

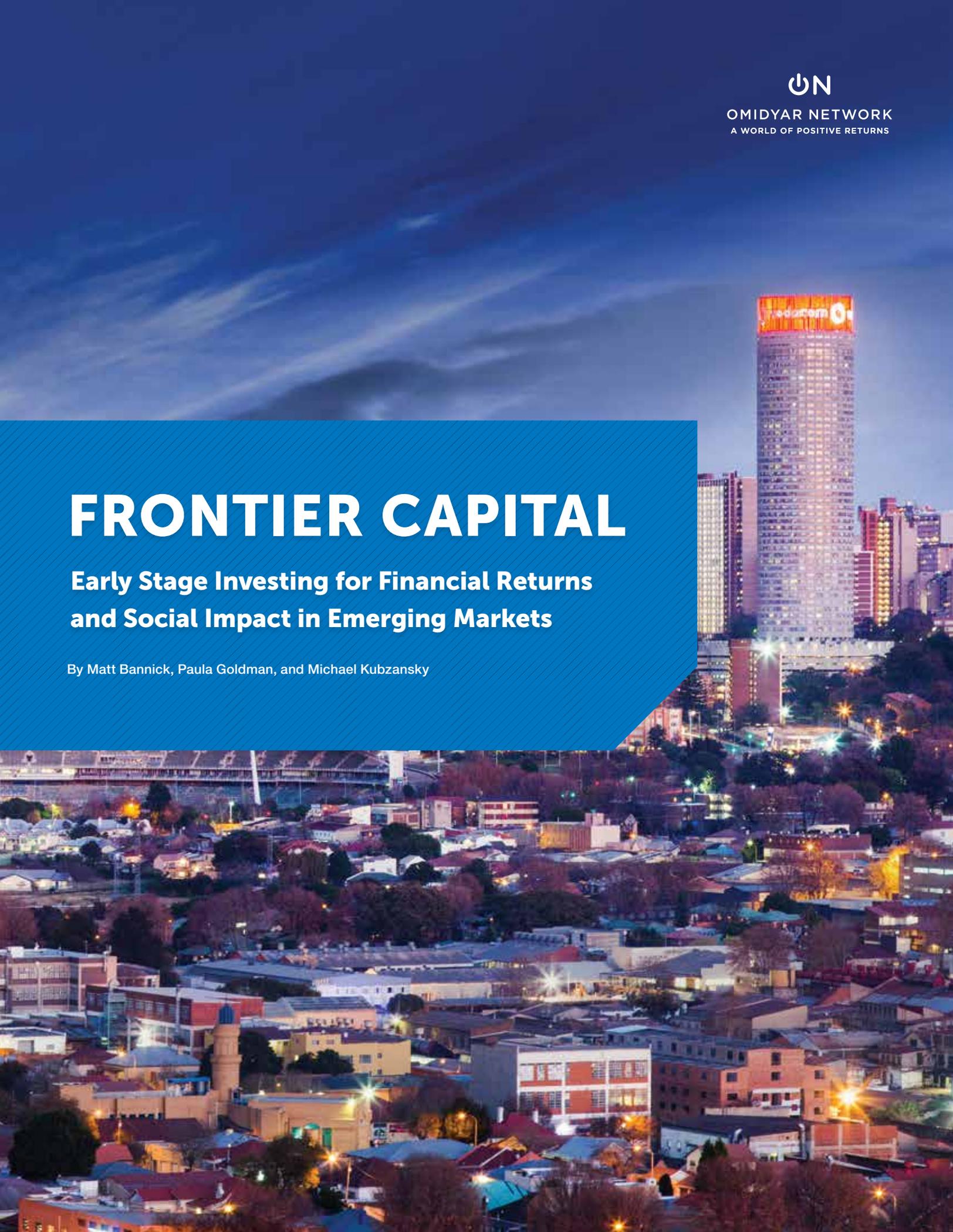


OMIDYAR NETWORK  
A WORLD OF POSITIVE RETURNS

# FRONTIER CAPITAL

**Early Stage Investing for Financial Returns  
and Social Impact in Emerging Markets**

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# Introduction



## **We stand before unprecedented opportunity to improve the lives of hundreds of millions of people in emerging markets.**

Powerful trends—from the rapid spread of mobile phones to growing middle classes, from the global uptick in entrepreneurship to the increased flow of capital toward developing economies—have made possible commercial innovations serving populations once excluded from market access. Consider: alternative credit scores to allow those who can't get traditional bank loans to invest for the future; affordable solar lighting to enable children without reliable electricity to study at night; job-matching marketplaces accessed on a mobile phone that allow workers in informal markets to connect to better employment opportunities. Individually, such innovations can tangibly improve the lives and futures of hundreds of millions of low- and lower-middle-income people across developing and emerging economies. Collectively, they have the potential to create new industries and accelerate economic growth.

But these innovations, which are frequently early stage and which often operate in more challenging markets, require highly risk-tolerant capital. After all, the entrepreneurs behind these companies are often attempting to build entirely new business models, to serve consumers coming into the formal economy for the first time, and to do so under variable and sometimes volatile macro-conditions. Not surprisingly, but sadly, there is far too little such capital currently available.

There is, of course, plenty of later stage capital available in emerging markets for business models that are already demonstrated to work—for example, companies that replicate successful startups from mature economies. Limited available early stage capital has generally been directed to services and products serving the middle- (and often upper-middle-) income groups and above. Conversely, much has been written in business and development circles about serving the very bottom of the pyramid—the poorest socioeconomic group, which represents a large part of the global population.

**This report outlines the importance and promise of serving low- and lower-middle-income (LMI) populations—essentially, the groups situated between the very bottom of the pyramid and the existing middle class. As we detail herein, LMI populations have huge unmet needs and face quite a bit of instability—challenges that can be addressed by innovative business models. We believe companies serving this demographic represent an under-tapped opportunity, both for financial returns and for outsized impact. The LMI segment represents a major market opportunity. For example, in Latin America and the Caribbean, the purchasing power of the LMI population is estimated at \$405B. In South Asia, it is estimated at \$483B.<sup>1</sup>**



We call investments in businesses serving these populations “Frontier Capital.” Such investments are gaining a diverse set of champions (as detailed herein), including commercial venture capitalists, impact investors, and some of the world’s most successful businesspeople. Our goal in this paper is twofold. First, we sound a clarion call for more risk capital to support innovation to improve the lives of LMI populations in emerging markets. Second, we answer the related question: What types of risk capital are most appropriate for this purpose?

Both issues are of utmost importance. In recent decades, we’ve seen how risk capital can transform billions of lives. Venture capital (VC), perhaps the most well-known form of risk capital, has helped scale life-saving drugs and vaccines, facilitated access to the world’s knowledge through the Internet, and empowered activists to accelerate major civil rights advances through access to social media tools. Other forms of risk capital, such as philanthropic funding, have also made a dent—yielding advances as diverse as the green revolution, public libraries, and the 911 emergency calling system.

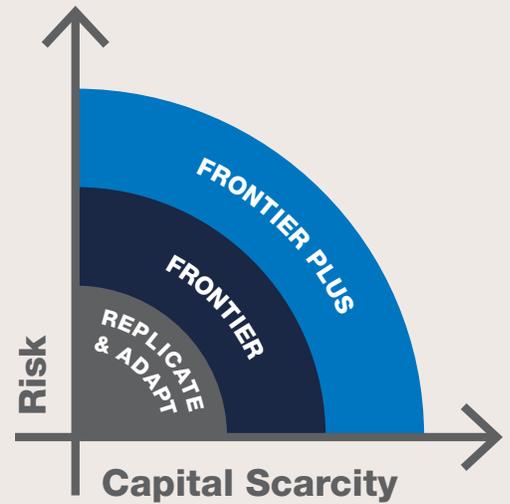
Which brings us to the significance of the right type of risk capital. Entrepreneurs serving poorer populations in emerging markets face a variety of challenges that are less common in richer countries—from dysfunctions in banking systems to lack of “friends and family” funding to get new businesses kick-started to challenges in seeking traditional “exits” (including acquisition or IPOs). Traditional venture capital structures typically require very specific portfolio economics, including a five-to-seven year time horizon for companies to be acquired or to complete their IPO, as well as the expectation of “home runs” (investments with 10x plus returns) to make up for the high failure rate of startups. Such speed and scale can be challenging in less-developed markets, as can exits themselves.

But the heart of early stage risk capital is something more essential than the specific venture capital formula. It’s about taking a small bet on an untested idea—and increasing that bet as we see increasing evidence of its traction. We firmly believe this practice holds broad application for the opportunity at hand.

## Segmenting the Opportunity

In this paper we draw on 10 years and \$850 million of funding experience—including \$400 million concentrated in early stage investing in emerging markets.<sup>2</sup> We also draw upon the experiences of our colleagues and co-investors in this growing movement, poring over hundreds of specific investment data points, as well as direct interviews and literature review. This exploration has affirmed the promise of frontier investing as both a strong business opportunity and an opportunity to transform lives. It also points to the importance of segmenting the frontier opportunity in terms of tools and investment expectations.

We divide the frontier capital opportunity into three segments: 1) “**replicate and adapt**” (proven business models, where the bulk of existing VC money is already flowing); 2) “**frontier**” (unproven business models that are asset light and serve both lower- and middle-income populations; this segment represents under-tapped opportunity that can be unlocked using conventional VC structures); and 3) “**frontier plus**” (unproven business models that may be asset intensive, serve only lower-income groups, and/or operate in countries with less-developed capital markets; this segment requires investors to be more creative with the tools they use, but offers tremendous impact potential).



**As the graphic above illustrates, as we move farther out from known business models, the higher the risk and the scarcer existing capital become—but the potential becomes greater for outsized impact in the form of innovation to meet the needs of LMI populations. It follows, then, that each of these segments is most appropriate for a different set of actors and requires a different set of tools.**



SEGMENT	STATUS	DESCRIPTION	CALL TO ACTION	KEY ACTORS
REPLICATE AND ADAPT	 <p><b>“GREEN PASTURES”</b> Much investment activity and strong results</p>	Proven business models: de-risked elsewhere, adapted to emerging markets context	Track newly de-risked frontier and frontier plus models and be ready to replicate them; expand the reach of proven models into LMI segments	Commercial VCs in Emerging Markets
FRONTIER	 <p><b>“GREEN SHOOTS”</b> Strong companies attracting good investor base but still untapped potential</p>	Unproven business models that are asset light and target a mixed-income base	More to be done here (through use of traditional VC funding structures) to accelerate promising verticals, including fintech, edtech, and consumer Internet and mobile	Commercial VCs, Impact Investors, DFIs, High Net Worth Individuals
FRONTIER PLUS	 <p><b>“SEEDS”</b> Promising companies and business models, many at very early stages of testing</p>	Unproven business models that are also one or more of the following: asset intensive; serving only lower-income customers; operating in a country with under-developed capital market	Pioneer investors needed to de-risk these newer models and provide better data on track record; in this domain consider innovations beyond traditional VC funding	Impact Investors, High Net Worth Individuals, DFIs, and other mission-aligned groups

Take, for example, the **replicate and adapt** segment, where de-risking and proof of concept were done elsewhere, usually with someone else’s money, and imported into an emerging markets context (or imported from one emerging market to another). Since these businesses involve less trial and error—and more predictable returns—it is not surprising that this domain is where the bulk of existing venture capital money in emerging markets is concentrated. While most of these proven models still serve only middle and upper-middle classes, there are a growing number with relevance to lower-income groups—from merchant cash advance to e-commerce models targeting mass markets, which we detail herein.

Things get trickier, but also potentially more compelling, when we turn to unproven models serving lower-income customers. The second segment, which we call the **frontier**, has tremendous untapped potential that can be unlocked largely with the traditional VC financing tools. In the frontier, businesses tend to be asset light (and do not generally include, for example, companies that have large real estate costs or inventory needs). This is particularly important since less financing is readily available for unproven business models in emerging markets. These companies also aim to address larger markets, not only serving the poor but simultaneously addressing the needs of consumers one or two income tiers up (lower-middle and middle income)—a strategy we call a “mixed income.” The



frontier segment includes promising sectors such as financial technology, education technology, and innovations in consumer Internet and mobile—areas that are already showing strong results. The frontier is a segment with great potential for both conventional VCs as well as impact investors (and their limited partners [LPs]). Notably, we find that companies in the frontier tend to operate in the more developed capital markets in the global south—such as Brazil, Mexico, India, and the like.

The third segment is what we call **frontier plus**. These are companies that not only have unproven business models but also take on additional challenges: They may target smaller markets with only poorer income segments; they may be more asset intensive; and/or they may operate in geographies where exits are particularly challenging. Here, we need to be creative in our pursuit of pushing the boundaries. There are indeed great businesses that fall into this category; in fact, this may be where some of the most innovative business models lie. But it would not be wise to rely solely on the traditional VC fund structure. Instead, we recommend experimenting with a variety of innovations for a more appropriate form of risk capital—including longer time horizons and various forms of quasi-equity, as well as the provision of more affordable forms of venture debt. Perhaps most importantly, here is where we need truly risk-tolerant capital—investors who are willing to take big bets in service of opening up entirely new industry sectors with transformative impact. Here we see a huge role for impact investors and their LPs as well, particularly for high net worth individuals who have great appetite to take risks and do things differently in service of outsized impact.

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## The Frontier Capital Movement

*The Frontier Capital movement is attracting champions from a diverse set of players. Influential business leaders, traditional venture capitalists, impact investors, development finance institutions, and government policy all play a role in helping direct risk capital toward innovations in a wide array of sectors.*



**VCs:** A growing number of conventional venture capitalists are backing new business opportunities in emerging markets created by expanding low- and lower-middle-income populations and rapid technology adoption and innovation. Investors such as Sequoia, Matrix, and KaszeK have invested in businesses in regions such as India, Latin America, and China.



**Impact investors:** Committed to both financial and social returns, impact investors have been at the forefront of proving new business models in emerging markets with the explicit goal of creating massive social impact. Groups such as Bamboo Finance, Accion's Frontier Investments Group, Elevar, and LGT Venture Philanthropy are supporting entrepreneurs in over 30 emerging markets, from Colombia to South Africa. In Mexico, IGZIA supports enterprises serving base of the pyramid customers. In India, funds such as Lok Capital and Unitus Seed Fund are funding innovations in areas such as healthcare, education, e-commerce, and financial services. Fund managers, such as those listed above, are backed by a diverse set of LPs, including major financial institutions, foundations, religious groups, and DFIs (per below).



**HNWs:** Increasingly, high net worth individuals are looking to apply their business acumen to solving some of the world's toughest problems. Highly successful business leaders such as Michael Bloomberg, Stephen Brenninkmeijer, Desh Deshpande, Tony Elumelu, Bill Gates, Vinod Khosla, Pierre Omidyar, and Mark Zuckerberg have invested in frontier companies and funds in sectors such as healthcare, education, and solar energy.



**DFIs:** Development finance institutions have played a key role in providing debt and equity financing to enterprises in emerging markets for development purposes. In recent years, we have seen organizations such

as the Overseas Private Investment Corporation (OPIC), CDC, IFC, FMO, and the Inter-American Development Bank explore new ways to direct early stage capital to businesses serving low-income populations in emerging markets. With the backing of the US, UK, Swedish, and Australian governments, the Global Innovation Fund was launched in 2014 to support innovations in emerging markets that have a strong potential for social impact using a venture capital-like approach. The UK Department for International Development (DFID) launched a £75m fund to support businesses in sub-Saharan Africa and South Asia that have a positive impact on poorer populations.



**Governments:** In emerging markets, there has been an uptick in government programs and policies aimed at fostering entrepreneurial ecosystems and early stage investing. The government of India has been particularly active in this regard; it recently launched a number of measures including the India Aspiration Fund (a fund of funds for early stage companies), which also encourages investors to pursue new investment theses. Longer-standing programs include the likes of Colombia's iNNpulsa, Brazil's FINAR and Criatec Fund, and Mexico's INADEM and NAFIN.



**Entrepreneurs:** At the heart of the frontier capital movement are the entrepreneurs creating products and services to improve the lives of lower-income customers. While these entrepreneurs operate in environments that pose a unique set of risks, many are successfully overcoming these barriers to serve millions of people. A number of these examples are profiled herein—from Dailyhunt (founded by Virendra Gupta), which enables non-English speakers in India to access critical news and information via the mobile Internet, to MicroEnsure (founded by Richard Leftley), which offers affordable life and health insurance to low-income customers in Africa and Asia.

Before we dive into the heart of the paper, several clarifications are in order. First, our analysis is limited to businesses serving low- and lower-middle-income groups (which we shorthand as “LMI populations”), but not those serving the extreme poor or the very bottom of the pyramid. We explain the rationale for this in the text box on the right.

Second, while this paper is “supply side” focused (looking at variations in financing for early stage businesses), the “demand side” is critical to this equation. Indeed, the quality of entrepreneurs and their management teams may be the single most important factor determining the potential success of a startup—a topic on which much has already been written.<sup>5</sup>

Third, while this essay is about emerging markets, some of the lessons and analysis (especially those around more patient financing models for companies in the frontier plus category) might be more broadly applicable—for example to companies serving poorer populations in richer countries, or those tackling tough problems that simply don’t lend themselves to a conventional venture approach.

Last, this essay is intended to spark an important conversation, rather than to serve as the last word on the topic. We welcome debate and dialogue. We write because we believe that expanding opportunity for lower-income segments is both an urgent need and a strong, untapped business opportunity. We write because we want to reflect on our own experience of these markets—and the sometimes difficult, but often inspiring, lessons of our own portfolio. And, most of all, we write out of a combination of humility and urgency; we want to learn from everyone who has ideas and hard-fought lessons that can help all of us do this more quickly and with more impact. We are hoping to find more leaders and investors who are willing to take risks to make sure we don’t squander this opportunity.

## The Importance of Serving LMI Populations

Even at this ripe moment, there are limits to the reach of market-based solutions. It has been well-established that many businesses have a hard time serving the poorest of the poor without subsidy.<sup>3</sup> While it is urgent that these groups are served, it may well be the case that permanent subsidy in the form of grants, public spending (e.g., social safety nets or cash transfers), or concessionary investing is the primary avenue by which this will take place. Instead, in this paper, we are deliberately focusing more narrowly on the income tiers just above the very bottom of the pyramid. Definitions of income tiers vary from geography to geography (and indeed translate very differently in urban vs. rural areas), but if the very bottom of the pyramid earns less than \$2/day, then we are collectively defining “low- and lower-middle-income populations” as the population that earns roughly between \$2 and \$8/day (including both low-income groups earning \$2-5/day and lower-middle-income groups earning \$5-8/day).



People in low- and lower-middle-income segments have greater purchasing power and often steadier income streams than the very bottom of the pyramid, making building businesses to serve them a much more viable prospect. Many of them are already accustomed to buying their services from private entities, and indeed may prefer to do so, especially in urban areas. But they are still highly vulnerable in the absence of safety nets, and highly in need of innovations that can help them improve their lives. For example, families that earn just \$5/day face up to a 40% chance of falling below the poverty line within 3-5 years, a risk that drops to 10% only when families earn above \$10/day.<sup>4</sup> Serving this group is therefore both important from an impact perspective and feasible from a business one.



## Returns on the Frontier

We are beginning to see promising track records for excellent fund managers serving LMI populations in emerging markets. Many are existing emerging markets VC funds—including well-known names such as Kaszek, Matrix, and Sequoia. But a new crop of funds has set out with the explicit purpose of serving lower-income groups. Some, like Accion's Frontier Investments Group, focus in a specific sector such as financial inclusion. Others, like the ones below, source from different sectors. Notably, the funds below each include a mix of investees from the replicate and adapt, frontier, and frontier plus segments.

For example, Elevar Equity is a venture fund focused on serving low-income customers in India and Latin America through investments in financial inclusion, housing, education, and healthcare. Elevar's first \$24 million fund invested in seven companies and has had complete or partial exits from four companies. The realized fund IRR to date is 72% on a local currency basis (Indian rupee, Mexican peso, and Brazilian real), 62% on a USD basis, and the net realized IRR to investors in dollar terms to date is 23%.

Similarly, Aavishkaar, a seed stage firm focused in lower-income segments primarily in India's underserved regions, has invested in a number of capital-intensive businesses in agriculture, dairy, education, energy, and health among others—some in the proven business model domain and some in the frontier and frontier plus categories. Aavishkaar has had 15 profitable exits from the 48 companies it backed in the last 12 years and a 2.9x return on invested capital, with all exits to private equity investors. Inherent to their approach is moving the investment risk from technology and product innovation to innovation in execution and a redefinition of the parameters of blockbuster success—"a return of 5 to 10 times of invested capital, instead of a return of 100 times."<sup>6</sup>

Lok Capital is a venture fund focused on serving the lower-income segment in India, primarily through investments in financial inclusion, livelihood, healthcare, and education—with a mix of proven models (such as microfinance), frontier models (technology enabled, mixed income), as well as frontier plus models. Its first \$22 million fund invested in 10 companies and the fund is now nearly fully liquidated from its portfolio. Exits returned 170% of capital invested and individual IRRs ranged from 25 to 30%.



# 1 Replicate and Adapt



**We begin our exploration of the frontier opportunity with a brief look at a segment we call “Replicate and Adapt.” This domain is comprised of business models that have been proven elsewhere, often with someone else’s money, and then replicated and adapted to an emerging markets context.**

Such businesses constitute the bulk of emerging markets venture capital to date. Witness, for example, Rocket Internet—perhaps the best-known VC fund that takes proven technology business models from the West—such as those of Amazon and Zappos, and replicates them in emerging markets. While most businesses in the proven models segment serve middle-income populations and above, there is a growing subset that serves low- and lower-middle-income populations.

For example, preschool chains are a proven business model in the United States and elsewhere (with well-documented benefits for early childhood education)—but not yet established in emerging markets. Tree House, the market leader for preschool in India, received early venture capital support from Matrix and others, and has scaled

rapidly. As of June 2015, Tree House had 647 preschools in 97 cities across India.<sup>7</sup> The company serves not only middle- and higher-income groups but also lower-middle ones. Similarly, Tappsi in Colombia, which provides on-demand taxi services, builds off of the existing track record of Uber in the United States to bring this new service to Latin America. Since taxi drivers come from mostly lower- and middle-income groups in emerging markets, this model allows workers to tap into bigger clientele bases.

There are also a variety of models here that are more straight technology plays—for example, merchant cash advance (which allows “mom and pop” owners of bodegas and small businesses to smooth out cash flow bumps), online classifieds and job-matching sites (which allow low-income workers to access a broader set of employment opportunities) and the like.

Notably, we are beginning to see proven models targeting only lower-income groups. For example, microfinance was intentionally created to serve the poor in emerging markets—and benefited from decades of patient financing and subsidy. Once the model was proven, however, it spread rapidly, gained commercial funding, and created notable exits for companies such as Compartamos in Mexico and SKS in India. (While microfinance institutions were predominantly debt-funded, SKS and Compartamos did receive VC equity as well.) We are also beginning to see some examples of “homegrown” or south-south adaptation, such as M-PESA, which was de-risked in Kenya and replicated in other emerging markets.

What unites businesses in the “replicate and adapt” segment is that the de-risking and proof of concept were achieved elsewhere with someone else’s money. Since these companies have much more predictable returns—and involve far less trial and error than their “frontier” counterparts, there is typically much more financing available to them. This means such businesses can take on a wider variety of characteristics and still scale rapidly. For example, Tree House, which supports a chain of school locations—requires substantial physical infrastructure. Access to finance for such needs has not proven an obstacle since both investors have confidence, and indeed proof, that the business model itself is viable.

Given the above, it is no surprise that proven models are where most VCs in emerging markets situate themselves. And there is certainly untapped potential here to extend proven models to serve LMI populations. This domain is also competitive and crowded. Further, only concentrating here may put investors at risk of missing the next promising waves of investment opportunities, with innovations targeted specifically at these populations and their needs.

In the “Replicate and Adapt” segment, there have been several notable exits in the microfinance sector. Below are some of the companies that both delivered impactful financial services to low- and lower-middle-income populations and produced 5X or greater returns to their investors.

COMPANY	COUNTRY
<b>Compartamos</b>	<b>Mexico</b>
<b>Equitas Micro Finance India</b>	<b>India</b>
<b>Equity Bank</b>	<b>Kenya</b>
<b>Janalakshmi Financial Services</b>	<b>India</b>
<b>MiBanco</b>	<b>Peru</b>
<b>SKS Microfinance</b>	<b>India</b>

# 2 The Frontier



**If proven models are where most VC money is now playing, unproven models represent both underappreciated opportunity and greater risk. It is in this domain that we believe investors will find the biggest possibilities for innovation and impact targeted at unmet needs of lower-income groups.**

It is also in this domain that investors have a chance to reap the benefits of being earlier to market, and developing local knowledge and networks. But this comes with less certainty about which businesses and models can be successful, which makes it doubly important to distinguish what types of unproven models are ripe for existing VC funding (and particularly the traditional “2 and 20” closed-end fund), and which we may need to think about more creatively.

As a general rule, early stage investors look at size of market and size of margins as two key factors that determine the suitability of a business for venture funding. These two factors are true regardless of the geography in which an investor operates. Our experience with the unique challenges of emerging markets and LMI populations led us to identify additional key business model factors that help distinguish where and when conventional VC structures are applicable.

The first is around the segment (and therefore size) of the market being pursued. Generally, companies that pursue a “mixed income” strategy—a mass market strategy serving both middle- and lower-income populations—have a better chance of scaling quickly and profitably. The second factor is around asset intensity: Since less financing is generally available to unproven emerging markets businesses, those that have lesser needs for working capital, physical infrastructure and the like, will generally have a stronger chance of creating the kind of home runs necessary for VC portfolios because time to scale will be much more rapid. It follows that investors in asset light models do not face as much potential dilution as the company grows. Finally, we also note as a consideration (separate from any specific business model question) the maturity of the capital market in which the company is being funded. As detailed herein, startups in certain countries have better prospects for exits than others.

Of course, this analysis is not meant to be exhaustive or exclusive; there may indeed be businesses that don’t meet these criteria and still make for great venture investments. The discussion is meant to be directional, to provoke a conversation that helps distinguish nearer-term opportunities from those that require more vision and risk tolerance.

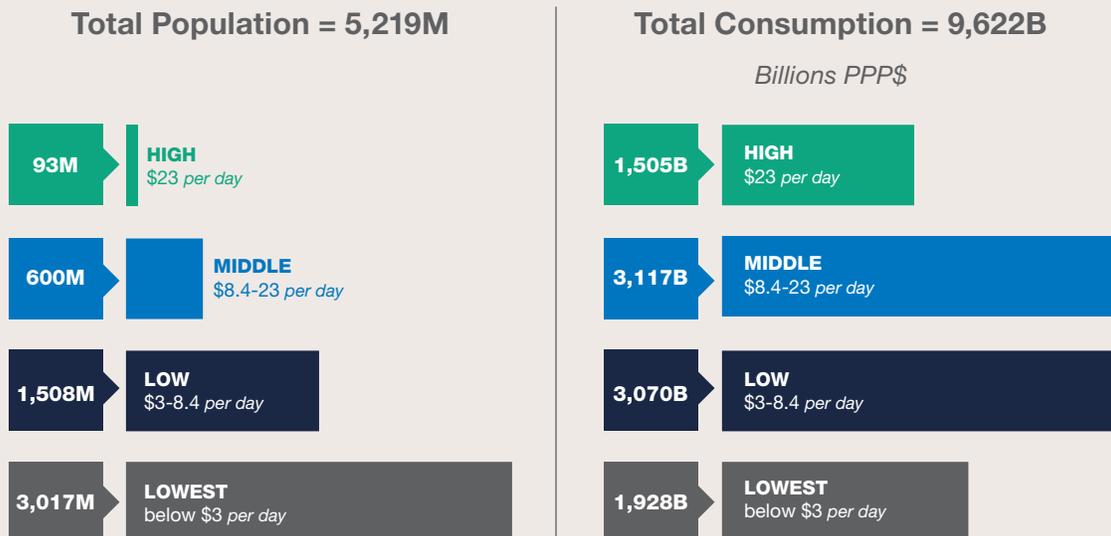
## Factor One: “Mixed-Income” Models

The larger your target market, the easier it is to achieve the classic “J-curve” growth that enables more rapid scale and the possibility of a “home run” (10x plus) VC return. This insight is hardly new. But when applied to businesses targeting LMI populations, it has important implications. Specifically, it may be far easier to achieve scale and to reach more lower-income consumers when you also serve middle-income customers—rather than focusing exclusively on lower-income segments as many well-intentioned investors frequently do.

We call business models that simultaneously serve LMI as well as middle-income populations “mixed-income models.” As outlined below, these models have several advantages that often enable them to grow more quickly than businesses serving solely lower-income customers. Such an argument may be uncomfortable for those who are exclusively focused on the needs of the poor. While the needs of the lower-middle class may not be as dramatic as those of lower-income groups, they are still important; addressing them may provide means to develop commercially viable channels to ultimately reach those with the most need. Of course, in many countries, low-income groups are such a large percentage of the population that it is almost a prerequisite for success to serve both lower- and middle-income populations simultaneously.

### The Low- and Lower-Middle-Income Opportunity

*There is a massive opportunity for businesses serving low- and lower-middle-income segments. Greater purchasing power and steadier income streams makes building businesses to serve these populations more viable. As the below graphs demonstrate, purchasing power of the low-income segment\* is approximately 60% more than that of the lowest income segment, despite having half the population.*



\*While we use the \$2-8/day threshold for this paper to define LMI, the data source above uses a slightly different cut (\$3-8.40/day)  
Source: Global Consumption Database, World Bank / IFC

## ECONOMIES OF SCALE

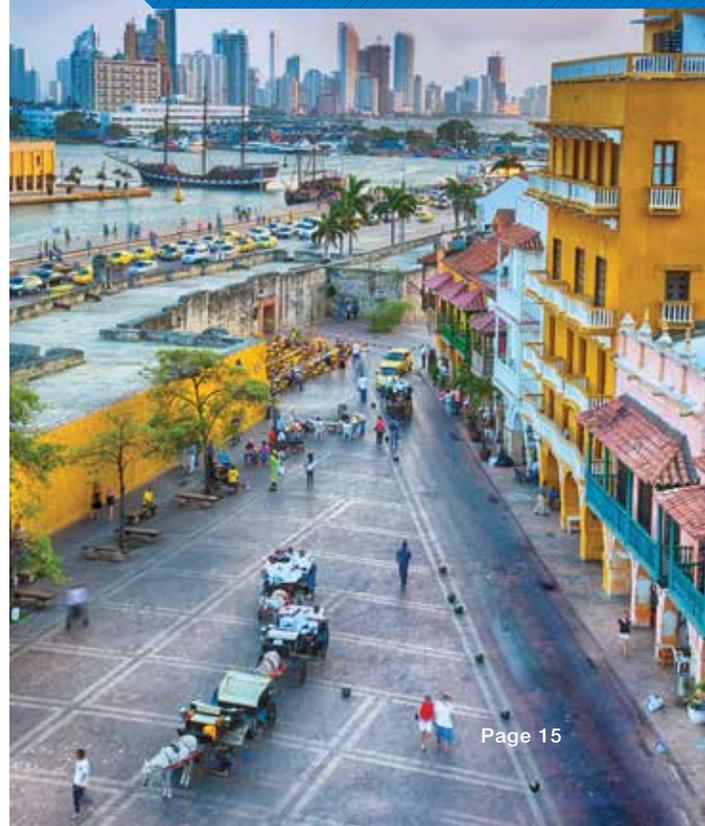
Mixed-income businesses generally target significantly larger markets. Indeed, compared to businesses that only serve low-income populations, mixed-income businesses can often achieve a greater volume of customers more easily, which in turn drives down costs and, usually, prices. Lower prices, of course, put products and services within the reach of the poor and help drive additional volume.

For example, Ver de Verdad (funded by IGNIA) identified a massive, underserved market in Mexico: those who need eye exams and high-quality, affordable eyeglasses. The company aggressively targeted a mass market, locating stores in downtown city centers with high foot traffic from both middle class and low-income customers. The high volume of customers created economies of scale that drove down the price—key to serving low-income customers. The high volume also justified an in-house beveling machine that could deliver the newly minted eyeglasses in just 45 minutes—a unique value proposition attractive to customers across all segments. Ver de Verdad currently has 23 clinics open, with the expectation of reaching over 300 by 2020.

Another example comes from microfinance. An internal look at MIX Market data suggested that newer for-profit MFIs with a lower proportion of clients below the poverty line (indicating they target mixed-income segments) tend to generate greater returns.<sup>10</sup> This makes sense, as a number of MFIs who have exclusively targeted low-income consumers have a very difficult time covering their costs, due to a range of issues including cost to reach and agent costs.<sup>11</sup> In general, those who have been concerned about microfinance reaching the poorest have recognized this phenomenon—leaders at microcredit pioneer BRAC confirmed this finding in a recent Harvard Business Review article.<sup>12</sup> Ford Foundation’s microfinance program has also responded to this realization, and in recent years has focused more on social performance measurement support for MFIs, and on working with CGAP and other researchers to promote and investigate the “graduation” model for the lowest-income families.<sup>13</sup> The effect of this focus has been positive for the poorest households. Evaluations of the Graduation Program by J-PAL and IPA showed that microfinance services have been most effective in improving the well-being of clients living below the poverty line when paired with other subsidized services such as a business asset (like livestock), regular cash or food support, access to a savings account, and training/coaching services.<sup>14</sup>

## Scale Is Rare in Serving the Poor Exclusively

Studies by Monitor Inclusive Markets of (collectively) 700+ ventures in more than a dozen sectors in India and nine countries in Africa found the most successful enterprises—i.e., those that had achieved some level of commercial viability and scale (whether in education, health, agriculture, financial services, water, and beyond)—buffered the risk and volatility of serving the poor by expanding their customer base to include adjacent and modestly higher income brackets.<sup>8</sup> Doing so, one study found, “proved to be a powerful risk mitigation tool” against high default rates or the periodic inability to purchase that can severely impact revenue, financial reserves, and the speed of scale.<sup>9</sup> Notably, of all the ventures in these studies serving low-income segments at scale in India and Africa, nearly every single VC-backed company targeted mixed-income markets. Examples included Vaatsalya Hospitals (India), Servals Automation (India), Livewell Clinics (now Viva Afya, Kenya), SKS Microfinance (India), Spandana (India), and d.light (India and Africa).



## ECONOMIES OF SCOPE

Mixed-income businesses are also often able to utilize existing infrastructure to add lower-price products onto existing lines, thus increasing overall profits.

Take, for example, the South African healthcare company CareCross. Whereas Ver de Verdad targeted a mass market from day one, CareCross started upmarket: In its first decade CareCross grew to serve more than 1 million middle- and upper-income South Africans. To attract low-income customers, CareCross designed a new product at a lower price point and developed innovative new marketing techniques for a target market unfamiliar with prepaid healthcare subscriptions. In four years, CareCross proved it could serve this new market segment profitably without subsidy by leveraging existing business units—allowing the company to drive down “startup” costs and minimize execution risk. With the help of like-minded investors such as Bamboo Finance, the company aggressively grew its low-income customer base. Its success in this arena contributed to a successful exit; CareCross was acquired by MMI, a South African Insurance Group, in 2014.

## EARLY ADOPTERS TO KICK-START GROWTH

In addition to economies of scale and scope, mixed-income models are more likely to gain early adopters to kick-start their initial growth. Poorer customers are generally more risk averse when it comes to adopting new innovations or technologies—and with good reason. Smaller wallets put greater pressure on every penny (or rupee or peso) spent to be put to good use. Some companies may more easily be able to acquire the early adopters so necessary for proving their business model by looking for them in the middle class. Once traction has been gained in these groups, it is often easier to convince more income-constrained customers to come on board.

Take, for example, M-PESA, a well-known development story with unexpected origins. M-PESA is a disruptive financial service that launched in 2007 and rocketed to 12 million+ active customers by 2014, more than half the adult population of Kenya.<sup>15</sup> By 2011, 72% of the M-PESA fast-growing customer base lived outside Nairobi on less than \$1.25 per day.<sup>16</sup> Despite the tremendous benefit reaped from M-PESA by low-income, rural, and unbanked households, they were not among its early adopters.<sup>17</sup> Safaricom first marketed M-PESA to the young, urban middle class. A 2008 survey confirmed that when M-PESA was not yet two years old, its early adopters were largely tech-savvy, banked, educated customers with significant discretionary income.<sup>18</sup> The M-PESA early adopters forged an aspirational brand and achieved critical mass to fuel network effects as M-PESA scaled to a mass market, with a heavy percentage of lower-income customers.<sup>19</sup>

## IMPLICATIONS FOR INVESTORS

The above analysis illustrates that early stage investments in LMI markets are more likely to hit fast-growth targets by supporting businesses pursuing mixed-income customer strategies. Investors would be well-served to look for more models that benefit from such economies of scale and scope.





**This analysis illustrates that early stage investments in LMI markets are more likely to hit fast-growth targets by supporting businesses pursuing mixed-income customer strategies. Investors would be well-served to look for more models that benefit from such economies of scale and scope. While it may be counterintuitive, some of the best opportunities to serve lower-income populations at scale may well come in the form of mass-market businesses.**

While it may be counterintuitive, some of the best opportunities to serve lower-income populations at scale may well come in the form of mass-market businesses. Indeed, some of these businesses may start without any obvious plan in the beginning to pursue down-market expansion, as we saw with the case of CareCross.

But that does not mean that mixed-income models are a panacea. Indeed, not all startups that successfully serve the middle class can successfully expand down-market.<sup>20</sup> Some that do end up sacrificing the quality of the product. Others may end up forgoing opportunities to target lower-income customers for fear of cannibalizing higher-margin businesses. Indeed, we have seen several companies abandoning plans to move down-market once they saw the comparative difficulties and risks of doing so, or simply the size and appeal of the opportunity to keep pursuing in more purely middle class segments.

Moreover, there are some services that poorer populations need that cannot be addressed by mixed-income models. Such services are important and none of the analysis above is meant to suggest otherwise. For example, Omidyar Network is a proud supporter of Living Goods, a nonprofit employing market-based approaches to provide life-saving health products to the poor in East Africa through local sales agents. This group had a choice to improve operating revenue by moving toward higher-income groups in urban areas and higher-margin products, but found rigorous evidence that their existing model reduced maternal mortality by an impressive 25 percent among the lowest-income populations. Such impact would likely have been lost with a switch to higher-income customers. Indeed, it is this risk that impact investors often refer to as “mission drift.”

Investors worried about mission drift can significantly mitigate such risks by investing in companies where social impact is embedded in the business model. For example, a company like d.light, which creates solar lanterns for those without reliable electricity access can serve many low- and lower-middle-income segments with these products; the products themselves are less relevant to upper-income populations, who have more options for lighting.

## Factor Two: Asset Light

The second major factor that we have observed in achieving the speed and magnitude of scale for businesses targeting lower-income customers is around the level of assets required, especially at startup stage. While the term “asset light” has many connotations, we use it primarily to denote companies that require relatively little capital expenditure (for example, for physical infrastructure or equipment) or working capital to prove a model and expand—which is particularly true of many technology companies. Compared to traditional businesses, whose growth is supported by increases in inventories and accounts receivable, or by physical infrastructure, asset light technology businesses may be able to test and adapt their business model more cheaply and quickly. Similarly, once the business model is de-risked, they can scale their model much more cost-effectively and quickly and are far more likely to have the kind of non-linear scale that makes for home runs. Distribution, sales, and marketing can frequently be expanded via low-cost electronic means rather than high-cost logistics, physical infrastructure, and assets.



**As the cost of starting a technology company has continued to plummet—as the ubiquity of mobile and Internet technology increases, and the cloud makes it fast and cheap to start a tech business—the speed with which asset light technology companies can hit the billion dollar milestone has continued to accelerate.**

Compare, for example, the timelines to scale of some of today’s biggest tech companies. Google, Facebook, and Amazon all relied on an established low marginal cost infrastructure of the Internet in order to scale. Then consider similar timelines for highly successful brick-and-mortar-based companies such as Wal-Mart and Chipotle. While the tech giants scaled almost solely online, the latter scaled through physical presences built store by store around the world. Amazon, Google, and Facebook took six, five, and five years respectively from their founding until they reached a billion dollars in revenue. Wal-Mart and Chipotle, by contrast, took 18 and 14 years respectively. In recent years, as the cost of starting a technology company has continued to plummet—and as the ubiquity of mobile and Internet technology increases, and the cloud makes it fast and cheap to start a tech business—the speed with which asset light technology companies can hit the billion dollar milestone has continued to accelerate.



**A decade ago, it was impossible to penetrate low-income market segments in emerging markets via asset light technology platforms. Today, the deep penetration of mobile networks has already sparked transformative new sectors and business models serving low-income segments.**

The continuous rise of the smartphone and greater mobile broadband penetration in low-income markets will blow open this opportunity. Some forecasts estimate that up to 70% of the world's population will use a smartphone by 2020 with emerging markets driving much of this growth; recent estimates predict that emerging markets will account for 80% of these new subscriptions.<sup>21</sup>

Asset light businesses serving LMI populations in emerging markets also have a few specific advantages that help them scale more quickly in challenging circumstances. First, they have a much lower need for capital overall—and (as outlined in section three) debt is especially both scarce and quite expensive for startups in emerging markets. Investors in asset light companies therefore have much less risk of dilution as the company grows. Second, poorer populations can be geographically spread in both rural and semi-urban areas. Technology-based applications (especially delivered through mobile phones) can help companies reach these customers more easily and cheaply. Those delivering virtual goods and services can also avoid the pitfalls of less-developed supply chains, which can make distribution—especially to rural areas—expensive, time consuming, and risky.

As illustrated below, there are several promising areas in which Internet and mobile technology is making it dramatically easier to create asset light models that serve LMI populations. Take for example financial services. Omidyar Network's analysis of mobile wallets indicates that they reduce the lifetime cost of an account by up to 85%,<sup>22</sup> dramatically speeding up time to break-even compared to a brick-and-mortar bank. This allows for a much quicker and cost-efficient way to reach the unbanked. The same can be true for education technology. Consider for example, Open English, a company which provides multimedia online English instruction. Instruction is provided through live lessons over the course of about a year and costs an estimated \$750-\$1,000. Because of economies of scale through technology-based delivery, the company estimates this cost is about a third to a fifth of what traditional schools would charge for small classes or individual instruction.<sup>23</sup> Such a reduction allows a much wider population to afford the service.

Taken together, these cost advantages of being “asset light” often (though not always) equate to the possibility of generating strong cash flows—if not offset by other costs, for instance customer acquisition. This cash flow consideration is one of the factors that typically makes an investment attractive to venture capital funds, and thus it is not surprising that the frontier segment does generate interest from at least some conventional VCs.

Irrespective of cash flow considerations, these comparisons are not meant to imply that technology can or should replace services delivered in person. In financial services, a bank can deliver much more of a package of services in person than it might, to date, on a phone alone. Similarly, in education, the benefits of multifaceted in-person, cohort-based instruction are well-documented. Nonetheless, technology is proving a powerful complement that can help open up new services for underserved populations who otherwise might be excluded.

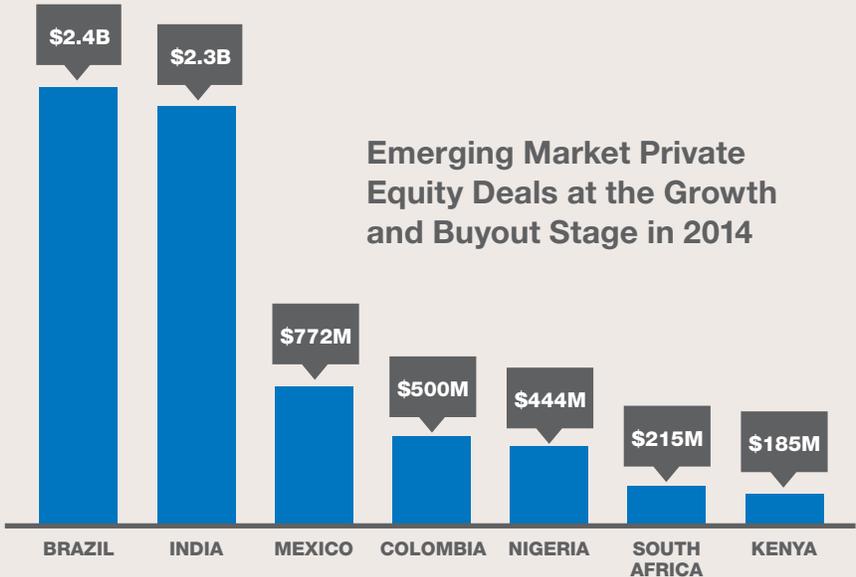
Indeed, it is noteworthy, given the relative advantages of the rapid spread of mobile technology in particular, that many self-identified impact investors in emerging markets are overwhelmingly invested in more capital-intensive industries such as agriculture, housing, and the like. All are important areas for innovation, but even in these areas it seems important to pay attention to the ways that the spread of technology can reduce the capital burdens of such models.

### Liquidity

Liquidity is an important factor (exogenous to any particular business model) that influences where early stage investing works for LMI populations. This is particularly true because IPOs, already scarce in the US, are almost non-existent in emerging markets outside of China (influenced in large part by lesser-developed stock markets). For example, in 2014, companies from Africa and Latin America combined represented less than 2% of global IPOs.

The vast majority of global exits (85%) are acquisitions—and here we are seeing more promise for frontier investors via a greater and growing geographic spread of buyouts.

Many of the deals in the graph below were not originally venture-backed companies. However, most of these countries, not surprisingly, are where venture investors are already active. More developed capital markets bode well for venture investing, as well as for frontier investing specifically.



Source: EMPEA 2014

## Near-Term Opportunities in the Frontier

As technology, particularly mobile, spreads quickly, it becomes more and more possible to build scalable high-growth businesses serving lower-income segments, especially the aspiring middle class. Below, for illustration purposes, we lay out a few promising sectors that are ripe for further innovation and investment and which lend themselves to the quick scale and margins needed for traditional venture capital portfolio economics. All of these sectors have tremendous business and impact potential; we would encourage investors of all stripes, from traditional VCs to impact investors and beyond, to look more carefully at these and similar opportunities. They represent the next frontier for venture capital in emerging markets.

**We believe the following sectors represent the next frontier for venture capital in emerging markets. Quick scale afforded by the spread of technology makes these sectors promising.**



*Financial Technology  
(fintech)*



*Education Technology  
(edtech)*



*Consumer Internet and Mobile*



### FINTECH

Technology is transforming the financial services sector. Disruptive startups are forgoing brick-and-mortar bank branches to deliver cost-effective financial services to the billions of unbanked in emerging markets via mobile and Internet platforms. Financial services are transformative for low-income segments,<sup>24</sup> empowering them to build assets, invest in a better future, and endure economic shocks that frequently thrust the unbanked back into poverty.

Mobile money was one of the first innovations in this domain to gain traction. By the end of 2014, 21 mobile money services had more than 1 million 90-day active accounts, and five of these services had over 5 million active accounts. Out of the 21 services, two were based in West Africa, a region where the number of mobile money accounts has had rapid recent increases—from 5.7 million in December 2013 to 8.9 million in December 2014.<sup>25</sup>

**Financial services are transformative for low-income segments, empowering them to build assets, invest in a better future, and endure economic shocks that frequently thrust the unbanked back into poverty.**



Building on the success of mobile money and mobile payments, startups are harnessing the same trends to disrupt a broader set of financial services that includes: insurance, consumer loans, personal financial management, and beyond. For example, MicroEnsure partners with telecom operators to sell affordable life and health insurance to 15M+ low-income consumers across 16 countries in Africa and Asia and expects to reach 26 million in 2018. The disruptive potential of MicroEnsure attracted investment from two major global insurance companies (AXA and Sanlam) with a combined market cap exceeding \$55 billion.

Another promising area is that of remittances. Every year a large sum of money is sent from immigrants in developed countries to relatives and friends in emerging economies. In 2014 this figure was estimated to be north of \$435 billion, far exceeding total development assistance flows globally. Technology is reducing transaction costs for these payments, enabling more to go to intended recipients. Xoom Corporation, one of the market leaders, allows consumers to send money, pay bills, and reload mobile phones from the United States to 33 countries, including China, India, Pakistan, Mexico, and the Philippines. The company was initially backed by venture firms including Sequoia Capital, New Enterprise Associates, SVB Capital, and Fidelity Ventures. It later went public—and in 2015, PayPal announced its intent to acquire the firm. The success of companies like Xoom has inspired the growth of other venture-backed remittance companies, including Azimo, TransferWise, and WorldRemit. Moreover, mobile money operators in emerging markets are increasingly providing regional remittance transfer offerings across their different markets, including Tigo, Orange, and Airtel—circumventing the traditional, often cash-based transfer programs.



## EDTECH

Technology is also fueling a revolution in how students learn. Digital tools for assessment, performance data analysis, and adaptive learning platforms are making it possible to tailor content for individual students, and to increase access to services not available to poorer learners. Despite the unique challenges of a market dominated by the public sector, the emerging edtech industry is picking up steam. Edtech firms in the US secured a record \$1.25 billion in investments in 2013, in recognition of a market projected to be three-quarters of a trillion dollars just for the US K-12.<sup>26</sup> Though it is still early days for edtech in emerging markets, the market potential is equally compelling—and worth more attention from VCs. The potential economic impact of technology to improve

educational outcomes is large and widespread. If technology is adopted in India's schools, colleges, and vocational training institutes along the themes outlined above, some reports have estimated that the incremental economic impact could be \$60 billion to \$90 billion per year by 2025.<sup>27</sup>

Early edtech ventures are posting impressive scale, returns, and impact. In Brazil, an asset light model has enabled the rapid growth for Geekie. Since it was founded in 2011, Geekie has delivered its proprietary adaptive learning platform (which customizes learning content and format to the individual needs of each student) to over 3 million low- and middle-income students in more than 7,000 schools. Its personalized learning platform aims to enhance high school performance, measured annually by the Brazilian national exam that determines access to public universities. The majority of students that have used the Geekie platform are lower income and study in public schools, which have to date provided little to no access to personalized learning tools. There is preliminary evidence that these tools improve learning opportunities and results. Much of Geekie's scale is attributable to the low distribution costs enabled by its tech-based delivery model, which combines cloud-based computing with browser and mobile interfaces to maximize its reach.

Or consider Siyavula, a South African education technology company that enables learners to improve their performance in high school mathematics and science through technology-powered learning. Siyavula's software adapts intelligently to every learner's individual needs, providing targeted feedback especially to those who are struggling, so that they can master the necessary concepts and skills. Learners using Siyavula's online programs have completed 5 million exercises to date, generating promising learning gains in a short period of time. Siyavula has also developed openly licensed, curriculum-aligned textbooks for math and science. This content is freely accessible to read and download online or over mobile, through an innovative partnership with the Department of Basic Education and Vodacom. Such a mix of technology-delivered services and partnerships is already demonstrating the potential to improve learning outcomes and increase access.

**Technology is also fueling a revolution in how students learn. Digital tools for assessment, performance data analysis, and adaptive learning platforms are making it possible to tailor content for individual students, and to increase access to services not available to poorer learners.**





## CONSUMER INTERNET AND MOBILE

Information is power—whether it be access to health information, agriculture prices, or the news. The rapid spread of mobile technology (and smartphones in particular) creates promising openings for innovation on behalf of lower-income populations. Of course, “mobile for development” is not a new idea; what is potentially under-leveraged are commercial mass-market mobile platforms that have disproportionate benefit for lower-income groups.

Consider Dailyhunt (formerly Newshunt), a mobile app in India that delivers news in native languages like Telugu, Marathi, Hindi, or Gujarati. Since its founding in 2009, Dailyhunt has been installed over 100 million times, reaching customers both urban and rural—reaching far beyond the English-educated urban elite and into the lower-middle-income groups and beyond. Because there are low incremental costs for each additional install, Dailyhunt has been able to focus more of its resources on building out content, further strengthening the value proposition of the app for consumers. Access to news and information is a critical input to a democratic society; companies like Dailyhunt are well-positioned to make critical information much more widely available.

A number of more recent startups are also worth mentioning. For example, Jugnoo (which just raised its series A) is pioneering the model of on-demand auto-rickshaw services. This innovative departure from on-demand taxis has the potential to make transportation more accessible to LMI populations (who are more likely to use rickshaws given the lower price point) while also increasing employment opportunities. A related business is ClickBus in Brazil, which aims to move some of the \$3.4B market for local and regional bus tickets online via an app.<sup>28</sup> ClickBus aggregates bus travel information and enables users to buy tickets to over 3,000 destinations in Brazil. Prices are set by the bus companies themselves, since fares are regulated under Brazilian law. More recently ClickBus expanded into Mexico, Colombia, and Turkey.

**The rapid spread of mobile technology and smartphones in particular creates promising openings for innovation on behalf of lower-income populations. Of course, “mobile for development” is not a new idea; what is potentially under-leveraged are commercial mass-market mobile platforms that have disproportionate benefit for lower-income groups.**

Meanwhile, Zimber, a seed stage business, is launching an on-demand home services model—from handymen to cleaning and exterminators. While it is still early days for on-demand home services globally, Zimber also holds promise of increasing both employment and service access for LMI populations.

Given such promising companies and the rapid spread of both basic and smartphones, it is surprising that we don’t see more explicit emphasis from impact investors on mass market consumer Internet and mobile applications that benefit poorer populations.



# 3 Frontier Plus



**In the last section, we outlined the frontier segment, where we believe there is an under-tapped opportunity to use the traditional venture capital model to spur innovation for low- and lower-middle-income consumers in emerging markets. How, then, should we think about companies that don't meet these criteria—companies with unproven business models that may also be more asset intensive, target exclusively lower-income consumers, or operate in geographies where exits might be particularly challenging (or all of the above)?**

On the one hand, this domain, which we call “**frontier plus**,” is clearly not for the faint of heart. Startups that target exclusively low-income populations are often going after harder-to-reach markets with lower individual purchasing power, making exponential growth less likely and margins more difficult. Similarly, highly asset-intensive businesses may be able to achieve rapid growth, but it is less probable that they would achieve the kind of home run returns necessary for many VCs’ portfolio economics, especially given the scarcity and cost of capital available for companies in emerging markets. Compound the above with the uncertainty of unproven business models, and the risks overall in this domain seem quite high. Indeed, given the newness of these business models, it is difficult to distinguish between those that have strong commercial promise (and just may need, for example, more creative financing), and those where investors may not be fully compensated for the risks they take in conventional VC time horizons. We would posit that the more of these aforementioned challenges that a business takes on (asset intensity, etc.), the greater the pressure to get things absolutely right and still be able to meet the timeline and scale expectations of traditional VC funding. Companies in this domain have far less room to test and pivot.

On the other hand, there are several reasons to take seriously frontier plus businesses, from both a financial and impact perspective. First, there are already a number of promising businesses operating in this segment, and attracting financing. Some, like Servals Automation—which sells efficient cookstoves to low-income Indian households, are in the manufacturing and retail sales business but still have provided excellent performance. Aavishkaar realized a 65% IRR. Others have yet to exit but are aiming at basic needs in unconventional ways. D.light, which delivers affordable solar energy solutions for homes and businesses in the developing world (and aims to eradicate the kerosene lantern), has sold over 10 million solar lanterns and solar home systems, touching an estimated 50 million lives. The company, which has products in 62 countries and operates from 10 field offices and four international hubs, has achieved an 84% market share in the entry-level solar lantern category according to Lighting Global.<sup>29</sup>

**We have seen several exits of companies in the frontier plus segment. Companies such as Rangsutra (consumer crafts), Servals Automation (efficient cookstoves), Shree Kamdhenu Electronics (electronic milk collection services), and RuralShores (rural business process outsourcing) produced 5x or greater returns to investors.**

Swarna Pragati is an Indian lender that offers housing finance to rural families in conjunction with other partner MFIs—a business model that is not at all proven in rural areas.<sup>30</sup> Loans range from about \$700 to about \$1,400 each, much smaller than even urban Indian housing finance loans. Terms are 36–48 months, and matched to “progressive builds” or incremental builds by the customer. Also operating in rural India, EM3 Agri, an Aspada investee, offers farmer productivity services to smallholder farmers to help them improve productivity by over 20%. Instead of selling farmers capital equipment like tractors, or other implements, EM3 sells a comprehensive service of a John Deere tractor and a driver to professionally manage tilling, planting, and other services. While many of these models are early stage, the fact that there have been exits—like Servals—suggests that there is opportunity here for those with the appetite for the risk and the patience to see it through.





**More important is the question of impact. Indeed, many companies in this space are pioneering business models that may have transformative potential for LMI populations—in critical sectors spanning agriculture to healthcare and beyond.**

Importantly, certain industries that do not start out as “VC ready” have shown themselves to become so over time. We saw this clearly with biotech investing, which in its early days had 2x-3x return on investments, rather than exceptional “unicorn” exits and IPOs. Over time, those economics changed and more companies with exponential growth emerged.<sup>31</sup> We also saw this clearly with microfinance, which became commercial enough for VC investments once enough examples of success were in the market. This point is significant because it means that investors who work in the riskier parts of the frontier may be in some cases opening up new industry sectors for venture investment—and may themselves be in a better position to benefit from their boldness than those who follow on later.

Finally, and building on the former point, it’s also possible that companies in this domain may have certain advantages that could partially counterbalance some of the challenges. For example, some would argue that such investments are subject to less of a “winner-take-all” market dynamic that is common in VC—given that they operate in slightly less-competitive domains with longer timelines to scale. Portfolios in this domain may thus exhibit fewer complete losses, providing something of a counterbalance to the expectation of fewer home runs. We would emphasize that this argument is still speculative and not (to our knowledge) based on rigorous data.

Taken together, the analysis above leads to several conclusions. First, pushing boundaries requires leadership—investors and entrepreneurs who are willing to operate in highly risky areas. The frontier plus area is one that plays uniquely to the strengths and mission alignment of impact investors and their LPs (including DFIs, aid agencies, and religious institutions). We encourage these groups to invest more, and more creatively, in this domain.

Second, it does not seem wise to rely exclusively on the traditional venture capital model when financing frontier plus businesses. The section below captures a few highlights from a review of financing innovations in this domain—with three particular types of financing and structuring seeming especially important for companies pushing out

**While it may be counterintuitive, there is in some cases an economic argument for patience—in the form of a promising return premium for not forcing an early exit. Of course, this calculus is complex, since every additional year of holding also exerts downward pressure on IRR. Nonetheless, we are beginning to see fund managers adjust their time horizons to be in line with longer maturation cycles.**



the frontier. All of these developments are in early days and far more experimentation is needed, but many are quite promising. Indeed, while there does not yet appear to be a formula as clear as traditional venture capital to address this category of businesses, risk capital still has a critical role to play here.

What is certain, however, is that venture capital is not the only type of risk capital, or the singular formula for success. Indeed, we should remind ourselves that it was only in the 1980s that venture capital itself became accepted as a mainstream financing model worthy of institutional investment, and only in even more recent decades that venture debt itself became mainstream. What's more, the early days of venture capital were arguably more risk tolerant and patient than today's practices. For example, Georges Doriot (widely known as the father of venture capital), was famously patient in his investments, with many companies going over 10 years without exits.<sup>32</sup>

## **A. Longer Time Horizons**

While it may be counterintuitive, there is in some cases an economic argument for patience—in the form of a promising return premium for not forcing an early exit. Of course, this calculus is complex, since every additional year of holding also exerts downward pressure on IRR but may also significantly increase the absolute amount of the gain as the disruptive model grows in size and footprint. We are beginning to see fund managers adjust their time horizons to be in line with longer maturation cycles. This, for example, is the thesis of the IGNIA Fund in Mexico, which invests across the three frontier segments, and has a 12-15 year fund lifecycle (as opposed to the usual 8-10).

In a similar vein, we are also seeing experimentation with holding companies (a practice that is already mainstream in conventional investing circles, primarily for tax reasons). In the last year, several established investors in emerging markets have told us about plans to set up holding companies or evergreen vehicles for their next funds, motivated by the mismatch between time constraints of traditional VC and PE funds and the needs of the markets in which they are investing. Aspada similarly decided on a hold co-structure after running a previous fund (SONG). Kartik Srivatsa of Aspada explained his rationale as follows:

*“Since we are investing in brick-and-mortar assets that have strong growth potential and generate high cash flow over time, we want the flexibility to hold onto these companies for ... 15-20 years rather than having to sell them early. Thus, between the regular cash flows and eventual exit we can get a good year-on-year return, which is difficult to obtain if we exit quickly.”<sup>33</sup>*

Of course, the holding company model and extended time horizons are still experimental, and may only be appropriate for a sub-segment of frontier plus businesses. For example, while Aspada’s investments aren’t typical tech VC deals, they also avoid many that are extremely capital intensive (eschewing for example, companies that need real estate investments to succeed), and have investments in several that turn usual capital expenditure needs into service-based businesses instead. Given the long-term bets in these companies, they also hold entrepreneurs up to an even higher bar of diligence, looking for strong execution skills and stamina—as well as openness to releasing relatively significant stakes in their companies (often in the 25 to 30% range).

We would emphasize time horizons are an area in which we encourage LPs to think more creatively. We know several experienced fund managers with excellent track records who approached their investor base about doing longer-dated funds. They received pushback, which often had little to do with returns expectations and more to do with a resistance to nontraditional structures. Such resistance may come at the cost of both impact and returns in the frontier plus domain.



## B. Venture Debt

Frontier and frontier plus entrepreneurs often face a dearth of options for affordable debt. Startups in these markets generally face a brick wall on credit with more traditional banks—which sometimes turn them down for lack of collateral or track record, or offer them extremely high interest rates. Of course, venture debt is often a desirable option for startups because it does not require a company to have the same kind of established track record. But this too is in short supply. In mature markets such as the US, venture debt is almost 10% of the venture equity ecosystem. But in India, for example, one source estimated that venture debt in 2013 was only 3-3.5% of the venture equity market.<sup>34</sup> This problem is particularly acute for businesses with large working capital needs, which are sometimes forced to take on additional equity in the place of debt, thus diluting investor returns.

In the last few years we have been heartened to see innovations to increase availability of venture debt to frontier and frontier plus businesses, particularly in the Indian context. For example, Intellegrow, launched in 2010 in India, replaces the collateral debt model with payments tied to cash flows. This model allows early stage businesses, generally less than three years old, and generally without either collateral or established track record of profitability—to access debt more affordably. Intellegrow has supported 80 businesses with \$42 million of debt funding. More recently, we are excited to see players such as SIDBI begin providing uncollateralized venture debt in India.

It is particularly urgent to develop similar venture debt solutions, particularly in emerging markets outside of India. Of course, doing so affordably is a challenge, given extra costs that come from factors like currency hedging and perceived risk. Local sources of funding for venture debt may also help lower costs since they have less need to factor in hedging for currency exchange risk.

This may be a place where a discrete, time-bound commitment to loan guarantees from philanthropic and aid sources could significantly accelerate the field. Programs such as the development credit authority at USAID and guarantees by groups like IFC and OPIC have brought substantial additional private debt into promising emerging markets startups. Concentrating similar resources to build out a more concerted venture debt ecosystem could make a world of difference.

A photograph showing a close-up of a person's hands holding a mobile phone. The background is a blurred outdoor scene with people and structures, suggesting a rural or developing area. The image is partially overlaid by a blue text box on the right side.

**Frontier plus entrepreneurs often face a dearth of options for affordable debt. Startups in these markets generally face a brick wall on credit with more traditional banks—which sometimes turn them down for lack of collateral or track record, or offer them extremely high interest rates.**

## C. Quasi-Equity

Quasi-equity is also a promising tool that may ameliorate several challenges common to frontier plus startups. Given difficulties with exits in many emerging markets, quasi-equity can offer investors a less risky form of liquidity. Further, because payouts are tied to the success of the company, quasi-equity may align incentives with entrepreneurs more than typical debt instruments while still compensating investors for risk.

The most common form of quasi-equity used for these purposes is typically based on a percentage of company revenues (also known as the “royalty” model). For example, Lundin Foundation (which invests in sectors such as agriculture, energy access, and financial inclusion in emerging markets) uses quasi-equity structures frequently. MEDEEM is an early stage company that has developed an affordable, accessible land rights documentation process, currently being deployed in Ghana. Following discussions with MEDEEM’s senior management, Lundin provided a subordinate, low-interest loan with a sliding-scale royalty and return capped to the earlier of the achievement of its target IRR or 10 years. A three-year grace period was provided to allow sufficient runway for the company to become cash-flow positive.

This structure ameliorates several challenges for investors at the frontier—it negates the need for prolonged debate over valuations based on unproven DCF assumptions; it is straightforward to validate/audit results; it offers gradual exits aligned with cash flows; and it provides exposure to equity-like upside. For entrepreneurs, it offers management the opportunity to avoid premature dilution and planning for a liquidity event, and incentivizes growth over cost control to achieve scale and profitability.

We are also beginning to see more quasi-equity structures that tie payouts to something other than top-line revenue. For example, the demand dividend model ties variable payments to free cash flow, with a fixed payoff amount. It also includes a honeymoon period of one-to-three years to allow capital to get to work. (The most cited example is Eleos’ \$200k investment in Maya Mountain Cacao, for which they expect a roughly 2x return in 4-6 years.) This model is interesting because, as opposed to straight royalties, it is much more tied to the entrepreneur’s ability to pay—but of course, there is inherent risk that companies can make their cash flow look much worse than it is if they wish to delay repayment.

The demand dividend is arguably best for companies that are beyond the proof of concept stage and “have a reasonable line of sight to positive cash flow.” But we are also seeing similar (non-revenue based) experiments with much earlier stage companies, and not just in emerging markets. For example, indie.VC does seed stage quasi-equity, tying payouts to the amount an entrepreneur pays herself in salary (compared to average salary in the area she is located in). O’Reilly AlphaTech Ventures (OATV) decided to create indie.VC in the US precisely to learn more about underserved sections of the startup market that could still be quite successful but where entrepreneurs themselves had no desire for a traditional exit. We are also seeing accelerators such as Fledge and Village Capital use quasi-equity with very early stage companies. Much more experimentation in this regard is needed—but the overall trend, we feel, is promising.

**Quasi-equity is also a promising tool that may ameliorate several challenges common to frontier plus startups. Given difficulties with exits in many emerging markets, quasi-equity can offer investors a less risky form of liquidity. The most common form of quasi-equity used for these purposes is typically based on a percentage of company revenues.**

# Conclusion: A Call For Pioneers

**We stand before unprecedented opportunity to use early stage risk capital to transform the opportunity set for a generation of low- and lower-middle-income populations across developing economies, while simultaneously creating new sectors and contributing to the economy.**

This opportunity is largely made possible by ongoing demographic and economic shifts, such as the dramatic spread of mobile technology to the massive flow of private capital to emerging markets. The array of new business opportunities is inspiringly diverse—from tech-based assessment tools that enable underserved learners to prepare for higher education to new forms of housing finance that enable poorer workers without formal employment to finance a property purchase for the first time. And although levels of entrepreneurial activity and firm startups have leveled off or dropped in the US,<sup>35</sup> levels of entrepreneurship are rising in emerging markets.<sup>36</sup>

What we really need are pioneers—leaders who are willing to take risk, to embrace the frontier by investing in entrepreneurs in new markets with innovative business models that can have tremendous social impact as well as financial return.

## A Call to Action

*Several important opportunities and calls to action follow from the analysis pursued in this report.*

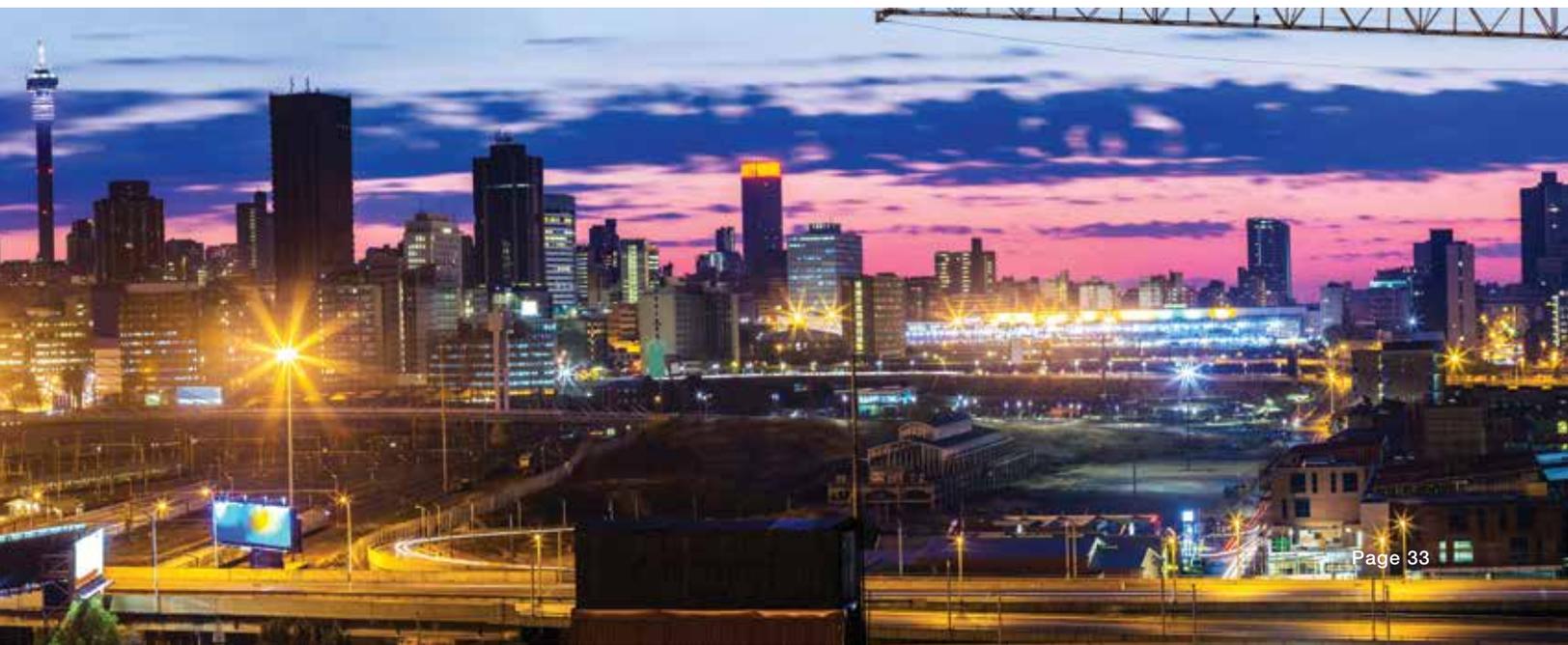
- **Impact investors** (including those who finance many funds as LPs—e.g., development finance institutions, financial institutions, foundations, and religious groups) have a unique role to play in both the frontier and frontier plus segments, where appetite for impact and risk tolerance is unlocking and accelerating promising new business models. We encourage impact investors to consider a broader spectrum of asset light, mixed-income companies. Equally, we would recommend experimenting with innovations in financing structures for riskier business models and sectors that may not yet be suitable for traditional venture capital, helping to prove these innovations for more traditional investors.
- For **venture capitalists**, there are under-tapped opportunities, particularly in the “frontier” domain—with asset light, mixed-income business models. Given the continued promise of large aspiring middle class populations entering the formal economies, we believe that this segment represents the future of emerging markets VC, and offers investors the promise of both strong commercial and social returns. We urge VCs to go beyond the comfort of tested models to these exciting new businesses in areas such as fintech and edtech.
- In recent years, we have also seen tremendous interest from **high net worth individuals**—often self-made entrepreneurs and businesspeople—who wish to use market-based tools to create impact. Leadership from this group is strongly needed here—across the spectrum, but in particular in the frontier plus area, where tolerance for risk, patience, and willingness to do things differently can open up game-changing and entirely new sectors. There are also meaningful opportunities to accelerate entrepreneurial ecosystems, which are foundational to all three frontier sectors.

- **Governments** in emerging markets have much to gain from accelerating this movement. Champions in government should consider extending policies that channel additional capital here, especially with incentives that help defray risk, as well as programs that encourage the growth of entrepreneurship.
- And of course, **entrepreneurs** are the foundation for successful early stage investing. We particularly appeal to seasoned emerging markets entrepreneurs to look carefully at the new opportunity set represented by LMI populations; this is a promising domain in which new enterprises can do well financially and contribute deeply to society.

To be sure, these are early days and there are still many questions to explore. Hence, in this report we began to delineate near-term opportunities from farther-reaching prospects to push out the borders of the frontier. In short, for those running more traditional closed-end VC funds, there is tremendous untapped potential in asset light businesses serving “mixed income” customer bases (tapping into the rising spending power, aspirations, and demand for quality services of the LMI segment)—in verticals such as fintech, edtech, and the like. For those who have greater risk tolerance or fewer constraints, the prize may be bigger yet. By taking a risk on newer business models and industries, we have an opportunity to de-risk entirely new sectors that can prove their commercial viability and open up worlds of impact and financial returns. Doing so may require being more creative with financing structures—such as longer holding periods or quasi-equity. We believe that both models of investing—the nearer term and the future oriented—are extremely important.

In the early days of an industry or movement, it is healthy to have some skepticism about where things might go. To that end, it is worth reminding ourselves of the early days of venture capital, which itself was subject to naysayers who thought it was too risky to put capital into young businesses that lacked track records. But early VC leaders were convinced that early stage investing was a risk well worth taking. Their fortitude, determination—and yes, patience—changed the face of entrepreneurship and innovation.

No doubt we should be smart, and align expectations with the kinds of businesses and models that best suit different types of early stage investors—as we have outlined in this report. The frontier investors will do just that, and seize this opportunity of a generation to extend new possibilities to billions of people around the world.



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OMIDYAR NETWORK

**About Omidyar Network:** Omidyar Network is a philanthropic investment firm dedicated to harnessing the power of markets to create opportunity for people to improve their lives. Established in 2004 by eBay founder Pierre Omidyar and his wife Pam, the organization invests in and helps scale innovative organizations to catalyze economic and social change. Omidyar Network has committed more than \$859 million to for-profit companies and nonprofit organizations that foster economic advancement and encourage individual participation across multiple initiatives, including Consumer Internet & Mobile, Education, Financial Inclusion, Governance & Citizen Engagement, and Property Rights. To learn more, visit [www.omidyar.com](http://www.omidyar.com), and follow on Twitter @omidyarnetwork #PositiveReturns.

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A WORLD OF POSITIVE RETURNS