interest into shares of the company, at a 20% discount to the company's valuation in its first equity financing round; or ii) receive interest and principal payments in a period of up to two years. During the one-year monitoring phase, the third party operators manage the acceleration program to minimize the demands on the partners. "If the company screened by Vox Capital is too immature, we send the entrepreneur to Vox Labs. We make decisions about it

quickly—in one to two months since we first considered the opportunity,” explained one of the partners. He continued, “To be approved by Vox Labs, an entrepreneur first needs to get the permission from a third-party accelerator who manages and operates the Vox Labs accelerator program. The whole process is very flexible and works much better than we initially thought it would—we considered the possibility of a 100% write-off for Vox Labs investees and yet the operation has provided two or three of our investments.”

In general, when assessing an investment of either equity or a convertible note, Vox placed the greatest weight on the entrepreneur and the quality of the team. Mr. Cavalcante commented, “For example, an entrepreneur who seeks to build a company in the healthcare sector needs to have a certain level of experience and knowledge in the field. In addition, an ideal entrepreneur must have a good business sense and the ability to create a good team that can deliver. Finally he or she needs to have some general knowledge of the technology involved.”

III. Portfolio Overview

As noted earlier, by September 2015, the Vox Capital team had screened over 1,430 investment opportunities throughout Brazil. Of these, 32% were in education, 21% in healthcare, 8% in financial services, 7% in housing, and 32% in other sectors. Further analysis was performed on more than 750 of the screened companies. In total, the fund made 19 investments, which serve more than 150,000 people daily. Out of these, nine were in Vox’s equity fund and 10 in Vox Labs. In total, these investment account for 83.3% of Fund I’s committed capital. The equity investments ranged from R\$1,000,000 to R\$10,000,000 (between US\$450,000 and R\$4,500,000) per company.

By September 2015, the fund had one write-off (Balcão de Empregos) but no returns-generating exits. An early write-off like this is expected for a fund at this stage. The old adage “lemons ripen faster than plums” applies to VC as well as horticulture, as faltering companies often reveal their inability to perform before promising companies can conclusively prove their strength. Because VC funds usually have small partnership groups, cutting an under-performing company is an important and difficult decision, as it allows the team to focus its energies on companies with more potential, rather than trying to rescue a floundering operation.

Thumbnail descriptions of the companies from Fund I are listed by date of investment below. Please note that the description includes two companies from Vox Labs—Biva and INBEP—which were interviewed as part of the information gathering process. These are also listed by date of investment.

Individual Company Thumbnails

Saútil

In November 2012 the Vox Capital team invested R\$3.7 million (US\$1.8 million) from Fund I in Saútil, a technology company that develops software and hardware solutions to provide organized and up-to-date information about resources and services offered by the public and private Unified Health System (SUS) that serves the entire Brazilian population. The company aimed to address the asymmetry of information between high- and low-income patients in the Brazilian healthcare market, by providing the latter with more easily accessible information about waiting times and pharmacy inventories at public healthcare facilities.

Balcão de Empregos

The Vox team made an equity investment of R\$2.6 million (US\$1.3 million) in Balcão de Empregos in December 2012 through Fund I. The company operated a job placement marketplace that combined online operations with physical locations. The founders sought to decrease the asymmetry of information between companies and low-income job candidates, reducing the time and cost of a job-hunt. The investment was written-off in the beginning of 2015, as it had not reached its expected business goals.

The management team, led by the founders, proved unable to manage the company's growth, largely due to challenges in recruiting and retaining talented staff. For two years, the Vox team had worked with entrepreneurs to improve performance and turn around the business. Eventually, it became clear that these efforts were not paying off and the fund manager decided to write off the investment to free up the team's time for more promising portfolio companies.

Bille

In 2012, through Fund I, the Vox Capital team invested R\$0.4 million (US\$200,000) in Bille Empreendimentos (Bille), a Special Purpose Enterprise (SPE) created by the Brazilian housing developer Crinale, which built and managed houses for low-income families in Brazil that were financed through the “Minha Casa, Minha Vida” government program. The program addressed the 8 million-home housing deficit by making it more affordable for low-income households to become homeowners. As of August 2015, Crinale had built over 4,000 low-cost houses.⁴²

Bille, Crinale's largest SPE, was established to build and sell 1,200 affordable houses in cities with fewer than 50,000 inhabitants in the interior of the states of São Paulo and Minas Gerais. Bille uses an innovative, lean business model that reduces the time from development to sale by more than 50%. The average price per house (45-48 square meters) is around R\$115,000 (US\$54,000). The harsh macro-economic conditions in 2015, however, have slowed the sale of

⁴² Matthew Ponsford and John Defterios, “Building a Housing Revolution in Brazil,” CNN.com (Oct. 1, 2014), <http://www.cnn.com/2014/10/01/world/brazil-housing-sao-paulo/>, accessed March 7, 2016.

the lots. Even so, according to Vox's valuation as of June 30, 2015, the company was the portfolio's top performer, with an unrealized multiple on invested capital (MOIC) of 2.92x and an IRR of 43.9%.

Plano CDE

Plano CDE is a market research company founded in 2009 to focus on the Brazilian BoP. The company uses both qualitative and quantitative methodologies to produce “independent, objective, relevant, and actionable” market surveys of the socioeconomic segments C, D, and E. These surveys, along with consulting and training, help clients address the needs of lower-income markets in hopes of boosting positive social impacts through the development of new policies, initiatives, products, and services. Plano CDE's clients include groups from the public and non-profit sectors, such as the Brazilian government and various domestic and international foundations, corporations, and multinationals.

Through Fund I, the Vox team invested R\$3.4 million (US\$1.6 million) in the company in December 2012, primarily to access its research and expertise on the Brazilian BoP.

Tamboro

In November 2013, the Vox team invested R\$3.6 (US\$1.6 million) in Tamboro through Fund I, and later made a follow-on investment of R\$3.0 million for a total of R\$6.7 million invested as of September 2015. The company offers an affordable technological solution (an educational software platform that includes games) to improve the quality of education in Brazilian primary and secondary schools. While its software initially focused on language and mathematics, it has expanded into other subjects and has been adopted by a major textbook publisher. The company is in conversations with other vendors to enhance their printed material.

As of August 2015, Tamboro's products have been used by 8,000 students at 50 schools in several cities across Brazil. Through its partnerships with publishers, the company expects to reach 300,000 students in the next three years. As of September 2015 the company had not yet carried out a formal impact evaluation of its technology, but it claims that teachers report gains of up to 20% in student performance on standardized tests.

ToLife

ToLife is a healthcare technology company developing a combined hardware and software solution for triage processes at healthcare providers. The company automates the patients' admission processes and risk classifications, allowing medical personnel to optimize their decisions about the patient's care.

As Mr. Moraes described:

When a patient gets into an emergency room, he or she waits in the line. First, a nurse needs to measure, read, and report patient's vital signs (body temperature, oxygen level, blood pressure, heart rate, etc.). In Brazilian public healthcare facilities, this process usually takes between 10 to 15 minutes (as opposed to 4 minutes in Brazil's private healthcare facilities). ToLife's 'beta' product integrates all the medical devices so the nurse doesn't need to write down the collected information on paper. The information goes directly into the system reducing the standard data collection time by 80%, from 10-15 minutes to 2.5 minutes. That is an 80% time-reduction in the emergency room enabling nurses and doctors to dedicate more time to analyzing the information, making decisions, and focusing on the urgent problems of patients in critical conditions. More than 50% of deaths from heart attacks and strokes could be avoided by an immediate response in the emergency room. It is impossible to know how many lives have been saved because this technology has been implemented - but it has a huge impact.

The company produces both the equipment (hardware) and the software, and also provides maintenance and an e-learning platform for nurses and medical personnel. Vox Capital's team invested R\$8.1million (US\$3.5 million) in ToLife in November 2013 through Fund I with a later follow-on investment of R\$2.0 million for a total of R\$10.1 million invested as of September 2015. At that point, ToLife's product was installed in over 5,000 public healthcare units across 900 municipalities in Brazil. Despite such high market penetration, the company has not met its targeted financial results as it is still working on the optimal business model – software vs. hardware vs. maintenance and services.

Avante

Before launching Avante in 2012, Bernardo Bonjean, a former Paris-Dakkar Rally motorcycle racer, spent most of his career in finance with Brazil's leading investment banks and asset managers. Motivated by "the desire to leave a legacy for his children," Mr. Bonjean was inspired "to 'humanize' the financial services [industry]" by transforming it into a client-centered model. He established Avante to provide comprehensive financial solutions for families and micro-entrepreneurs in Brazil's favelas (urban slums). According to Avante, over 14 million people live in more than 1,000 favelas in Brazil, but less than 1% of that population has access to traditional retail banking services.

Avante offers banking services at considerably lower fees than do traditional financial service providers. For example, it charges 2.5%-4% in monthly interest on microloans, while commercial banks charge around 8% per month. Moreover, Avante's micro-loans exhibit a 0.5% average default rate, compared to 4.0% for its Brazilian peers. Instead of assessing collateral, Avante's loan approval process assesses a prospective client's creditworthiness through a proprietary evaluation system that performs algorithmic (objective) analysis on data from public

databases, which is then informed by the human (subjective) assessment of Avante's agents who work with clients on the ground.⁴³

The Vox team invested R\$4.1 million (US\$1.8 million) in the company through Fund I in July 2014 and has also helped the company to refine its business model.

ProRadis

Founded in 2013, ProRadis aims to decrease the cost of medical imaging diagnostics for Brazilians who do not have access to private health insurance. The company plans to negotiate bulk rates with private providers and redirect demand toward less popular time slots during which facilities are generally underused. To do so, ProRadis has developed a proprietary technological platform that links seamlessly with existing systems and doubles as an all-in-one facilities management tool by providing radiology information systems and picture archiving and communication systems (RIS/PACS) and enterprise resource planning (ERP) features.

The company targets a market of 40-50 million people—middle income individuals who cannot afford private health insurance but who could otherwise afford medical imaging services at the rates negotiated by insurance companies with private healthcare providers. For example, in 2015 the average waiting-time for an MRI scan in Brazil's public health sector was almost two years. With access to spare capacity in the private sector at an affordable price, public sector patients could obtain such examinations significantly faster—in a week or two. This change is expected to have an important social impact in terms of better treatment of injuries and, as a result of faster diagnosis, greater productivity and quality of life.

Vox's team invested R\$3.1 million (US\$1.4 million) from Fund I in the company. Investors in this round included Wayra, an accelerator program of Spanish global telecom giant Telefónica, and Performa, a Brazilian VC fund.

Magnamed

In 2005, Wataru Ueda, Tatsuo Suzuki, and Toru Kinjo started Magnamed in Mr. Ueda's mother's garage. They planned to design, develop, and manufacture more reliable, lower-cost, easily maintained ventilators to be used in ambulances and intensive care units (ICUs), and, although based in Brazil, they aimed to address the needs of the global market.

Over time, Magnamed developed and successfully introduced a portable respirator in Brazilian and international markets. The product is both cheaper and easier to operate than existing devices, most of which are produced in Europe, and its operational simplicity makes it safer to operate by emergency personnel with limited training and skills. Thus, it has become an

⁴³ There is an extensive amount of research on the difference between “institutional” lending, which relies on hard data, and “relationship” lending, which focuses on the personal and reputational information to be gleaned by individuals in the community.

attractive choice for the more resource-constrained health systems around the globe, and it has helped rescue teams to respond more efficiently to emergencies and save more lives.

On August 31 2015, Vox's team invested R\$10.1 million (US\$2.8 million) from Fund I in Magnamed as a part of an R\$10.7 million (US\$3.0 million) financing round, co-investing alongside Criatec, a Brazilian VC fund. Mr. Ueda noted that the management team talked to a couple of international funds but decided on a domestic investor because of its social impact agenda. Mr. Ueda emphasized that all three co-founders went to Brazilian public universities and received government funding to create their product, and thus felt the need “to give something back to the community. That is the underlying reason of our partnership with Vox. At the same time, [we also expect] Vox's network will help us grow.”

INBEP

In 2012, INBEP was established to provide affordable e-learning and skill certification for individuals and companies. As of September 2015, the company claimed to have trained more than 6,000 students, many of whom attribute their employment to INBEP certification.

In April 2015, the Vox team invested R\$300,000 (US\$100,000) from Fund I in the company through Vox Labs using a convertible note. According to Tiago Maciel, the company's co-founder and CEO, in addition to money and Vox's reputation in the market, being part of a business accelerator is essential for INBEP's growth.

Biva

Biva is a peer-to-peer (P2P) lending platform founded in 2014 by Eduardo Teixeira, Paulo David, and Jorge Vargas Neto. The company aims to bring down the funding cost faced by micro-entrepreneurs and SME business owners. "Our dream was to bring innovation into the Brazilian financial system," said one of the owners. The other added, "Our mission is to reach people that don't have the access to the traditional system and instead work with the informal market, and bring them back to the system. Our model provides lower costs for borrowers and higher returns for investors."

Along with providing capital at lower cost to borrowers, Biva offers higher returns to small investors, essentially “democratizing” the access to investment products. Biva’s platform links the demand side—borrowers—and the supply side—capital providers. On the demand side, Biva offers uncollateralized credit at an interest rate of 2%-4% per month; in comparison to traditional lenders that charge up to 14% per month on credit cards. On the supply side, the minimum investment required to be a Biva creditor (capital provider) is R\$500 (US\$220). In April 2015 Vox invested R\$300,000 (US\$100,000) through Vox Labs using a convertible note.

Financial Results and Impact

Being the first mover in an undeveloped impact investing VC-ecosystem market required investors' patience, especially in terms of financial performance. One of Vox's LPs noted:

They are a great team, open to learning and discussing their ideas with other people. They have great social and business networks. They are setting reasonable expectations and communicating them well to investors. Their reporting to LPs is superb. They always hire the right consultants, and they are good at communicating difficult ideas—for example, saying to an entrepreneur that she or he would not make a good CEO. They have no problem in admitting their mistakes, which we appreciate.

As of June 30 2015, Vox's portfolio MOIC stood at 1.08x with a reported IRR of 3.9%, no exits and one write-off (Balcão de Empregos). The fund's portfolio as of June 2015 included the companies listed in Table III-1 below.

*Table III-1: Vox's Fund I Portfolio Key Dates and Figures*⁴⁴

Company Name	Date Founded	Description	Date Invested (1st round)	Amount Invested⁴⁵ (millions)	Current Status	GIIRS IBM Rating⁴⁶
Saútil	2011	Healthcare information management	Nov. 2012	R\$3.7	Invested	Platinum
Balcão de Empregos	2003	Job placement marketplace	Dec. 2012	R\$2.6	Written-off in 2015	N/A
Bille	2009 ⁴⁷	Housing development and construction	Dec. 2012	R\$0.4	Invested	Platinum
Plano CDE	2009	BoP focused market research	Dec. 2012	R\$3.4	Invested	Gold

⁴⁴ The data in this table are from the September 2015 private placement memorandum and accompanying slide deck for Fund I and Vox Labs, which was collected by Vox Capital as of June 30, 2015.

⁴⁵ As of September 30, 2015.

⁴⁶ Refers to Global Impact Investing Rating System (GIIRS) Impact Business Models (IBM) Rating. Per definition, The Impact Model Rating recognizes business models that are specifically designed to solve social or environmental problems through company products or services, target customers, value chain, ownership, or operations.

⁴⁷ The year applies to Crinale, the parent company that managed Bille, one of its special purpose vehicles.

Tamboro	2011	Education technological solutions	Nov. 2013	R\$6.7 ⁴⁸	Invested	Platinum
ToLife	2009	Healthcare information management	Nov. 2013	R\$10.1 ⁴⁹	Invested	Platinum
Avante	2012	BoP microfinance	July 2014	R\$4.1	Invested	Platinum
ProRadis	2013	Medical imaging diagnostics IT solutions	June 2015	R\$3.1	Invested	Silver
Magnamed	2005	Respiratory medical devices	Aug. 2015	R\$10.1	Invested	Gold
Other investments (Vox Labs)	2011	Investments in Vox Labs (see Table 2)			Invested	N/A

The Vox Labs seed investment program was also funded through Fund I. As of September 2015, Vox Labs had made 10 investments, as shown in *Table III-2* below. Four of these (Saútil, Quitei, Kidopi, and WPensar) had been fully exited, meaning these companies either fully repaid the debt Vox had provided or (in the case of Saútil) were converted to equity positions. Two (Banco Perola and +60 Saude), have been partially exited, that is, partially repaid their debt. Three (Biva, Kidu and INBEP) are active, and one was written off (CDI Lan). Vox Labs was not designed to deliver a return, but rather to contribute to Vox Capital's pipeline, hence only 2.3% of Fund I's committed capital was reserved for Vox Labs.

⁴⁸ First round was R\$3.6 million and follow-on round was R\$3.0 million for a total of \$6.7 million as of September 30, 2015.

⁴⁹ First round was R\$8.1 million and follow-on round was R\$2.0 million for a total of \$10.1 million as of September 30, 2015.

Table III-2: Vox Labs' Portfolio Key Dates and Figures⁵⁰

Company Name	Sector	Date Invested	Amount Invested <i>(in thousands)</i>	Current Status
CDI Lan	Retail/Distribution	Jan. 2011	R\$150	Written-off
Saútil	Healthcare	Dec. 2011	R\$55	Graduated/Fully exited ⁵¹
WPensar	Education	April 2013	R\$300	Graduated/Fully exited
Quitei	Financial Services	April 2013	R\$150	Graduated/Fully exited
Kidopi	Healthcare	May 2013	R\$50	Graduated/Fully exited
Banco Perola	Financial Services	Dec. 2011	R\$100	Graduated/Repaying
+60 Saúde	Healthcare	Sep. 2013	R\$150	Graduated/Repaying
Kidu	Education	June 2014	R\$300	Graduated/ Grace period
INBEP	Education	April 2015	R\$300	Graduated/Grace period
Biva	Financial Services	April 2015	R\$300	Active/Grace period

The fund's social impact investment thesis, along with its overall performance, was very well received by another Vox LP, which was new to this type of investment despite its history as an LP in classic VC funds. The LP's representative commented, "We understand that Vox's success would be measured not only through financial returns, but also by an internationally accepted methodology for measuring social impact. Also, we realize Vox is a first-time fund manager facing some typical first-time manager challenges. From our perspective, in general, the fund has performed very well. The Vox team proved to be very capable and intelligent. Importantly for LPs, the fund's reporting quality has been high."

Based on quantitative and qualitative data provided by the GPs, entrepreneurs, and the MIF, the research team analyzed the impact of Vox's investments on its portfolio companies in two categories, direct impact and indirect impact, which are described in further detail below. It must be noted that these results, and particularly the assessment of indirect impacts, should be considered indicative rather than exhaustive. Therefore, it is important to highlight two aspects

⁵⁰ The data in this table are from the September 2015 private placement memorandum and accompanying slide deck for Fund I and Vox Labs, which was collected by Vox Capital as of June 30, 2015.

⁵¹ The investment was exited on December 13, 2013 through equity conversion.

of the impact analysis. First, the research team analyzed direct and indirect impacts only for interviewed companies – i.e. seven equity investments (Avante, Bille, Magnamed, Plano CDE, ProRadis, Saútil, Tamboro) and two companies from the Vox Labs portfolio (Biva and INBEP), funded through convertible notes. Secondly, the question of attribution invariably arises, as it is often difficult to determine with any certainty the impact—direct or indirect—of a given fund investment in a portfolio company (e.g., the company may have multiple investors, and the indirect impacts are often influenced by many extraneous forces). Although the impact of a single investment may be debated, for simplicity throughout this study it is assumed that the fund manager’s investment implies that it has had an impact on the company’s performance.

Direct Impact

Besides providing the needed capital for growth, this research found evidence that Vox had a direct impact on its investees in many important areas, as shown in Table III-3. Vox’s nine portfolio companies have together generated R\$34.4 million (US\$12.8 million) in 2014 revenues and employed 410 people as of April 16, 2015.⁵² These figures represent an increase of 84% in revenues and 105% in employment since the date Vox invested in the companies. On the other hand, in the period from the date of the investment to April 16, 2015, the average wages across all companies decreased by 1%. This 1% decrease in average wages was driven in part by one company that outsourced a number of positions. If, however, we remove this company from the calculations, the average wage actually increased by 8%. It is once again worth noting that without a more sophisticated identification strategy these impacts cannot necessarily be causally attributed to Vox’s investment in the companies.⁵³

*Table III-3: Vox Portfolio Performance*⁵⁴

Increase in Employment	Change in Average Wage	Increase in Revenue
105%	-1%	84%

The research team evaluated direct impact across four criteria, the first and most basic of which was the commitment of capital to promising companies operating in equity- and credit-constrained environments. In addition to financing, the fund was evaluated on its effectiveness in assisting portfolio companies with networking opportunities and the provision of business

⁵² In the case of one portfolio company, Bille, the employment figures include a number of positions that were outsourced and thus are supported by Bille, but do not appear on its payroll.

⁵³ In general, accurately determining an investment fund’s impact is very complex. Data is often sparse and difficult to obtain, and even when available, often based on small samples and best estimates.

⁵⁴ For Increase in Employment and Change in Average Wage, the performance data has been calculated by observing the respective aggregate data across all portfolio companies from Fund I in the period since the initial investment through April 16, 2015. For Increase in Revenues the performance was calculated using the annual revenues figures from the respective year each company received initial investment from Vox through the year end 2014. All data were sourced from Vox.

training. Finally, the fund was also evaluated on its effectiveness in improving investees' environmental, social, and governance (ESG) practices. The research team rated investments across these four criteria on a scale of 0 (little to no impact) to 4 (considerable impact).

Examining the direct impact of Vox on its portfolio companies, the research team found that the networking support provided by the Vox team was extremely important to its portfolio companies, receiving the highest score for two-thirds of its interviewed portfolio. Vox's rating reflects the nearly unanimous view of its portfolio companies that the fund manager's large and influential network provided important advantages, particularly in terms of business development and market access. Vox's networking rating may have been especially high because many of its BoP-targeted entrepreneurs had few other options for networking support, or because the founding team was particularly well connected. Vox's business training was also very helpful to its portfolio companies—ranking only behind networking in terms of importance—particularly in terms of supporting management teams as they made important strategic decisions. As an impact investor, Vox Capital also provides ESG training to its companies, and the fund's team has actively developed new methods for helping its portfolio company managers carefully consider and optimize their businesses' social impact. The Vox team is continuing to develop and test strategies to measure and increase its portfolio's social impact, serving as a model and testing ground for other Brazilian impact investors. Finally, the provided capital was important to its portfolio companies, as all of the companies were operating in equity- and/or credit-constrained environments. Indeed, several companies faced serious liquidity issues at the time of Vox's investment, and the committed capital was critical to their ongoing operation. In some cases the investees had access to capital through other channels but chose Vox as a superior partner to execute their business plans and achieve rapid growth, resulting in somewhat lower scores.

Indirect Impact

Along with direct impacts, a VC fund's investments also have indirect impacts—that is, the impact on a community or region due to the investment in a given company. By their very nature, indirect impacts are even more difficult to measure than direct impacts, and they often emerge clearly only after months or even years have elapsed. Using existing data and interviews with relevant actors, the research team assessed the role that Vox's companies have played in their communities and regions. However, as noted earlier, the question of precise attribution is not addressed in this study, and for simplicity purposes, it is assumed that Vox's investment in the company was instrumental in creating these impacts. The indirect impacts considered for Vox Capital included ancillary economic growth and/or job creation that occurred in the greater community in response to growth in the portfolio company; promotion of innovation, improved quality of life for BoP citizens; and the company's impact on the country's VC ecosystem.

Overall Vox's indirect impact varied – in part due to the early stage of its companies as well as the wide range of business models and target markets represented in the sample. Vox's ancillary growth and job creation scores, which reflect the growth created in companies that interface with

the portfolio companies, were mixed. This is not surprising, as the observed portfolio companies are predominantly early stage, with a concomitantly limited impact on overall job creation. One of the companies that scored highly was Magnamed, a company with substantial operations and a large roster of suppliers. In terms of innovation, most of Vox's portfolio companies relied to some extent on innovative products or processes, but they did not constitute technical breakthroughs. Indeed, in most cases they made use of technology and/or solutions that had been pioneered in other geographies, e.g., Biva's P2P lending platform. There were two notable exceptions: ProRadis, a provider of medical imaging diagnostics IT solutions; and Avante, a microfinance lender with an innovative tablet-based app. In keeping with Vox Capital's overarching mission as an impact investor, most of Vox's portfolio companies had a substantial focus on BoP populations and the alleviation of poverty, and this is where the fund received some of its highest indirect impact scores. In terms of impact on Brazil's VC ecosystem, all interviewees agreed that Vox, the nation's first home-grown impact investor, has played and continues to play a crucial role.

IV. The Future

The Vox team has matured and is constantly improving, but many endogenous and exogenous challenges lie ahead of them. Below, those believed to be most significant are described.

One of Vox's main challenges has been sourcing deals, despite the firm's position as one of the leaders on the social impact investing scene in Brazil. With the BoP market in excess of 120 million people, one would expect that an abundant array of opportunities would exist.⁵⁵ The team reviews around 250 opportunities per year to close two to three deals.⁵⁶

In addition, awareness of concepts associated with VC investing remains limited among Brazilian entrepreneurs targeting BoP consumers. Mr. Cavalcante, a Vox partner, explained that even in 2015, a number of prospective entrepreneurs in Brazil did not fully understand the notion of a start-up, or what to expect from a VC fund during and after the investing process. For example, according to Mr. Cavalcante, many entrepreneurs still do not understand the difference between equity and debt investments, asking questions such as "What is the interest rate Vox charges on the provided capital?" Such concerns and questions are not uncommon in emerging VC markets and contribute to the use of convertible debt as in the case of Vox Labs. Not only is the concept more intuitive, but these quasi-equity structures mitigate the risks associated with exits, even though they limit the potential upside.

Mr. Izzo highlighted another challenge that involved the difficulty of measuring impact and the amount of time over which it appears. He explained a misunderstanding common in the ecosystem about the results of impact investing:

Many people expect a "certain" impact from an investment even before the capital is invested. They assume an investment will produce a desired social impact. At Vox

⁵⁵ Internal Vox documents and interviews.

⁵⁶ Internal Vox documents and interviews.

Capital, though, impact is seen as another layer of risk, akin to business risk, and has to be accepted as such just as much as the business risk is accepted in VC. Measuring impact is also more complex and trickier than measuring business success—it is not limited to just serving the BoP segment for good photographs for report covers. Balancing between good business decisions and the largest impact measured in a robust way is especially challenging.

As opposed to the conventional view that impact investments produce lower returns, Mr. Izzo expects Vox's investments to generate higher returns than those of traditional VCs, because such impact investments aim to improve the customer's overall quality of life. He explains:

Social impact businesses in which we invest should ideally generate a higher degree of loyalty, a stable and large client base, and a good image because they do not prioritize profit. Consumers understand and feel that. Therefore, such businesses need to spend less on marketing and public relations and these savings, in a scalable business in the longer run, can be transferred to research and development or product development, or just used to improve margins through lower relative costs. All that, in the end, can produce very high returns for investors.

Another important challenge, as noted by Mr. Moraes, is creating successful exits: "We hope to have our first exits in three to five years [2018-2020]. According to our conservative scenario we expect four write-offs out of 10 investments; two or three would lose some money; two would have mediocre returns and only one would have a successful exit with a good multiple. In such scenario, we expect Fund I's performance to be around 15% IRR."

However, with Fund I's unrealized performance of 1.08x MOIC and an IRR of 3.9% reported to LPs as of June 30 2015, these results are yet to be seen. One improvement that could help in achieving better results is to insist on stricter deal terms with portfolio companies, as one LP commented:

Vox's deal structures should provide more protection for investors. The Vox team receives very positive feedback from entrepreneurs—they work with portfolio companies to help with sales strategy and execution, business partners, or in matters involving government. However, sometimes Vox may get too close with entrepreneurs.

Furthermore, achieving good exits will be impossible without a good team, and hiring and retaining top talent—both for the fund and for investee companies—is yet another challenge. Mr. Izzo noted:

The high-quality talent pool is relatively small in Brazil. Compensation packages at Vox or at investee companies are not as good as in banking or at international corporations, and there is more risk involved in working at Vox or at start-ups, making it harder for us to attract the top talent. On the positive side, the talent can be motivated by stock option plans, a common practice in the VC industry. However, the inexperienced founders of

investee companies may be reluctant to hire highly-skilled professionals or give them stock options because they fear being overshadowed by them.

Vox's need for a strong track record was echoed by interviewed investors. That aspect is not only important for Vox but for the development of the whole ecosystem, as the lack of performance results will dissuade investors. Mr. Ribeiro noted:

So far we have discussed intentions. We want to facilitate social change while making financial returns. Vox wants to transform the market and create positive outcomes but all of this is still a work in progress. Without successful exits we will lose our credibility and given we are perceived as one of the market leaders, the whole eco-system will suffer.

That difficulty, coupled with the current on-going macro-economic turmoil in Brazil, poses challenges for the team's efforts to raise a new fund, a process started in 2015. The target size is R\$120 million (US\$32 million), an increase of 50% in local currency compared to the first fund. Mr. Moraes said they plan to continue with their Fund I investment philosophy and invest in 10 companies focusing on education, healthcare, and financial inclusion in the Brazilian South-West. As of September 2015, a few LPs, including some incumbents and some newcomers, had expressed interest in the second fund. The Vox team is working hard to generate successful exits and results that would inspire more to join them.

V. Acknowledgements

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