Accelerating Inclusive Fintech Startups in Emerging Markets:

An Evaluation of Catalyst Fund

CATALYST FUND

JPMorgan Chase & Co. BFA Bill & Melinda Gates foundation Rockefeller Philanthropy Advisors

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Photo Credit: Nancy Widjaja, Nick Quintong, Paygo Energy

Acknowledgments

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Catalyst Fund is a global accelerator program that supports early-stage inclusive fintech startups in emerging markets with flexible capital, tailored connections to investors is part of venture-building as we define it, and connections to investors. Catalyst Fund helps early-stage innovators build accessible, affordable and appropriate solutions for the low-income customer. Direct learning from the startups is captured in shareable knowledge products, such as the AAA Framework, a blueprint for designing products and services for the poor, and shared with other ecosystem actors to spur innovation, unlock capital, and attract talent to inclusive fintech. Catalyst Fund is managed by BFA and was founded in 2016 with the support of the Bill & Melinda Gates Foundation and JPMorgan Chase & Co, with Rockefeller Philanthropy Advisors as a fiscal sponsor.

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Executive Summary

Expanding access and usage of high-quality financial services for low-income consumers in emerging markets is critical to improve their financial health and to achieving the Sustainable Development Goals. The digital revolution has already dramatically changed the financial sector and the way in which consumers access finance worldwide. Yet, in spite of advancements in technology and infrastructure, 1.7 billion individuals still remain unbanked, and over
3 billion are underserved.

Unlocking the benefits of digital financial inclusion will require more innovation, more investment, and more collaboration among stakeholders. At the center of the digital financial ecosystem are early-stage entrepreneurs, who are the drivers of deeper innovation. Unfortunately, these innovators face the highest barriers in accessing the capital and skills they need to succeed, often finding themselves falling into a "valley of death".

Catalyst Fund was founded to solve this challenge. Catalyst Fund is a global facility that supports promising early-stage inclusive fintech entrepreneurs with a combination of patient capital and venture-building support to overcome the valley of death. The funds also gathers helpful lessons to build the knowledge base of stakeholders in this sector - startups, investors, policymakers, and donors - so that they can collaborate to catalyze more innovation to positively impact underserved communities.

Based on the data we gathered and what we heard from program sponsors, investors, startups, and other stakeholders during the course of this evaluation, we believe our efforts have been helpful to catalyzing early-stage inclusive fintech and bridging the capital and talent gaps that stifle innovation.

Catalyst Fund received an NPS of 100 from startups and a rating of 4.8 out of 5 on startups' overall experience with the program and a ROTI of $8.01. Startups found the venture-building support most valuable, likely because they cannot get similar tailored support from other programs. Access to the Catalyst Fund network of investors and other like-minded entrepreneurs was also extremely helpful to them, particularly for CEOs who are not typically exposed to global investors.

This report aims to evaluate the design, operations, and performance of the facility at each of Catalyst Fund's five operational steps: Sourcing, Selection, Supporting, Synthesizing, and Sharing. It then considers the impact of the startups themselves. This review captures lessons on selecting promising inclusive fintech startups, offering technical support, and synthesizing and sharing lessons learned to educate the sector. These lessons are organized in each chapter as a list of insights and recommendations to strengthen the program going forward.

This evaluation suggests that additional investment and support are needed to unlock the full potential of inclusive fintech

Generate more knowledge for the sector and foster deeper partnerships with investors, banks and industry stakeholders to unlock more capital to early-stage companies and enable pathways to scale via partnerships.

Continue to improve venture-building support, preserving the tailored and hands-on technical assistance delivered by fintech and emerging-market experts. This is unique and helps ventures focus on the proof points they need to be on a solid path to growth.

Incorporate the AAA lens to drive deeper impact. Catalyst Fund's commitment to impact ensures that companies build strong value propositions that are accessible, affordable and appropriate (AAA) for underserved customers in emerging markets.

Share insights on successes and failures to benefit collective learning. Catalyst Fund's willingness to share its tools and learning from the portfolio companies benefits the sector and highlights gaps and opportunities to spur innovation for financial inclusion.

Generate demonstration effects by selecting startups based on investment theses that uncover gaps and opportunities to collectively advance the sector and complement our global work with regional deep-dives in strategic markets.

Develop roadmaps for program sustainability. Catalyst Fund has led to 10x higher investments on average for startups, generating US$8.01 in additional capital for every US$1 invested by the program - an attractive return on total investment. However, it is important that Catalyst Fund considers new models aimed at achieving sustainability in the long term while maintaining its independence and focus on inclusive fintech and impact.

Icons Key This report highlights activities and features of the program using the following icons:

Lightbulb: New activities to consider

Ribbon: Activities to keep

Cone: Activities to improve

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Introduction

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Introduction

There is widespread excitement about the potential of technology to improve the financial health of underserved customers in emerging markets. Technology can expand accessibility and enhance the quality of financial services by making it easier, cheaper, and faster to reach excluded populations.

Dynamic startups are at the forefront of this expansion, offering frontier solutions that disrupt old models and enhance traditional products and channels. They harness technology to serve consumers historically ignored by the financial system; they deploy lean operating models to develop customer-centric value propositions; and they are not burdened by legacy systems and fixed-cost structures that prevent incumbents from reaching the underserved.

Despite improvements in technology and a proliferation of startups, inclusive fintech has yet to deliver on its promises. The sector is limited by three critical challenges that together create market inefficiencies and missed opportunities for impact:

Investors' risk appetite for early-stage ventures in emerging markets remains low, so flexible, patient seed funding for building businesses is scarce, creating a "valley of death" among startups. In fact, only 1 percent of total impact capital goes to early-stage, social-impact startups.

A limited, inconsistent supply of vital inputs, such as talent and technical support, hinders companies' ability to progress their product to reach product market fit, leaving potentially relevant solutions for low-income consumers unable to generate traction.

A missing body of evidence on how to build scalable fintech solutions that truly work for poor and last-mile customers means that fintech startups end up focusing on upper- and middle-income segments in major urban cities.

This report considers each of Catalyst Fund's five operational steps: Sourcing, Selection, Supporting, Synthesizing, and Sharing (organized into three chapters for simplicity), and then assesses the overall impact of the startups participating in the evaluation. These lessons in each chapter are organized as a list of insights relevant to the aspect being

Definitions

Fintech startup

Any type of business-to-consumer or business-to-business venture that provides tech-enabled financial services or solutions. These typically include alternative credit-scoring and data analytics companies, platform and Software-as-a-Service (SaaS) companies, PAYGo companies, supply-chain and agricultural finance companies, and more that are touching other economic sectors through fintech (energy, health, education etc.). A sub-segment of fintech startups are "inclusive", as they focus their business on the financial health of low- to moderate-income consumers.

Fintech solutions

These include but are not limited to credit, payments, insurance, savings, pensions, and other financial products that are powered by technology.

Minimum viable product

The simplest version of a new product that delivers customer value and allows the team to collect validated learning about customers with the least amount of effort.

Venture-building

The set of activities carried out by Catalyst Fund's acceleration program, which includes hands-on, tailored technical support to help startup teams refine their products and value propositions, connections to a network of investors, and mentorship.

Fintech ecosystem

The fintech ecosystem is comprised of three domains: innovation, capital, and governance. It includes stakeholders such as consumers, financial institutions, fintech startups, donors, investors, regulators, and other support-service providers.

Early-stage

Startups that have a proof of concept but are pre-revenue (or early-revenue) and have raised a pre-seed round of less than US$1 million from grants, friends and family, angels or bootstrapping.

Product market fit (PMF)

"Product market fit means being in a good market with a product that can satisfy that market." - Marc Andreessen.
Increased traction, repeat usage, and improved referral potential are all signs of a company moving towards probability mass function (PMF). When demand surpasses operational capacity, that's a sign of achieving fit.

Scale and meaningful scale

Scaling is when a company addresses a larger market demand while keeping its operating costs minimal. Meaningful scale, especially in the context of emerging markets, is when a company is able to address an increasingly significant portion of its target market without burdening itself with higher costs as a result.

1.1 About Catalyst Fund

Catalyst Fund accelerates promising, inclusive fintech startups by resolving their specific capital, talent, and evidence challenges so that they can deliver accessible, affordable, and appropriate (AAA) solutions to the underserved more efficiently, more quickly, and with greater impact.

Inclusive fintech early-stage startups [1] face unique challenges as they launch and test their products. These challenges are unique to their position at the intersection of financial services, emerging markets, and low-income customers.
Catalyst Fund therefore has two mandates: (i) supporting startups to find product market fit to de-risk them for investors and ensure that they develop solutions for people on low incomes; and (ii) educating the ecosystem of fintech startups, investors, and funders to unlock capital and spur innovation for financial inclusion.

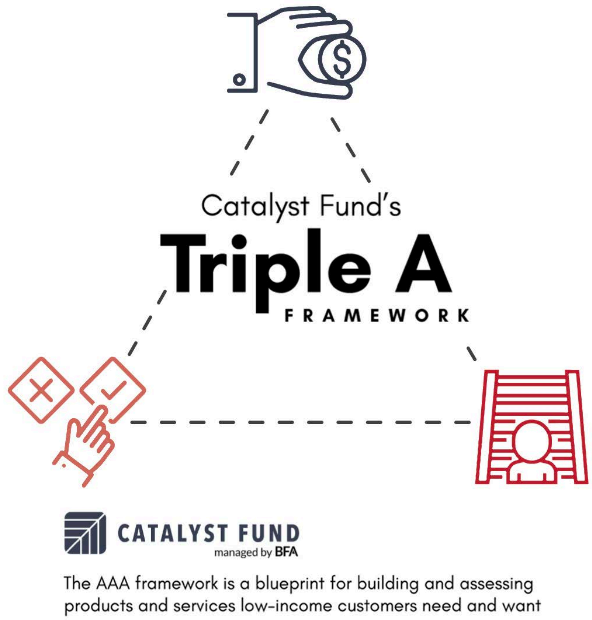

Figure 1.1 : Triple A framework

Between 2016 and 2019 Catalyst Fund 1.0 combined patient capital, technical support, and investor connections to offer 20 inclusive

- **flexible innovation grants** to develop viable businesses serving the low-income
- **tailored, hands-on venture-building support** to get AAA solutions for low-income segments to product market fit;
- **curated access to the Investors Advisory Committee**, whose members acted as mentors, and later, introductions to a Circle of Investors to unlock follow-on capital for
- **access to a peer community of inclusive startups** across emerging markets through the cohort structure (there were four cohorts), and opportunities to network with a community of experts, financial service providers, and investors through global and regional events.
- **knowledge resources to help ecosystem actors** - startups, investors, funders, and banks - learn how to develop fintech that truly benefits low-income consumers and how to scale innovation.

1.2 Our Theory of Change

Fintech Startups Before CF	Catalyst Fund	= Results	→ Precursors for Scale	→ Scaled Impact
High potential but risky to investors Still working towards product/market fit Aspire to develop accessible, affordable, appropriate solutions for the underserved	**Patient Capital** + **Venture Building** • Technical support for AAA • Access to investors + **Knowledge Building** • Knowledge dissemination to the ecosystem through action-based learning • Educating, convening and connecting investors to startups	• Startup de-risked and investment capital raised • Customer adoption and usage of AAA fintech products • Increased awareness in the ecosystem • Investors have greater knowledge and data to identify AAA value propositions and invest in fintech startups	• More customers and revenue • More capital unlocked to scale • Greater engagement from the sector (donors, regulators, telcos, banks, techfins, others)	• Underserved communities are using AAA financial services that improve their financial health • Ecosystem actors support and scale AAA inclusive fintech solutions

1.3 A Look At The Numbers

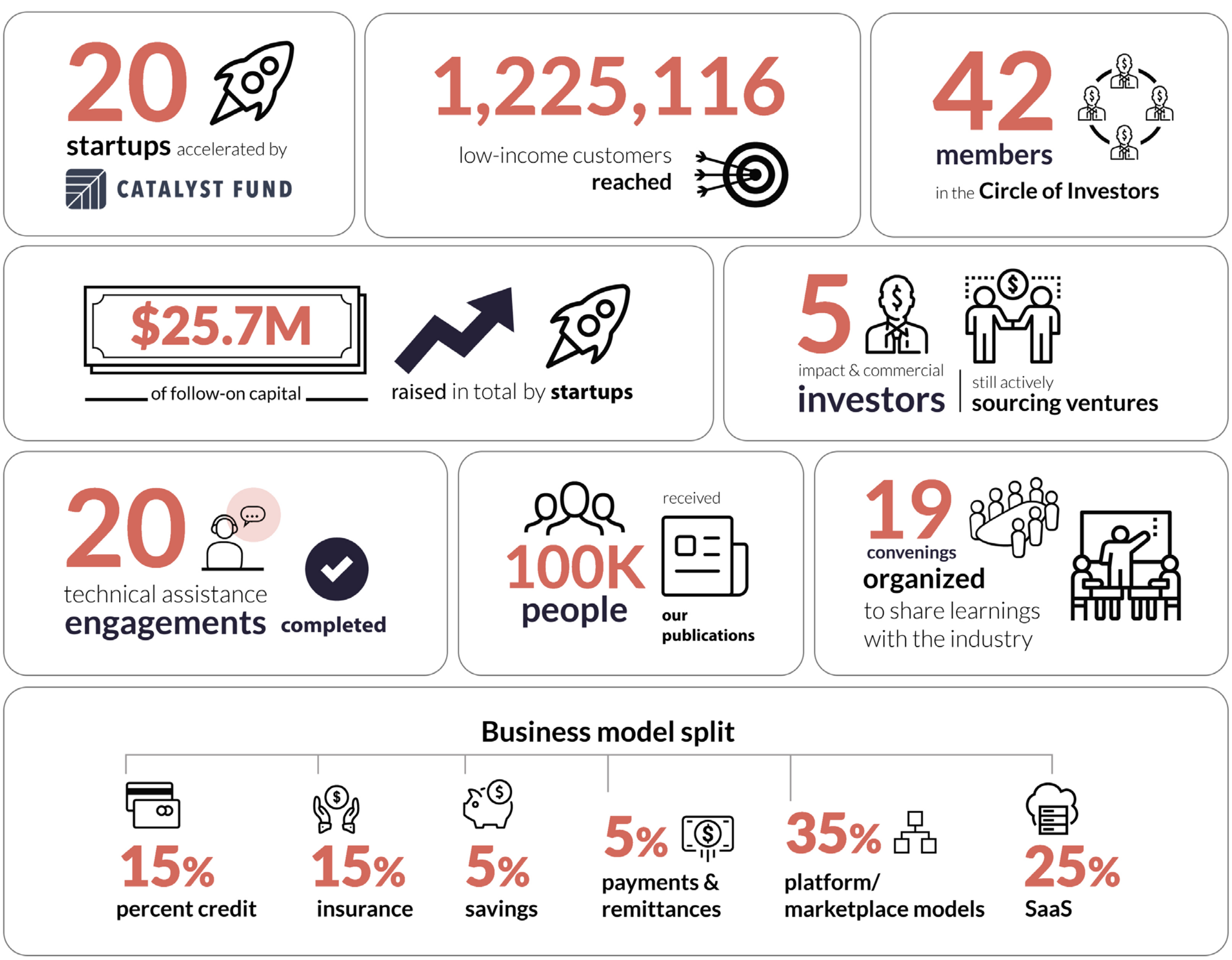

Figure 1.2: Numbers at a Glance

1.4 Our Portfolio of Startups

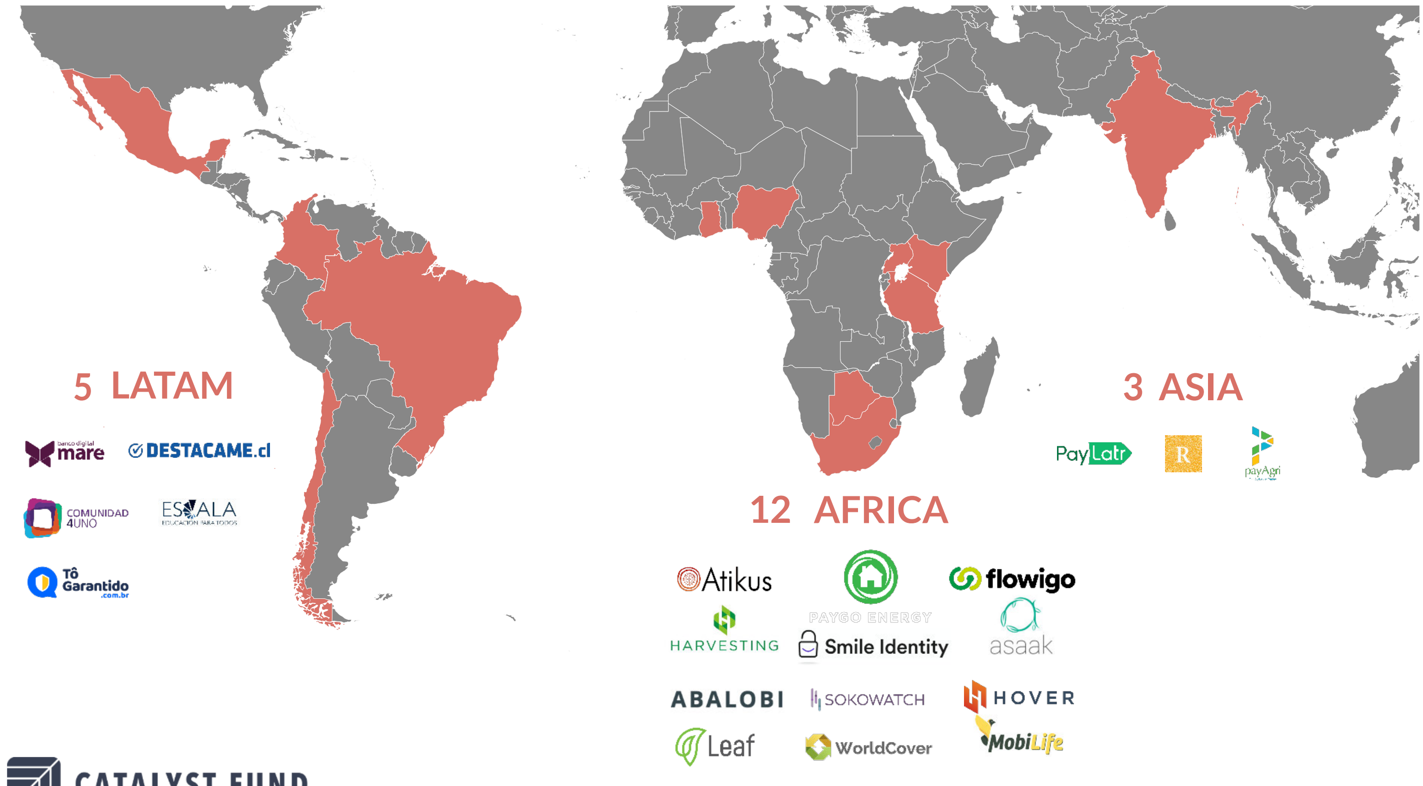

Figure 1.3: Portfolio Spread

Evaluation Scope

As the first three years of Catalyst Fund 1.0 come to an end, this evaluation seeks to assess the creation, design, and management of the program and its impact on fintech startups and the inclusive fintech ecosystem. As part of this evaluation, Catalyst Fund engaged Enabling Outcomes to map and understand the program's effectiveness and results. The final evaluation examines the following questions:

1. Did the program successfully identify early-stage inclusive fintech firms that fit the criteria of the program?
2. Did the services offered to the startups enable progress towards product market fit?
3. Was Catalyst Fund able to de-risk startups for investment and unlock follow-on funding?
4. Did the lessons learnt from Catalyst Fund build knowledge for the ecosystem of donors, investors, fintech startups, and service providers in the financial inclusion sector?
5. Can Catalyst Fund improve its acceleration model for early-stage fintech startups? And if so, how?

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Evaluation Findings

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Evaluation Findings

The Catalyst Fund model consists of five operational steps: Sourcing, Selection, Supporting, Synthesizing, and Sharing. The evaluation reviews the design, operations and results of the program across these five Ss (grouped into three chapters for simplicity) to capture lessons from selecting promising inclusive fintech startups to offering technical support and finally synthesizing and sharing lessons learned to educate the sector.

Figure 2.1 : Catalyst Fund model operational steps

2.1 Sourcing & Selection

CEO Location

50 percent were local CEOs

30 percent were expat CEOs

20 percent were remote CEOs

Startup Regions

60 percent Africa

15percent Asia

25percent LatAm

Completion Rate

100 percent of startups completed the program

Survival Rate

85 percent are surviving to date

Investors' Involvement

100 percent investor involvement for sourcing companies

The first step in the acceleration process is finding the most promising startups that meet the program's criteria. The process followed by Catalyst Fund differs from that of most other accelerators. We do not make calls for applications, host challenge competitions, or utilize other open-source methodologies to solicit applications. For Catalyst Fund, startups are sourced through a group of impact investors, the members of our Investors Advisory Committee (IAC), which is a group of five like-minded investor firms that each identify, vet, sponsor, and mentor startups: Accion Venture Lab, 500 Startups, Gray Ghost Ventures, Omidyar Network, and Quona Capital.

Our sourcing model is built on the hypothesis that investors in the committee have innovative startups knocking on their doors all the time. Given this readymade pool of startups, investors can sponsor those which they feel have great potential for impact and scale but are too early for investment.

Each member of the IAC recommends a company to the program approximately every six months. The recommended startup undergoes initial screening, and once submitted as an official candidate to the IAC, the members have conversations to understand the company's potential and ultimately give their final approval (or not) on a non-objection basis. This process is supposed to be quick and easy, taking no more than three weeks from the moment a startup is sponsored to the moment it receives the grant funding. This ensures that startups can get funding quickly and rapidly iterate on their products. Beyond their initial introduction, investors ensure that startups meet the seven Catalyst Fund criteria.

This process ensures that high-quality startups are found by professional investors, who are uniquely qualified to find and recognize good and scalable investment opportunities. Additionally, it gives investors a chance to engage with companies at an early stage and stay close to them as they reach the proof points that investors are looking for.

Catalyst Fund Selection Criteria

1. **Innovation:** They must feature an innovative product and business model
2. **Inclusion:** They must have the potential to meaningfully increase the financial inclusion of excluded populations
3. **Additionality:** Catalyst Fund grant resources would substantially improve their ability to test and improve their product
4. **Stage-fit:** The product must be at minimum viable product (MVP) stage or still need to find product market fit
5. **Geography:** The target market/ operations of the startup are emerging markets in sub-Saharan Africa, Asia, or Latin America
6. **Risk level:** There must be no red flags, particularly not around impact and consumer protection
7. **Learning & knowledge:** They must have the potential to meaningfully contribute to the learning agenda for

> ***"I like that investors are sourcing the startups and identifying potential for investment down the line. The fact that the deals are coming from practitioners is an important filter."***
>
> ***Tahira Dosani, Managing Director, AVL***

Our Insights

For the purposes of this evaluation, we considered whether the selection process worked as hoped in terms of engaging investors and selecting early-stage startups.

Investors are motivated to source, select, and eventually invest in startups

Each of the investors in the IAC has sourced startups and remained engaged over the course of the program. Each member has proposed at least 2-3 companies for each cohort, and together they were able to source and select 20 companies.

One initial concern was potential competition between the investors sponsoring startups - that they would all want to invest in the same startups. However, we found there was no investor-level competition. In fact, sourcing through investors led to the successful selection of high-potential companies, which in turn led to the opportunity to extend follow-up investment opportunities to a larger pool

Ensuring stage-fit requires careful upfront assessment of the companies

With regards to startups, the program had a 100 percent completion rate, despite the fact that 70 percent of CEOs were first-time CEOs. After receiving Catalyst Fund's support, the companies themselves performed better than the industry average.

However, our evaluation also found that while program managers and IAC members respected the criteria, they made some exceptions on stage-fit. We accepted some companies that were at concept validation stage, i.e., they did not yet have a minimum viable product (MVP) on the market. As a result, they were unprepared to benefit fully from the program.

The selection process did not ask enough questions of the sponsoring investors and of the startups to ensure stage-fit. Unfortunately, we only learned more once we had started structuring the actual technical support. In one case we selected a company that was later-stage; it had already raised institutional capital of over US$1 million. While assessing the company, the investors and the Catalyst Fund team agreed that the company had a high potential for impact and still needed support in finding product market fit, so it was accepted into the program.

The selection process can overlook diversity if it is not a dedicated criterion

We found that our portfolio was unbalanced from a gender perspective, as gender was not a criterion for selection. 95 percent of our portfolio's startup founders were male, and this is a trend across the industry. Additionally, we found that 50 percent of the CEOs were natives of the countries in which they had launched their startups, 30 percent were expats but had worked in the markets in which they operated, and 20 percent were working remotely from their main country of operations but had key personnel deployed in the country or frequently traveled to check in on operations. While all the CEOs in Latin America and Asia are local, there are more expats and remote CEOs in Africa. Although our African startups are successful and their impact in the communities in which they are working is high, it may be that there is a gap in the local talent obtaining access to platforms such as ours.

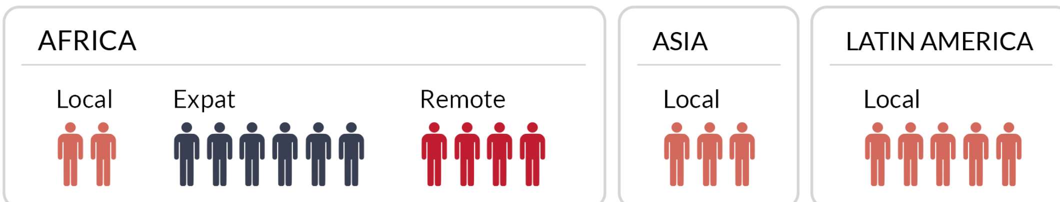

Figure 2.2 : Portfolio diversity

Lack of sectoral focus may have limited opportunities for learning

Finally, our selection criteria did not focus on particular product verticals or sectors, leading to a highly diverse set of companies within cohorts. While each startup benefited from the program, there may be advantages to having startups operating in the same sector or developing similar products for cross-

Recommendations for Sourcing & Selection

Activities/features to keep	Activities/features to improve	New activities/features to consider
IAC to support the sourcing and selection process	Tighten selection criteria to better define and assess stage-fit	Expand the sourcing pool of investors for a larger pipeline of startups
	Focus more intentionally on diversity among the selection criteria	

2.2 Support Services to Startups

Grants disbursed since inception	Total investors involved	Tailored VB services value	Most common startup concern	Second most common startup concern
US$ 1.85 million	47	US$ 1.08 million	Finding product market fit	Fundraising

After the first two Ss (Sourcing and Selecting) comes the third S, Supporting. Catalyst Fund's support services are specially tailored to address the particular challenges faced by early-stage startups as they launch their products and iterate to find product market fit.

Risks for early-stage inclusive fintech ventures

Inclusive fintech startups, in particular, face challenges that are unique to their position at the intersection of financial services, emerging markets, and low-income customers:

1. **Securing funding for early-stage startups in emerging markets:** In emerging markets capital is scarce, many startup models are unproven, and foreign investors are unfamiliar with the sector and local markets. The Collaborative for Frontier Finance estimates that in the small and growing business sector there is a US$930 billion financing gap for high-growth tech ventures such as those in our portfolios. Venture capital is often also concentrated in only a few startups, making it challenging to maintain high-growth trajectories in these markets. A recent report by Disrupt Africa shows that in 2015 and 2016, 72 percent of all startup investment in East Africa went to only three companies.

   This scarcity results in a "valley of death" for early-stage companies. They fail to generate sufficient revenue quickly enough to offset the costs of launching and result in failure. The problem gets more complicated because entrepreneurs invest their time and energy in raising capital to bridge this valley, rather than building and testing their products to successfully reach growth milestones.

   "Finding funding is a huge burden. The average startup CEO spends 70 percent of his time fundraising, which remains the number one challenge faced by local startups." - Yoann Berno, Flowigo.

2. **Developing accessible, affordable, and appropriate value propositions for underserved populations that build trust:** Inclusive fintech startups are trying to serve customer segments who live in low-trust, low-tech, low-resource, and often remote environments. These customers are generally not digitally savvy and do not want to engage with financial service providers. This makes it harder for startups to reach customers and build trust with them and demonstrate the proof points investors seek.

3. **Accessing data and choosing the appropriate tech:** Many fintech startups rely on alternative data sources, such as companies offering alternative credit scoring models or other approaches based on artificial intelligence (AI). Access to high-quality data in large quantities is essential for these startups, but these can be difficult to procure and organize.

4. **Finding and retaining local talent:** In emerging markets, talent is more scarce, so companies often struggle to assemble the right teams and retain promising talent. Teams at the early stage might therefore have skills gaps that may limit their ability to find product market fit. A team of savvy business leaders that lacks a CTO and deeper technical abilities would need to find a product manager or an engineer. Conversely, a team of engineers who have no experience conducting customer research or pitching to investors would need a user-experience (UX) designer or a head of operations with a business mindset. Depending on the location of the company, a startup might also be more or less connected to global institutional investors and have less exposure to the mechanics of fundraising.[2] Similarly, CEOs might also have different management styles that could be improved with dedicated coaching.

   "The biggest challenge is getting the team with the right skillset at first, especially when you're a young company and don't have a system or protocol for hiring, and then you start growing rapidly. It then gets challenging to manage the team and train them." - Jorge Camus, Destacame

5. **Forming partnerships with incumbents:** Fintech entrepreneurs often need to work with partners such as banks or mobile network operators to distribute their products. Developing such partnerships can take a very long time, and there are still few incentives for incumbent organizations to grant access to their data or customer bases to startups.

6. **Navigating regulatory barriers:** Regulation in the fintech industry can be particularly demanding, given the nature of credit, insurance, and savings products. These regulations are critical to protecting consumers, but they also create obstacles to growth by imposing barriers such as licenses, documentation, and reporting standards. Startups often struggle to work with regulators to get approvals or licenses before they can launch or scale their businesses, a process that can be costly and slow.

Catalyst Fund aims to address most of the startups' internal challenges, tackling funding constraints, value proposition design, technology and data gaps, and talent gaps. By addressing these challenges, startups can move more quickly towards product market fit. Market-level challenges, however, are more difficult to address directly. For example, establishing partnerships, understanding changing regulations across different markets, and identifying exit opportunities requires different, larger-scale collaboration among numerous stakeholders in the local market, and a program such as Catalyst Fund is not always ideally positioned to intervene.

The Catalyst Fund Support Package

The first step in developing venture-building support engagements is scoping the problem. Upon joining Catalyst Fund, the startups complete a self-diagnostic survey to assess the areas in which they face risks, both internally and externally. The Catalyst Fund program team and the startups then discuss the results together to identify and prioritize mitigation strategies.

Through the self risk-assessment we found that over 80 percent of fintech entrepreneurs were concerned about finding product market fit(PMF). Especially challenging is understanding customers and building strong value propositions. 45% mentioned fundraising as the second-biggest challenge. 30% said that they faced technology risks, including lack of accessible data to refine their products, and 60 percent pointed to various external risks such regulation, macroeconomic dynamics, timing, and infrastructure that might threaten their business ability to scale.

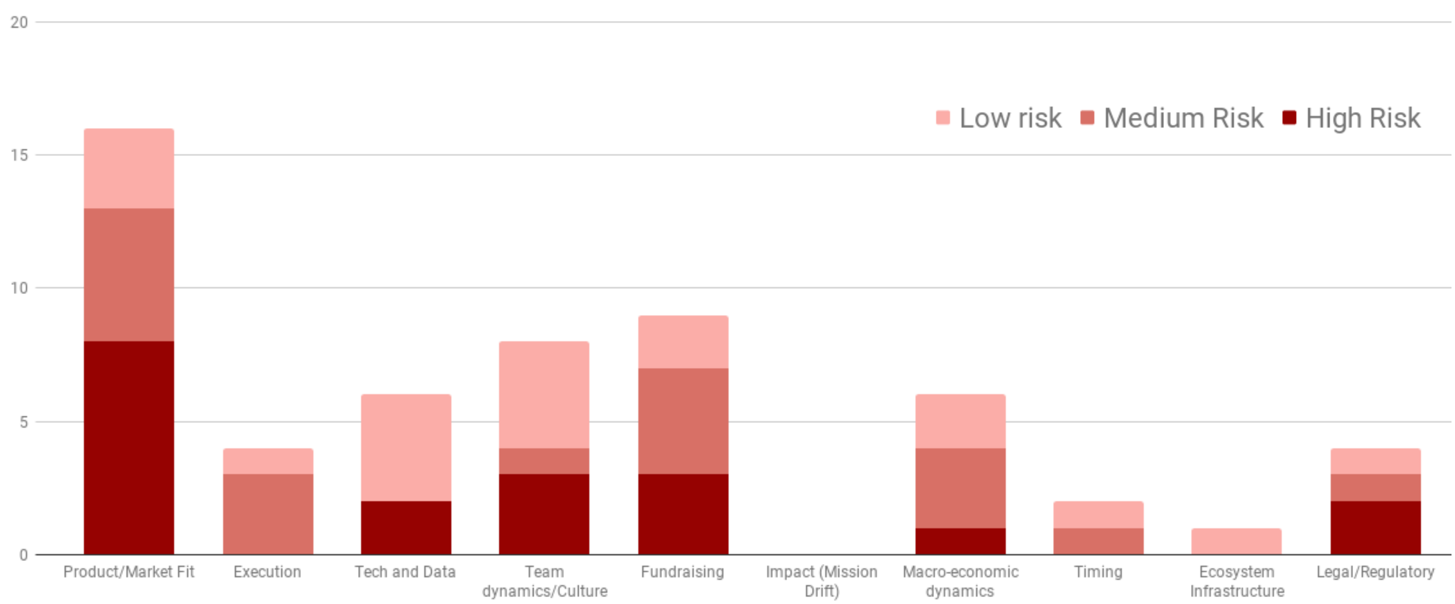

Figure 2.3: Ranking startup risks

Our **hypothesis** is that the early identification of key risks gives us a deeper understanding of the roadmap towards product market fit and can help fintech startups invest in the business support they need early on. After working with our entrepreneurs to identify risks and PMF roadmap, we tailored our technical support so that investors could be more confident in the future success of the business.

Catalyst Fund provided three core areas of support services:

- Grant capital
- Venture-building services
- Focus on the low-income customer

Below we consider and present insights into each part of the package in turn.

1. Flexible and Patient Capital

Philanthropic capital has the power to bridge capital gaps to deepen the breadth and depth of inclusive companies that can create impact. Catalyst Fund offered flexible grant capital to early-stage startups to step beyond the valley of death. Providing no-strings-attached financial support to early-stage companies can prevent promising ideas from dying before they get a real shot at developing fully a solution for the underserved. Grants go up to US$100,000 and were disbursed based on a tiered structure to ensure an inverse proportion between the amount of funding already raised by the startups and the grants offered as part of Catalyst Fund's support.

Our Insights

Flexible grants help companies overcome the valley of death while testing and iterating on their solutions

Most CEOs say the grant enabled them to overcome initial roadblocks and reach important milestones to raise more capital. Thirteen out of the 20 startups used part of the grant to hire talent and to invest in working capital, marketing or product development.

These are critical investments in the early days of a startup. "We spend the full grant on acquiring customers via digital marketing, we acquired 250,000 users, meaning 250,000 users in Chile got their credit report for free for the first time," commented Jorge Camus, CEO of Destacame.

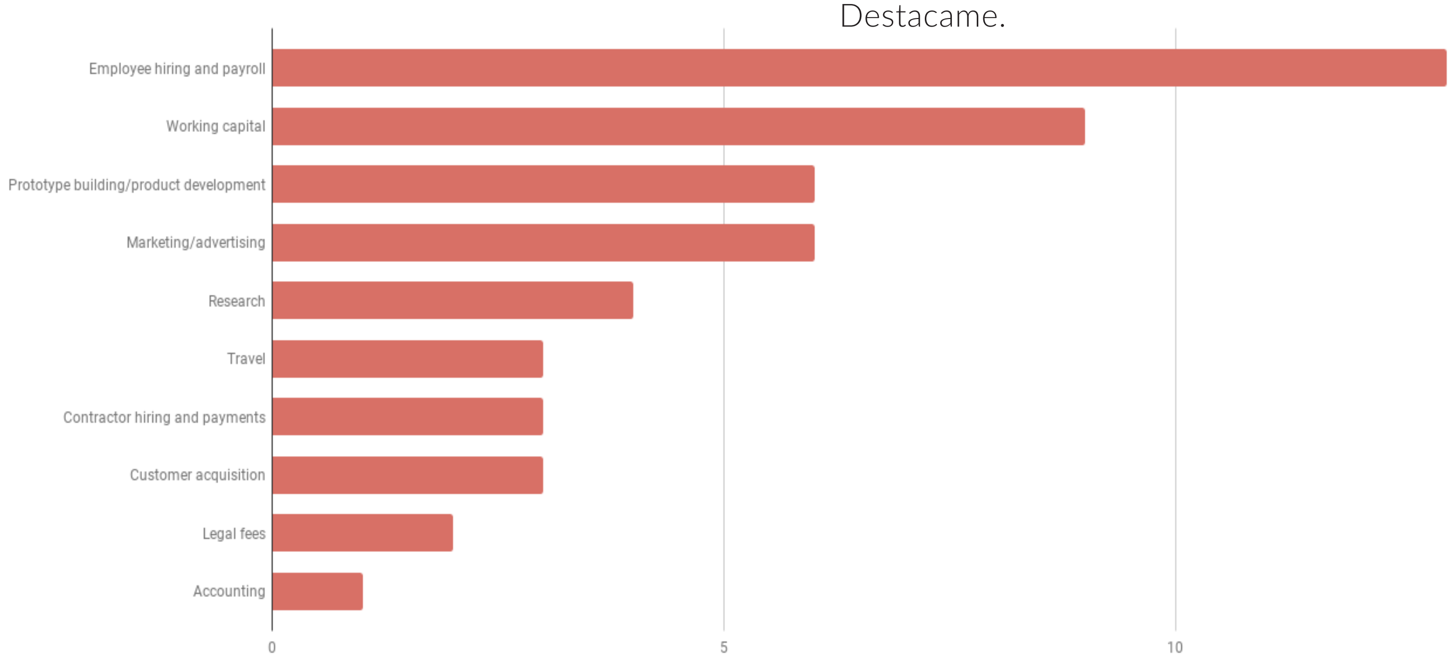

Figure 2.3 : Grant utilization

Startups felt that the amount of grant capital they received was good (up to US$100,000), and they appreciated the flexibility of the grant, its quick delivery, and the fact that there were no strings attached (e.g., no equity stake). The grant gave them enough runway to prove models and get seed funding without running out of cash before the next round of funding.

From an investor perspective, these grants were a good way of getting to know early-stage companies, developing relationships and watching the companies progress, even without a formal investment relationship. ***"The grant offerings help create a closer relationship with startups that allows us another way to determine whether they are investor-ready,"*** said Tahira Dosani from AVL. Monica Brand Engel from Quona Capital also commented that ***"through this structure, CF is not competing with other investors, making it unique."***

Letter from Frank Schutte, CEO, MobiLife

"My colleagues and I founded the business in mid-2015, and it has been entirely self-funded, except for the very welcome grant from the Catalyst Fund in late 2017. By early this year, we had run out of money! For most of this year, we have been in low-maintenance mode while my primary focus was on raising equity funding to take the business forward.

This process was slow, difficult and we had THREE last-minute failures, after having invested months into negotiations and due diligence etc. There were many months where we were not able to pay all our salaries, and we were not able to invest a single cent into marketing and distribution. We came within a hair of being yet another failed start-up.

I'm glad to tell you that at long last, we have in the last few weeks completed our series A funding round, having raised our Series A. I can tell you that without the grant of $100K from the Catalyst Fund, we would not be here today. Although the grant amounts to only about two months of our total operating costs, it gave us just enough runway to get to deal completion."

Recommendations for Grant Capital

Activities/features to keep		New activities/features to consider
Offer flexible grants, with no strings attached so entrepreneurs test their solutions	Tier the grant amount based on how much startups have raised before the program	Crowd-in local angels and investors in local markets to unlock more capital to inclusive fintech

2. Venture-building Services

Most acceleration models include some form of technical assistance, capacity building, networking, mentorship, capital, and access to resources (data, offices, software etc.)[3] Catalyst Fund built a unique model for supporting startups. In addition to flexible capital, it offered tailored technical support from highly specialized fintech experts, coupled with mentoring by investors, networking opportunities, and investor-readiness coaching.

Tailored technical support [4]

After identifying priority areas to work on with the startups through the diagnostics, the Catalyst Fund team sourced appropriate specialists from within BFA and scoped venture-building projects. Technical support projects were structured to meet entrepreneurs where they were. The engagements with the companies were designed to be focused and flexible, often split into two "nano" projects or sprints, and executed at separate intervals. This was intended to give companies time to internalize the learnings from the first project and build on them, and also to account for pivots or changes in strategy. Once the program came to an end, startups took the risk assessment again and had a feedback call to discuss any changes in the risks they faced, the road ahead, and their

Catalyst Fund Technical Support Offering

User Research	Technology and Data Analytics	Value Prop and Business Design	Regulatory Advice
User Interviews (Indepth interviews focus groups etc)	Prototyping and MVP building	Value Proposition Design and Product-Market Fit (PMF) Workshop	Regulatory Advice
Service Blueprints and Customer Journey Mapping	Data Analytics: MLalgorithms, Computer Vision, Segmentation, Cohort and Survival Analysis, etc	Investor Readiness Coaching	Market Landscaping
UI/UX testing	Apply new tech to increase efficiencies (Blockchain, Chatbots, RPA, etc)	Business Modeling and ROI development	
Behavioral Design and Trust Building Design	Develop product roadmaps and advise on systems infrastructure (cloud, USSD, mobile, SMS)	Business Performance Dashboards	

Figure 2.5 : Catalyst Fund technical support offering

Access to networks and peer-learning

Entrepreneurs need investors who are like-minded. Investors need to conduct significant due diligence, which takes time. The right match, in which the investor understands the business, the sector and the market constraints, makes for better alignment on expectations and company trajectory. To encourage this, Catalyst Fund created the Circle of Investors, a network of premier impact and commercial investors who watch the progress of the companies throughout the acceleration process and get matched to those who meet their investment criteria at the end. Catalyst Fund curated double-blind introductions between its entrepreneurs and investors. If both parties perceived a fit - the venture fits an investor's criteria and the investment fulfills the startup's strategic needs - then Catalyst Fund made the introduction.
In addition to investor connectections, the program also facilitated peer learning through curated events, where startups from different cohorts had the opportunity to connect and share notes

Our Insights: Tailored Technical Support

A carefully designed diagnosis process focused on product market fit is necessary to identify value-adding projects

At the start of Catalyst Fund 1.0 we simply aligned our support with what startups asked for. The results, in terms of acceleration towards product market fit (PMF), were mixed. We learned that, in order to maximize the impact of our approach, we needed to make sure that what the company asked for was truly what was needed for its long-term growth.
After three cohorts we realized that PMF was the primary concern for our companies, so we integrated an assessment of progress towards PMF into the diagnostic phase. For cohort four we created a PMF diagnostic toolkit to better determine how to push the companies to finding PMF. This tool helped us to better prioritize areas of work and exposed the

> ***"CF came in with deep domain expertise in Emerging Markets and FinTech and the TA is timely, actionable, and tangible, done in the entrepreneurial language."***
>
> ***Startup Founder***

Customized and hands-on support delivers greater value to the CEOs and lowers risks for startups

Startups prefer highly tailored technical support, as opposed to a general standard curriculum. At the beginning of the program we asked what companies needed, and 75 percent of them requested tech development support, followed by business strategy, data analytics, and customer research. However, when we then started scoping the projects using our diagnostic tools, their needs called for projects focused on reinforcing their value propositions, then tech development and data analytics, and customer research.

Given the early-stage companies joining the program, many still needed to prioritize iterating on the value proposition to find product market fit. For example, we supported Comunidad 4Uno, a financial service marketplace for domestic workers and their employers in Mexico, by conducting user research and segmentation analysis to determine which customer segments would be most interested in their insurance offering. We ran a value proposition workshop to help the team focus on targeting the most valuable segments. This initial phase was complemented with a UI/UX (user interface and user experience design) workshop to identify customers' pain points, developing a service blueprint and running marketing experiments via A/B tests on their landing page. This helped Comunidad 4Uno sharpen their offerings and develop a targeted growth strategy.

Trust is also a major challenge for companies entering a new market as a new player, so our support focused on tools and tactics to build trust with the user. Fintech entrepreneurs need to adopt creative approaches that blend "tech and touch" to optimally engage customers through a mix of digital and human interactions. For example, we supported WorldCover, which provides insurance for farmers in the developing world, to run qualitative user research to better understand farmers' behaviors and how WorldCover could continue to increase awareness and trust in their insurance product to scale.

On the tech front, several companies were found to have gaps in tech expertise. In this case, companies needed help building back-end product architecture maps, MVPs of functional apps, or databases and plans on how to structure their data to get maximum value from it. For example, when PayGo Energy joined the program, they needed support building the back-end and help develop the first MVP of their agent app. BFA experts designed and developed a pilot product architecture through off-the-shelf back-end software modules and in effect acted as interim CTO for the company. Asaak, which provides microloans to small and medium-sized businesses in Uganda, on the other hand, benefited from an assessment of their database, platform and mobile app to set up a roadmap to tighten their architecture and get ready to use machine-learning models on their data. Similarly, payAgri, an agri-fintech startup in India, did not have a strong tech background and benefited from advice on product management and from a technology appraisal of their app and systems to make sure they were secure and well structured to deliver value to customers.

Later-stage companies, on the other hand, were more technically advanced and benefited from more advanced data analytics support, such as incorporating machine learning in their business solution. For Rukula, which offers small loans to excluded households in Sri Lanka, the support project was tailored to assessing its readiness to deploy machine learning in their current processes and the value this might bring to the company. We performed an analysis of Rukula's tech architecture and data assets, and an exploratory analysis of Rukula's loan data and call/SMS logs to provide a grounding

A responsible use of facial recognition technology

Smile Identity

Smile Identity's mission is to enable anyone who needs to prove their identity to do so easily, anywhere in the world. They use computer vision and machine learning to validate the true identity of customers of banks, telecoms, fintech companies, and shared economy applications in Africa and beyond. They help with authentication and identity validation by allowing the use of facial recognition as second-factor authentication, comparing selfies to IDs, and validating know your customer (KYC) with issuing authorities in seconds. Another interesting application of the technology is to track the attendance of employees in distributed locations.

When Smile Identity joined the program, they needed support testing their facial recognition algorithm in the markets in Kenya, where they launched. "It is a well-known fact that most face recognition systems perform less accurately on people of color as compared to white faces, largely due to a lack of diversity in the training datasets used to develop many underlying face algorithms," said Mark Straub, CEO of Smile Identity. It was therefore imperative to test the algorithm with users in Kenya under different lighting conditions and with different phone types to make sure that the system would learn to operate appropriately in those circumstances. The Catalyst team started testing the algorithms by running sample datasets to identify the most suitable algorithm to match IDs to selfies. It then tested the product with users in Kenya, who provided feedback to improve the interface and get to an optimal user experience. The feedback from users was fundamental to inform the next steps in the app design.

Finally, the team complemented Smile Identity's highly skilled engineers to build a custom solution to encompass both the facial recognition and text extraction tasks that the app needed to perform, using existing open-source computer vision libraries. Given the power of these technologies and also their unintended consequences, testing and ensuring that all information is handled responsibly is a huge priority for Smile Identity. After the program Smile Identity went on to raise a Series A round and is well positioned to solve identity verification across Africa and beyond, one smile at a

Startups prefer highly tailored technical support, as opposed to a general standard curriculum. At the beginning of the program we asked what companies needed, and 75 percent of them requested tech development support, followed by business strategy, data analytics, and customer research. However, when we then started scoping the projects using our diagnostic tools, their needs called for projects focused on reinforcing their value propositions, then tech development and data analytics, and customer research.

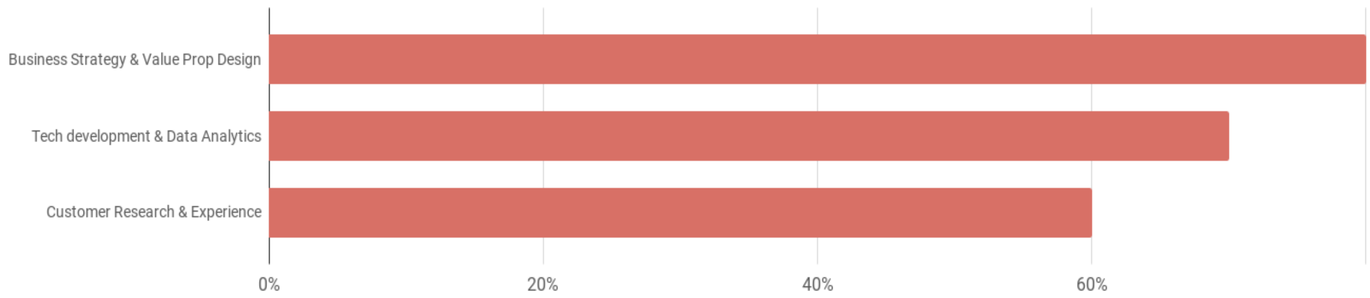

Figure 2.6 : What was delivered to the startups

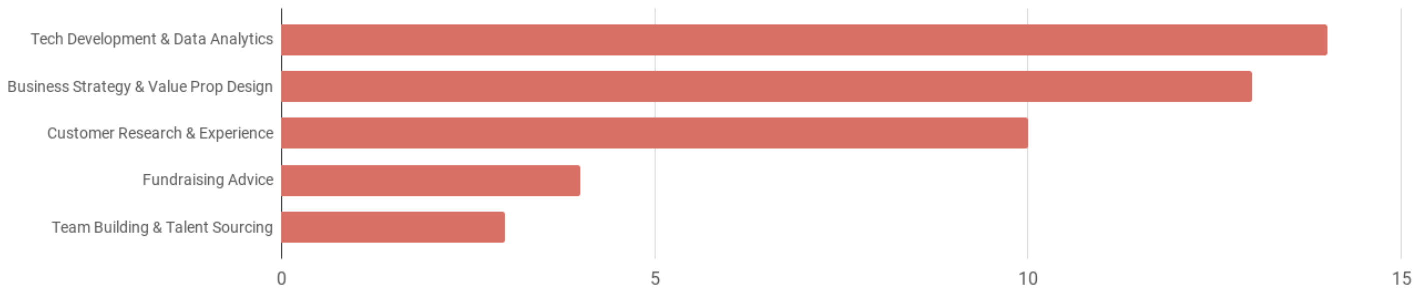

Figure 2.7 : What startups found most valuable

> ***"CF offers the best complement of technical, business and consumer insights you can find, especially in financial services."***
>
> ***"We would like longer TA [technical assistance] engagements with the BFA team and it would be great to be able to tap them after the program to receive advice (even if we have to pay)."***
>
> ***Startup Founder***

Supporting startup teams to adopt a lean mindset and develop product management skills goes a long way in ensuring good practices that outlast the project

There are also softer components of support that go a long way in coaching early-stage companies. When the pressure is on and funds are running low, startups are tempted to try a million things, hoping that something will stick. However, trying too many things simultaneously ultimately leaves startups unsure of what works and what does not, and why. In a survey, our specialists also noted that this lack of focus led startups to work on too many activities that were not essential to achieving the common established goals of the project. To avoid this, the specialist teams worked with the startups to practice the discipline of agility and stay focused on product market fit.

With the last two cohorts of companies, the venture-building team helped the companies adopt agile methods more intentionally through data-driven approaches to research, analysis, and operations. Seventy percent of the startups across cohorts three and four specifically mentioned how they valued the support in developing a product market fit mindset. For example, Catalyst Fund helped Banco Maré, a blockchain-based payment service in Brazilian favelas, collect data intentionally through their app, track key metrics via a simple data dashboard, and develop structure experiments to act on insights from the data. Banco Maré could clearly measure their progress towards product market fit and quantify the results of the experiments. Finally, commitment and motivation from the startups is fundamental to ensure the smooth execution of the project, and they reap

> ***"BFA's Catalyst Fund helped Banco Maré understand our data and make better decisions timely."***
>
> ***Vitor Kneipp, Co-founder, Banco Maré***
>
> ***"Catalyst has done a great job facilitating interactions with specialists in a way that is substantive for startups. It's fairly surgical, but deep-touch enough to usually have a lasting effect. Has been a pleasure to be a part of that process."***
>
> ***VB Specialist***

Focusing on rigorous approaches to finding product market fit

HOVER

Hover enables developers of USSD (Unstructured Supplementary Service Data, the communication channel of choice for mobile money services) to integrate mobile money solutions even where an application programming interface (API) does not exist.

"We look at USSD as a command-line interface similar to the internet before the web browser," says Ben Lyon, Hover's CEO. Before joining Catalyst Fund, Hover's near-term goal was to achieve product market fit (PMF) and make a self-service API available globally. The team had strong tech talent but needed to smooth the user experience to get continued and improved traction with both the end-users and the financial service providers in the market. Hover felt that developing a flawless user experience and understanding their core focus use cases were most important to reach PMF. As part of the support, a designer conducted user experience (UX) research with the team to interview 17 customers in seven locations across Nairobi and iterate on over five prototypes, helping Hover refine their internal product flows. Additionally, with go-to-market feedback, the team held a PMF workshop and ran a use-case identification exercise, which resulted in 20 different use cases that Hover could consider working on. Focusing on a process to improve UX for customers and prioritizing key experiments helped Hover with their execution process. As a bonus, through the engagement they connected with a potential new customer. Hover has also created more systematic feedback loops in its market development and research processes and zeroed in on strategies to measure their progress towards PMF, including integrating digitized PMF surveys and monitoring key metrics to assess customer traction.

Product market fit is a continuous learning process and requires patience

We assessed the change in the companies' progress towards product market fit based on simple criteria that grouped the companies into the following categories: no PMF, early PMF, late PMF, and at PMF. When we asked our specialists whether the venture-building support was effective in making the startup progress towards PMF, three out of 12 specialists were neutral, and two specialists said that we could do better in terms of helping startups focus more on specific criteria while practicing lean methods with them to internalize and employ after the program. Upon assessing the progress of the companies, we found that 35 percent of all startups progressed to the next level in their journey towards PMF, but 60 percent did not progress significantly. As a result, we measured incremental shifts based on how many startups progressed, pivoted or tweaked their models, and how many ran experiments. The road towards achieving PMF is long, and while it may appear that many startups did not see a major change in their journey, they ultimately reported a decrease in their perceived risk related to finding PMF. This was also, on average, the second-highest positive risk change

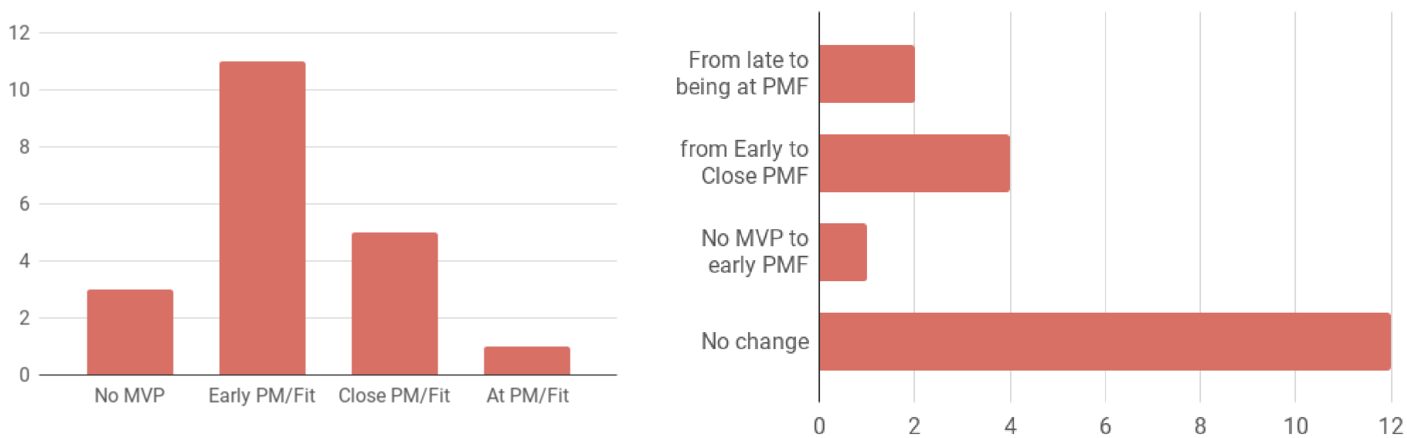

Figure 2.8: Product market fit before and after Catalyst Fund

Support for early-stage entrepreneurs needs to be flexible and account for pivots

At this early stage, companies are still strengthening their value propositions and tend to change their models as they learn from their customers and adapt to market dynamics. Nearly 35 percent of the companies in our program pivoted their model and switched from a B2C to a B2B model over time. One company pivoted from a B2B platform model to a B2B2C model, serving both clients directly as well as connecting with larger financial service providers. Only two companies in the program were unable to get traction in spite of several pivots and ultimately decided to fold. Offering a more agile assistance model helped to ensure that startups have the space to pivot and continue to receive the most appropriate support as they go through changes.

When the timing isn't right

On a couple of occasions, companies joined the cohort too early in their development journey, when they were still going through many iterations of the solution. Flowigo, a software-as-a-service (SaaS) company seeking to enhance the operations of pay-as-you-go product distributors in Africa, faced timing risks which ultimately backfired. It joined the program with one model but quickly realized it was not viable for the market. The venture-building support focused on building a new value proposition and doing some market scoping and validation for a pivoted model of the business. However, the market ultimately lacked the client density necessary for them to scale, and key infrastructure issues like connectivity posed an ongoing challenge. SaaS companies such as Flowigo need dense networks of businesses to flourish, but in Africa industries which count more than a few dozen major players are rare. Scaling a SaaS business while addressing 10-15 customers is a hard sell. Ultimately, Flowigo succumbed to the timing risk, deciding to pivot and wind down this line of business. As Flowigo CEO Yoann Berno put it: "Timing is everything."

There is a persistent need for finding and retaining the right talent to scale

Finding the right teams to continue growing is a constant challenge for startups, especially specialized tech talent and business-savvy strategists who know emerging markets. Of all the risks we assessed, there was no change in the risk score related to "teams" by the end of the program. Startups often noted that human capital is the only thing that gets harder to find as the business grows. Funding alone cannot solve the talent recruiting challenge. As a result, Catalyst Fund helped a few companies, such as ESCALA Educación in Colombia, in drafting job descriptions and identifying the best candidates to play a CTO role. However, this was not done systematically, given that this is a big concern within the small and growing business sector and we need to take action in actively supporting better channels to pool talent and help startups develop strong value propositions for employees. Going forward, we might partner with specialized talent networks, such as RippleWorks, to provide post-acceleration talent pools to the startups.

Recommendations for Tailored Technical Support

Activities/features to keep	Activities/features to improve	New activities/features to consider
Focus on product market fit to scope support projects	Integrate more agile practices to strengthen technical support by working more closely with the startup at the beginning of the program to understand how they operate	Explore opportunities to develop a talent pool available to startups
Customized hands-on support		
Support startups to have a lean mindset and product management skills		

Our Insights: Access to Networks and Peer Learning

Curated introductions between investors and startups can facilitate connections and lead to follow-on funding

The assumption was that access to this group of investors may increase startups' opportunities to receive follow-on funding after the program and that curated introductions would lead to higher chances of securing follow-on capital for entrepreneurs. The Circle of Investors was not part of the initial Catalyst Fund program design but grew rapidly to over 40 members. To date, Catalyst Fund has facilitated more than 30 connections with Circle members that resulted in eight investments. Twenty out of 40 of the Circle members now actively follow and participate in interactions. Outside of the Circle, the program also tried to connect startups with investment opportunities and has facilitated over 65 connections between startups and investors across the industry. However, our startups have also found that they still faced fundraising risks after the program. This shows that, despite the valuable grant, our efforts in expanding the network of investors and in actively facilitating connections with them and with industry networking events, the startups still face fundraising issues. There is thus a need to unlock more capital in the ecosystem to fuel

Bringing inclusive startups together forms a powerful support network

Relationships among the startups developed through events and workshops both globally and regionally. Catalyst Fund coordinated sessions for its portfolio during global events such as SOCAP and also collaborated with industry players such as AVL, FMO, and Quona Capital to set up interactive inter-portfolio events such as the CEO Forum.

Catalyst Fund also organized workshops where startups openly shared their challenges, past failures and future aspirations. Several mentioned the value of such opportunities to exchange thoughts with other founders facing similar challenges. Sharing advice, support, and ideas with one another, especially when operating in similar markets and serving similar customer segments, proved to be extremely valuable. Most participants believed these relationships would be an ongoing source of support in the future and might in some cases have the potential to lead to business partnerships. As a result, over 75 percent of respondents said that they would like to remain part of the network and come back to social events as alumni.

While these events have helped create a strong support network, we need to curate more peer-to-peer opportunities to deepen the relationships and bonds between startups. Entrepreneurs have expressed a strong desire to meet more often with each other and interact, even if virtually. We have a WhatsApp group where all our portfolio CEOs and the Catalyst Fund team share insights and advice to keep the connection alive beyond the events. However, we need to ensure we keep the momentum going by exploring other online solutions, by pairing up entrepreneurs working on similar challenges, or by exploring other

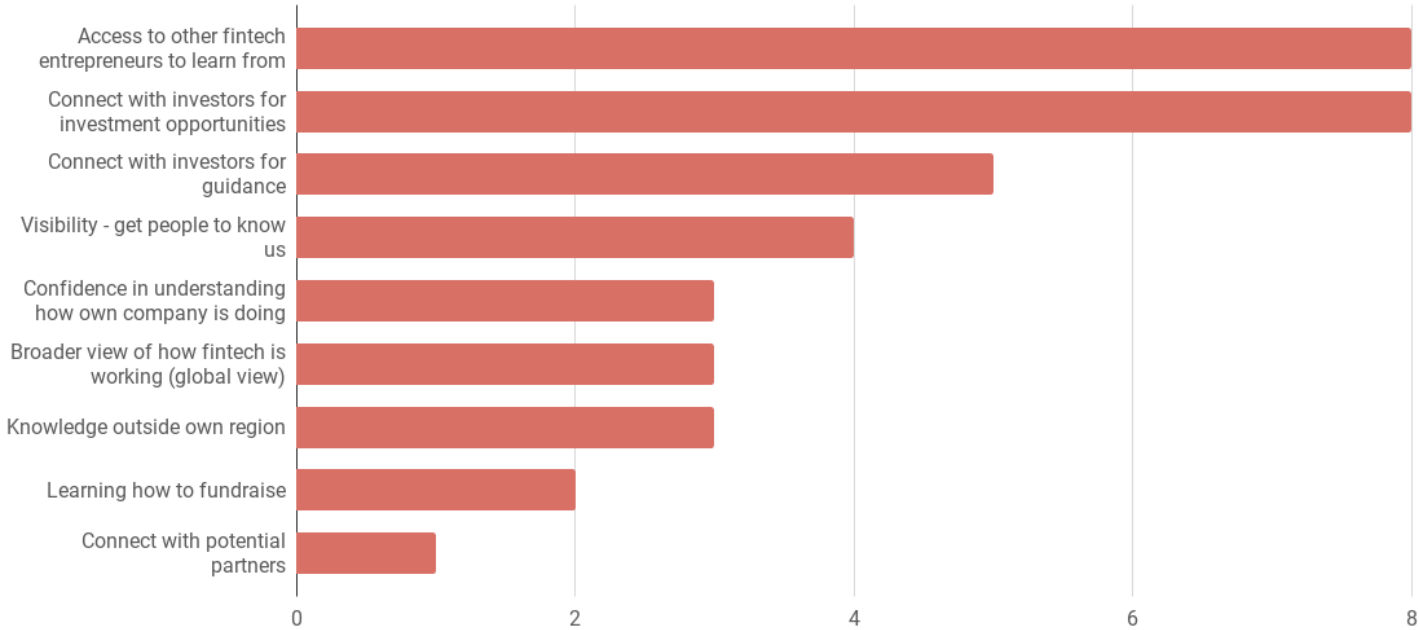

Figure 2.9: CF network benefits for the startups

> ***"Catalyst Fund has been instrumental in Harvesting's early success, especially in getting us plugged into the financial inclusion world, and introducing us to global leaders like FMO and fast-growing startups working in adjacent areas. It not only helped us fine-tune our offering but also provided a great networking opportunity with global investors."***
>
> ***Ruchit Garg, CEO, Harvesting***

Mentorship to startups requires processes to energize interactions beyond in-person meetings during events

Mentorship by investors in the Investors Committee did not happen consistently with all companies. Relationships were warm, but not enough energy was generated to remain connected beyond events. The program could have put in place better accountability structures for investors to mentor the startups and play a more active role in facilitating more interactions. In addition, the program could help startups identify industry experts and alumni startups that could offer advice. This would also contribute to building local networks of mentors who could offer wider-ranging advice on fundraising, recruiting talent, solving legal issues, and exploring digital marketing/ growth hacking.

Recommendations for Access to Networks and Peer Learning

Activities/features to keep	Activities/features to improve	New activities/features to consider
Grow the circle of investors and curate introductions between investors and startups	Improve the mentoring program by widening the pool of mentors beyond investors to domain experts Educate global/local investors more about fintech opportunities, assess innovators to mitigate risk perception Introduce more elements of community building, especially curating peer-to-	Developing networks with incumbents such as banks and mobile network operators could help spur exit opportunities for startups through partnerships

3. Focus on the Low-income Customer

Companies with intent to monitor customer impact	Companies with business models aligned with financial health	Companies that monitor other non-financial well-being	# of SDGs touched	Time to realize impact
100 percent	61.5 percent	55 percent	12 out of 17	2 months to 4+ years

Distinct from a typical accelerator, Catalyst Fund was not just focused on accelerating companies to the next milestone of funding, but also on the goal of developing impactful solutions for the underserved. There were three ways in which Catalyst Fund viewed and worked towards impact for customers:

1 Working towards solutions that are more Accessible, Affordable and Appropriate for low-income customers

By working in the trenches with the startups, the program endeavoured to understand how financial solutions could be assessed and made more impactful in their sectors. Solutions are most impactful when they are accessible, affordable and appropriate for underserved segments, so we created the AAA framework (pronounced Triple A), a practical blueprint for building and assessing products and services that low-income customers need and want. AAA solutions address the challenges of customers who live in low-trust, low-tech, low-resource and last-mile environments. For example, a solution increases accessibility through technology that provides a wider set of access points to reach customers in remote areas. A solution is more affordable if the technology and/or the business model brings costs down and cost-savings are passed on to the end-customers. A solution is appropriate if it is designed with the target customer in mind to be flexible, fast, easy to use, and mixing a tech and touch approach to ensure it is suited to engage customers who might not be digitally savvy.

2 Customer-level impact as progress towards financial health

Going one step beyond just assessing the solution, the program worked with the startups to help them understand how they are improving the financial health of low-income customers and select impact metrics to collect. The program aimed to guide the startups in identifying impact metrics that could most easily be gathered and monitored at this stage, as well as how they could gather the data points. We refer to financial health metrics as defined by the Global Financial Health Framework, according to which customers are financially healthy when they:

- Balance income and expenses
- Build and maintain reserves
- Manage existing debts and have access to potential resources
- Plan and prioritize
- Manage and recover from financial shocks
- Use an effective range of financial tools

3 Fintech's impact on SDGs as a link to a broader socio-economic impact

Inclusive fintech can have an impact on the Sustainable Development Goals (SDGs) insofar as financial solutions contribute to moving towards a better, more equitable and sustainable world. Many investors make investment decisions based on the impact that an investment will have on the SDGs. Catalyst Fund's definition of fintech is broad and recognizes that fintech solutions do not only impact financial health. While we did not track indicators to determine the impact of the startup to advance the SDGs, we mapped our companies to assess how many were linked to them. This might be helpful for investors to understand the broader impact that fintech solutions can have on

Our Insights

The AAA lens can help integrate impact into the core value proposition of the startups

Embedding the AAA framework into the core of our support services helped companies think about how to design for low-income customers from the get-go. We asked companies to report on metrics to determine how their solution was more accessible, affordable or appropriate than the alternatives and concluded that, while it is difficult to gather exact data points when the company is still evolving and growing, there are early signs that these value propositions are more appropriate for the underserved. Putting the AAA lens on the portfolio also highlighted gaps in the industry's understanding of what truly makes a solution "appropriate" for the low-income consumer, which is often a more intangible metric.

Appropriate

Tailored products that are flexible, fast and simple to use.

MOBILIFE

24 hours avg. claim processing time

RUKULA

95% Repayment rate

ABALOBI

Through the marketplace fishers get **3-4 times** more in revenue

LEAF

Services in local language

Affordable

Reduced business costs through smart use of tech mean lower prices for customers

PAYGO ENERGY

Pay-per-use gas paid for by MM and charged in small amounts customers can afford vs.

$50 for a canister and $10 for refills

ASAAK

33% cheaper compared to MFIs and alternative lenders

BANCO MARE

operating cost per user decreased by **27%**

DESTACAME

42,000/month individuals who obtain a credit report for free

Accessible

Serving customers with little reported financial data, farmers and women.

WORLDCOVER

90% of customers earn less than **75¢/day**

TOGARANTIDO

95% Percentage of policy holders, first time

COMUNIDAD4UNO

95% are female customers

PAYAGRI

60,000 farmers can be reached through 12 Community Based Orgs (CBOs) in 12 months

The impact on the financial health of the customer is difficult to measure in the early stages and takes time, but it is possible

Given the early stage of the startup and its nascent data-monitoring and reporting structures, it is hard to draw conclusions on whether a company improves customers' financial health. All of our companies reported that they intend to monitor customer impact metrics more closely, but only about 35 percent of them have already started collecting some data points.

At this stage, it takes time for startups to gather enough data points to draw robust conclusions, and it is easier for some business models than others. Participants reported that it would take them from as little as 2-3 months to measure the impact for lending-use cases to as long as 1-4 years (or more) for credit profiling or savings products. For example, ESCALA, a company which offers savings programs for higher education, has a customer named María, who works in a flower field. She adopted a two-year-old girl and is now committed to saving regularly for her education through ESCALA. While it may take a few months or years to start assessing Maria's financial health through her savings patterns, ESCALA's impact on saving for education will take a few more years to assess.

Given these challenges, we knew that their approach to monitoring impact needed to strike a balance between the need for flexibility and lean, time-efficient reporting methods and their desire to measure impact. Therefore, we designed the data-gathering processes to be as simple as possible and appropriate for their business model. Going forward, we will spend more time coaching the startups on lean impact measurement and why it makes sense to track financial health.

Based on early evidence, we note that over 60 percent of our companies have business models aimed at improving customer financial health in at least six ways.

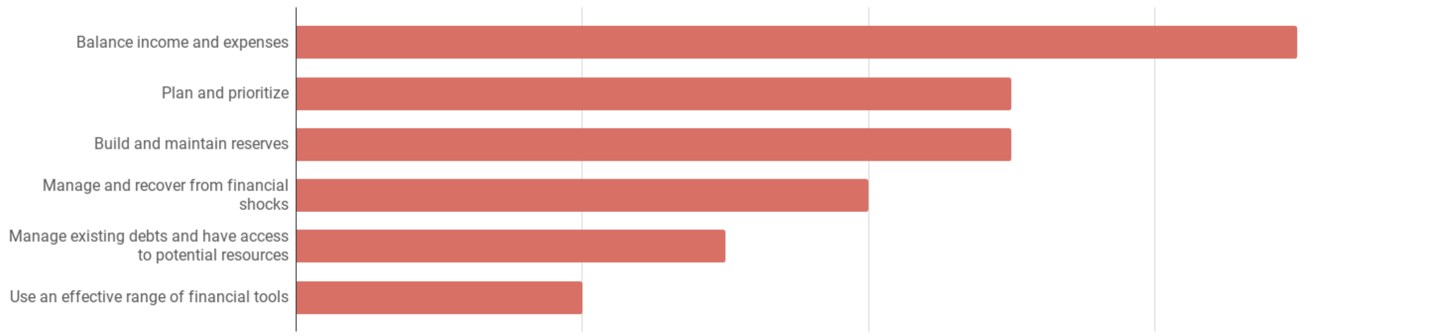

Figure 2.10 : Aligning business models with financial health

Inclusive fintech touches many sectors that can contribute to the Sustainable Development Goals

In addition to financial health, over 55 percent of our companies monitor other positive effects on customers and the surrounding ecosystem. Some examples include environmental effects, access to higher education and longer-term income changes, youth employment and micro-entrepreneurship numbers, as well as checks on transparency regarding data ownership and sharing.

Our startups' solutions contribute to 12 out of 17 Sustainable Development Goals, and all of them focus on Goal 1: Eradicating poverty in all its forms. Since they span at least eight different sectors, including health, education, agriculture, energy, retail, fisheries, identity, and access to finance, they generate positive effects beyond improving the financial health of their end users.

Figure 2.11 : SDGs touched by Catalyst Fund companies (in descending order)

From sea-life conservation to clean energy

ABALOBI

Abalobi, a "hook-to-cook" platform to service small fishing communities in South Africa, connects fishermen with restaurants via a marketplace app so that they can sell directly to restaurants and avoid middlemen. Through this direct access to restaurants, fishermen have seen a three- to fourfold increase in their revenue. Abalobi has also helped to improve the financial literacy of the fishermen by offering them accounting tools and, by incorporating checks and balances within the app, they want to make sure that only catch that is legally allowed to be sold is available to the market, and endangered species are

PAYGO ENERGY

PayGo Energy provides a pay-as-you-go service for gas cylinders to communities which would otherwise use kerosene or coal. By offering friendlier financial means to pay for gas, it ensures that communities breathe cleaner air and live healthier lives. In its campaigns to create awareness about the benefits of using gas over kerosene or coal, it also provides emergency fire training, making communities more aware and empowered to use the new

"Hi Destacame Team! I have the pleasure to communicate to you that I have been contacted by the bank and the credit was approved. I congratulate you for what you do so Chilean like me can come back to the financial system."

Rodrigo F., Destacame customer, Chile

"Asaak helped me to make investments in my business and really turned it around. My business was too small for a bank loan, but Asaak wanted to work with me and now they have my loyalty."

Paul N., Asaak customer, Uganda

"For the first time, I was able to cross the border without fear. The border guard asked me for money and I told him, 'Go ahead and search me, I have nothing.' I was so excited. This will greatly increase security in the region."

Asina, Leaf Global Fintech customer, DRC

Recommendations for Prioritizing Financial Health

Activities/features to keep	Activities/features to improve	New activities/features to consider
Continue to test and refine the AAA framework to assess how inclusive fintech value propositions are, working with new and existing companies.	Offer more intentional guidance on how to measure customer impact by hosting customer impact workshops. These would help startups select the most relevant and lean metrics, develop low-cost and efficient data gathering processes, and determine how to assess evidence-based impact.	Incorporate the AAA approach into the product market fit toolkit to ensure that value propositions are always developed to be inclusive and impactful.

2.3 Synthesizing and Sharing: Our Ecosystem Impact

Digital content reach	Attendees at events	Convenings and webinars	Monthly views on website	Inclusive Group LinkedIn Group
100,000 readers	**20,000**	**19**	**4,000+**	**959**

As an accelerator program, Catalyst Fund 1.0 mainly touched stakeholders in the innovation and capital spaces: fintech startups/ accelerators and investors. While Catalyst Fund's core competency is venture building, we also had a second mandate: knowledge building for the fintech ecosystem.

By working directly with startups on the ground, Catalyst Fund has a unique vantage point. This allowed us to build a body of evidence for the ecosystem on the successes and failures of early-stage fintech startups, the barriers they face and how to overcome them, and the role of various industry stakeholders. The objective of the program therefore is to increase the understanding of ecosystem players of how to identify and support impactful solutions, generating greater engagement from various actors and attracting more capital and talent to inclusive fintech.

The Catalyst Fund's synthesizing and sharing mandate was designed around a learning agenda, or a set of key questions:

Startup value propositions: How can fintech companies benefit low-income consumers through new products, technologies and business models?

Barriers to growth: How can startups overcome barriers to growth, such as illiteracy, trust, remoteness, weak infrastructure, and connectivity, to reach their target customers?

Ecosystem and partnership lessons: How do fintech companies and incumbents partner? And how do they connect with investors?

Facility lessons: How do accelerators best support early-stage startups towards reaching product market fit?

Photo Credit : Hover

Startups committed to answering these questions and to sharing data with Catalyst Fund at the time of joining the program and scoping the venture-building engagement. The program thus promoted action-based learning, anchoring the project engagements to learning goals with a bottom-up and hands-on approach.

Moreover, since Catalyst Fund experts become part of the companies and advise and work with them on the ground (unlike most accelerators in the landscape), they are able to capture direct learning that can contribute to lessons about local markets and products for the broader ecosystem. After working with 20 companies, we have amassed significant experience to distill industry-level learnings which we capture in various forms, from blogs to briefs and reports, and disseminate these through webinars and events.

At the outset of Catalyst Fund, we built a curated audience for the inclusive fintech ecosystem. Our newsletter primarily enlists our stakeholders: investors, donors, and executives from fintech companies and financial institutions, 52 percent of whom are founders and/or CEOs, as well as senior managers and other experts. To disseminate our learnings, we also sought to work with partners who bring other core competencies to help us play to our strengths and widen the reach of our knowledge.

We engaged these partners in formal ways and worked with membership-based and sponsorship-based organizations such as ANDE and Next Billion for dissemination or as learning and marketing partners. Additionally, we have developed a social media presence to reach our audiences. We have grown a LinkedIn Inclusive Fintech Group to 1,000 members, mostly financial inclusion and inclusive fintech practitioners. We were also intentional about carving out the key words and hashtags #inclusivefintech as associated with Catalyst Fund and BFA (second result in Google search for inclusive fintech) and to signify the use of fintech approaches to create products and services with AAA value propositions for the low-income customer.

Our Insights

Startups on a path to growth offer greater insights as they tweak, evolve and scale their products

The best lessons have come from companies on a path to growth (those nearing product market fit) as they have had more iterations, trials and errors, and time to benefit from lessons learned. We sometimes worked with companies that were too early to work towards PMF, and therefore our learning from them was not as aligned with the learning agenda. Once we focused on PMF, this allowed us to differentiate how we supported the companies and what we could substantively learn. CEO engagement also played an important role, as a more engaged CEO meant more interesting learning outcomes.

Clusters of companies from one sector generate deeper learnings

Catalyst Fund was a new model for acceleration, and we did not know if we would find companies from which we could learn that fit our selection criteria. Our ability to learn was spread across an unpredictable pipeline of many different types of companies and geographies, and we were limited in the number of examples that could be applied to one sector, industry or market. We were able to gather more learnings when we had more than one company in one specific sector. For example, we had four insurtech companies, which was helpful in deepening our understanding of insurtech models, and giving us insights into how insurtech business models are innovating to reach the underserved by combining tangible value propositions and hooks for customers, smart product design, flexibility in payments, and automated back-end claim processing systems.

Our most valuable insights clustered on topics around value proposition design, risk mitigation for startups, and trust creation

Our content covered a diverse set of topics with lessons about machine learning, optimizing the tech journey, data strategy, customer trust, UX/behavioral design, product management and product market fit, partnerships, business strategy and investment readiness - all of which are appropriate for early-stage companies.

To understand the impact of our shared learning, we conducted a survey with the community that receives our newsletter as well as with our close partners. According to our readers, our most valuable lessons seem to cluster around value proposition design, trust creation, and risk-management techniques for startups. This tells us that we have successfully generated interest among startups on topics that are relevant to their operations. These lessons are also of interest to investors or accelerators who work directly with entrepreneurs. We have not gained as much traction with these other audiences and could tailor the content for wider distribution to other stakeholders in the startup ecosystem.

Short-form content is valuable in reaching a wide audience, while longer-form content is more appropriate for synthesizing deeper, portfolio-level or ecosystem-level insights

Short-form writing, primarily in the form of blogs, was intentionally chosen as the main medium to deliver timely, digestible, and easy-to-share content for our stakeholders. It also meant publishing a high volume of blogs as the main catalog for our learning, totalling over 50 blogs, ultimately reaching over 100,000 readers and surpassing our content target threefold.

However, along the way we learned that long-form publications, such as briefs and reports, to communicate at the portfolio and ecosystem level were equally valuable to share deeper insights. We published a brief on what makes fintech inclusive, a landscape report of acceleration models for inclusive fintech in emerging markets, and other pieces to expand the knowledge base of different actors in the ecosystem. In the future, we could create more pieces targeted at a wider audience. For instance, a first step could be developing an evidence- and funding-gap map to inform investment theses for investors and donors, which could generate more industry- and market-level

Frameworks and toolkits are a great way to turn insights into actionable recommendations for other industry stakeholders to apply

While the body of literature about tech and innovation from Silicon Valley finds an eager audience around the world, the discussion of early-stage innovation for the low-income customer and in emerging markets seems to generate little excitement. In that sense, Catalyst Fund is well positioned to develop original material by adapting product- and tech-building tools for the low-income segment. For example, Catalyst Fund developed the AAA framework to define and assess what makes fintech inclusive. Additionally, we have developed and published three toolkits for startups tailored to the needs and challenges of entrepreneurs. The fourth and final toolkit will be available after the publication of this report.

We use the four toolkits with our companies during their engagements, but they are also available for independent study by the broader startup community as a free resource from our website. While these resources cater specifically to inclusive fintech startups working with customers, markets and ecosystems in emerging economies, other startups might find value in the way we are testing and building startup ventures using agile and lean startup methods. Firms exploring emerging markets can learn a lot about specific local contexts and low-income customer behavior through the toolkits. Users appreciate the combination of practical framework-based lessons and real-life examples, which are useful for first-time users to diagnose and situate themselves on scope, and directional for more advanced users who are further along in their startup journey.

Our Catalyst Fund Toolkits for Entrepreneurs

Building trust in digital financial services – The trust toolkit helps fintech companies and their product managers find touchpoints to establish critical trust with their customers and increase product uptake.

Assessing and mitigating startup risk – Early identification of key startup risks can help fintech companies address these risks early on. The risk diagnostic is a comprehensive tool in helping to identify, prioritize, and mitigate these risks.

Six steps for a smart AI strategy – With hyper-digitization, this tailored AI toolkit gives founders a score on how AI-ready they currently are and also provides recommendations on how best to get there and plan a sound AI strategy.

Building something customers want – The product market fit toolkit is a robust tool that helps founders assess their product's strengths and weaknesses, and how it meets their customers needs (in development).

"Interesting to see all of the [product market fit journey] in one place and as a whole gave a different perspective that was helpful."

Jess Shorland, Product Manager, Hover

"We should know better - we know we have to be doing all these things but are not doing it rigorously. We should be if we are following a process. It's a good reminder, as a remote team we have to work with these processes."

Ben Lyon, CEO, Hover

"A benefit [of the Risk Diagnostic] has a psychological benefit - it's being more comfortable with and knowing what risks you face, a control of the sense of risk."

Chris Sheehan, CEO, WorldCover

It takes at least five channels to reach a wide-ranging audience and provide value to stakeholders

We bring our work to light primarily through digital marketing, newsletters, in-person convenings, webinars, and by engaging the media (PR). When we started the program, we knew we would leverage our blogs and social media channels to target the tech community and have a presence at events where the audience consists of CEOs and investors. From the first year, we sought to build a community and sent our team and the most recent of cohorts to global and

Description	End of Program Target	Actual
# of blogs published	**40**	**57**
# of readers receiving publication	**22500**	**100,000**
# of attendees at events	**6300**	**20,000**
# of convening and webinars to share research	**6**	**19**
# of media articles mentioning CF(positive media impressions)	**35**	**15**

Figure 2.12 : Catalyst Fund program reach

Every year we convene our Catalyst Fund CEOs and investors at Social Capital Markets (SOCAP), the largest event for impact investing in the US, attracting over 10,000 people. We also leverage the convergence of people to organize our stand-alone events, such as our annual Inclusive Fintech Happy Hour, which attracts over 300 people and a line out the venue door, and peer-learning workshops just for our CEOs. To date, we have convened an estimate of 18,830 people in 11 Catalyst Fund-organized events. Convening and creating tailored programs has been incredibly valuable to establish connections between peers and stakeholders, build relationships with potential future investors, and strengthen our influence and brand recognition in inclusive fintech (33 percent reported the Catalyst Fund events were the most useful, followed by 31 percent for our publications). Finally, while we generated a lot of output, it was not clear what demonstrable outcome was tied to the dissemination, although we did gain media coverage across 12 outlets, reaching 353,000 visitors.

Leveraging partners and media more strategically could super-charge the program dissemination efforts

We were limited in our ability to leverage the big brands of our partners and needed to be smart about multiplying our visibility. While we did engage our companies and partners informally, we did not structurally engage them as dissemination partners. Moving forward, we need to rely more heavily on our partners and expect them to support and join us in strategic dissemination by giving them specific roles and responsibilities.

Our efforts at engaging the press were met with mixed results. While we engaged with PR professionals to pitch Catalyst Fund and companies to “shine the light” on inclusive fintech, the mainstream tech media were focused on covering the stories as they related to Silicon Valley and less so to markets where the numbers of customers were lower and revenue and funding were more limited. While we did have some early wins, such as coverage in the *Wall Street Journal* and *The New York Times*, it was difficult to sustain mainstream media interest over the course of the program even as our offering of insights became richer and

Our audience derives most value from events and publications because they learn something new from the content

Our audience perceives that they derived value from our publications and were influenced by them. When surveyed recently, 100 percent responded that they received benefits from our material, ranging from learning something new to changing the way they worked. We counted 29 organizations that became adopters of our insights, which meant that we reached more than half of our target (61 percent) before the end of the program. Our influence is even greater as Catalyst Fund members now sit on working groups, are acting as advisors to other organizations developing their own acceleration efforts, and are regularly invited to interviews or to speak on panels to share their insights and perspectives on inclusive fintech.

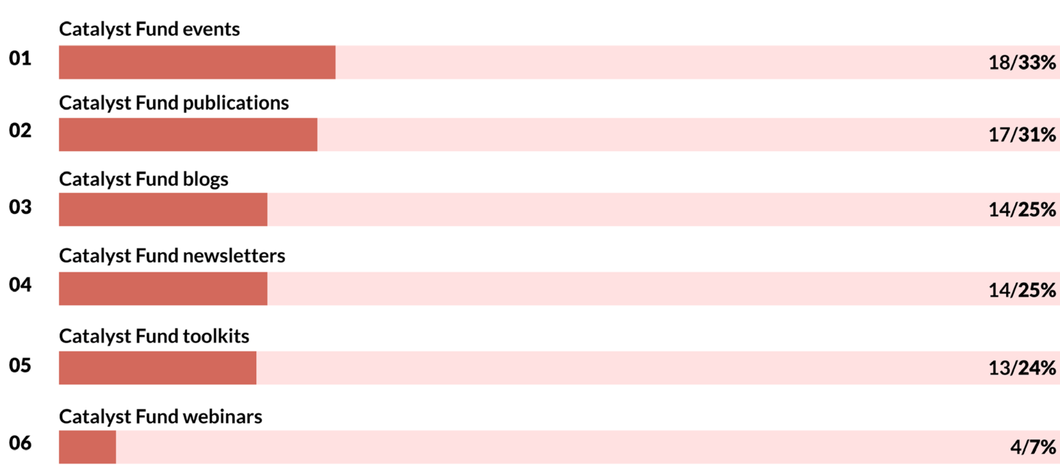

Figure 2.13 : Useful learning materials for the Catalyst Fund audience

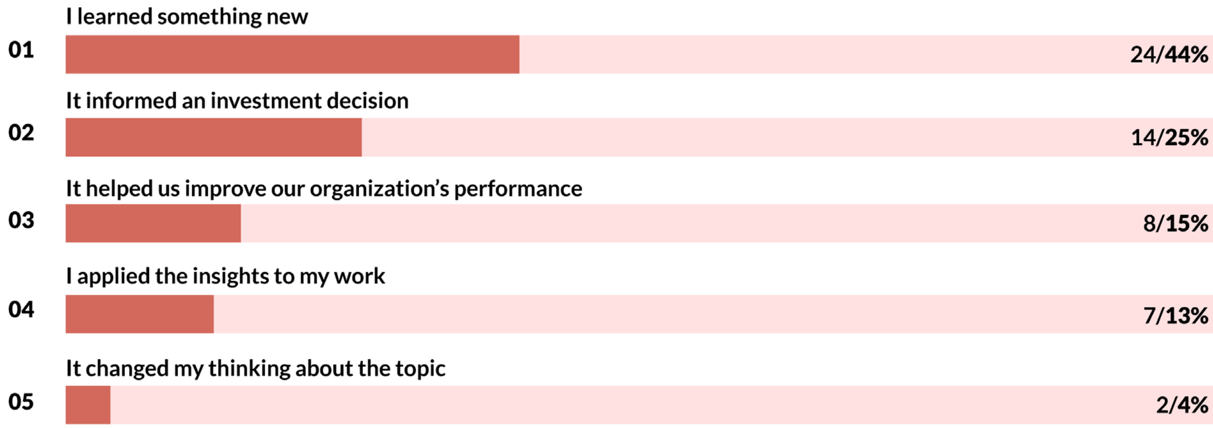

Figure 2.14 : The value of the Catalyst Fund pubications for the Catalyst Fund

A strategy shift from learning to influencing was necessary to capitalize on the body of knowledge gained

After two years of Catalyst Fund we took stock of our activities, our achievements, and our alignment with our stakeholders. Thanks to our close relationship with our funders and the Investors Advisory Committee, we used the mid-term program evaluation to better understand how Catalyst Fund was meeting its mandates both for venture building and for knowledge building. We determined that the venture-building model worked extremely well, and that there was an opportunity to refine the model by deepening the learning around investment theses and pathways for the model to scale.

The emphasis of the program after laying the groundwork needed to refocus from mostly learning to mostly sharing and influencing. Thus the mid-term marked our own shift, and that of our donors, from a dissemination strategy to an influence strategy to use the knowledge-building strategy to ignite ecosystem actors, in particular by crowding in funders to inclusive fintech.

This shift led to three changes to our sharing and synthesis approach. First, we reprioritized our primary stakeholders in knowledge building from the fintech companies to the investors and donors, while continuing to disseminate our lessons and resources to fintech companies and accelerators. Second, we focused our synthesis from direct, operational-level learning to industry-level and market insights, which were more relevant to engage investors. Finally, we extended our role of matchmakers between fintech companies and investors to create relevant networks that touch each other and facilitated the connections between them: our portfolio of CEOs, the IAC, our Circle of Investors, and developing relationships with strategic partners (providers such as banks and learning/capacity-building organizations).

Going forward, we identified an opportunity to expand our demonstration and influence activities to engage investors both globally and locally, as well as banks. Engaging and educating commercial and local angel investors as well as incumbent institutions in emerging markets might result in more capital and talent crowding into this space.

"[Catalyst Fund] could help investors to understand how to do good product market fit … even training investment managers on what agile is. Most seed investors don't know what this is. Organize impromptu meet-ups and meet local investors to help mystify risk, there is a ton of value in this."

Monica Brand Engel, Partner, Quona Capital

"[Catalyst Fund's] tailored technical assistance is the secret sauce - we see that reflected in the entrepreneurs' progress, in the blog posts about UI/UX, bringing in investors in a more hands-on way; this helps with our forward-looking investment thesis."

Scott Onder, Senior Managing Director, Mercy Corps Social Ventures

Recommendations for Synthesis & Sharing

Activities/features to keep	Activities/features to improve	New activities/features to consider
Continue to build knowledge base on our areas of differentiation: value proposition and good design at its core	Amplify our reach by setting up the portfolio companies and other allies as concerted dissemination channels	Develop an evidence gap map in terms of industry learnings to develop investment theses that can address them and deepen digital financial inclusion
Continue refining frameworks and toolkits as new insights are gathered to keep them relevant and useful for the industry	Align upfront with all the stakeholders on the program on what their priorities for learning are	Share knowledge with impact and mainstream investors, local angels, and incumbent institutions to crowd in more capital to emerging markets fintech
	Balance direct learnings and higher-level learnings to ensure insights are relevant for a wider audience	
	Seek further media sources to build our brand and the brands of our accelerated companies	

03

Overall Perfomance

Program Performance

Total follow-on capital raised	Companies that raised follow-on capital	Total customers reached
US$25.66 million	80 percent	1.2 million

This section highlights key results in terms of Catalyst Fund's program design, execution and outputs as well as individual startup performance.

3.1 Startup Performance

Survival and Completion Rates

Startup growth among the companies has generally been positive. Only two startups shut down operations in the second half of 2018, and one company was acquired shortly after completing the program in early 2018. When compared with similar startups in the GALI database, **the survival rate for Catalyst Fund companies is 85 percent, compared with the GALI average of 69.1 percent.**

The program **completion rate for Catalyst Fund companies is 100 percent vs. 74 percent for GALI companies.** Although our portfolio of companies is much smaller, the difference is worth noting to ensure that we are on the right track. For the remainder of this section, our analysis will exclude the companies that were shut down or acquired.

Employees

At an aggregated level, the number of employees has risen, indicating that companies are growing and expanding to respond to increased demand. **On average, companies increased their team sizes by 50 percent.** SokoWatch, an e-commerce platform that helps informal stores in emerging markets keep products in stock and access credit to grow their businesses, was an outlier as the number of its total employees grew from 32 to 137 in less than a year. Sokowatch employed a large sales team to ensure they could manage in-person interactions with shopkeepers who needed more assistance and assurance with using the platform. With this strategy, SokoWatch has reached over 3,000 stores across Kenya and Tanzania.

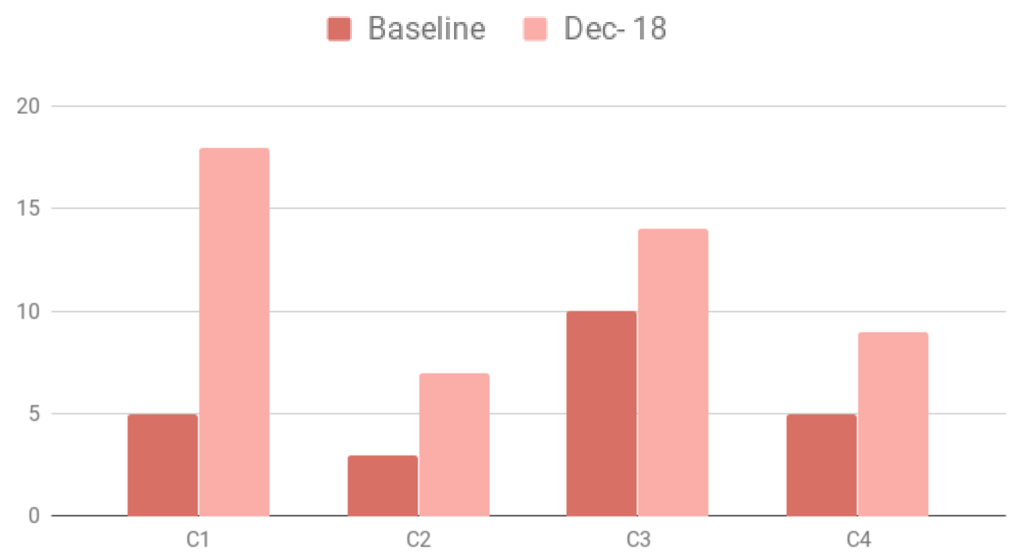

Figure 3.1: Average employees in the CF portfolio companies

Customers

Most companies have also reached larger numbers of customers after the program. The percentage change in customers reached before and after the program ranged from 15 percent to 5,233 percent, so it is hard to compare the companies with each other. Some companies did not "grow" as much because they are still focused on getting value propositions right for their customer base. Overall, **Catalyst Fund companies have reached over 1.2 million customers across 13 emerging markets.**

Three companies, Destacame, WorldCover, and Rukula were removed from the graph as they are outliers. They reached 1,153,000, 20,000, and 12,000 customers, respectively - over two years in the case of Destacame and WorldCover, and in the space of one year in the case of Rukula.

Companies with B2B models also reached a greater number of institutional clients. Most of them joined the program with very few partners and now have active integrations with up to 12 enterprises in their target markets.

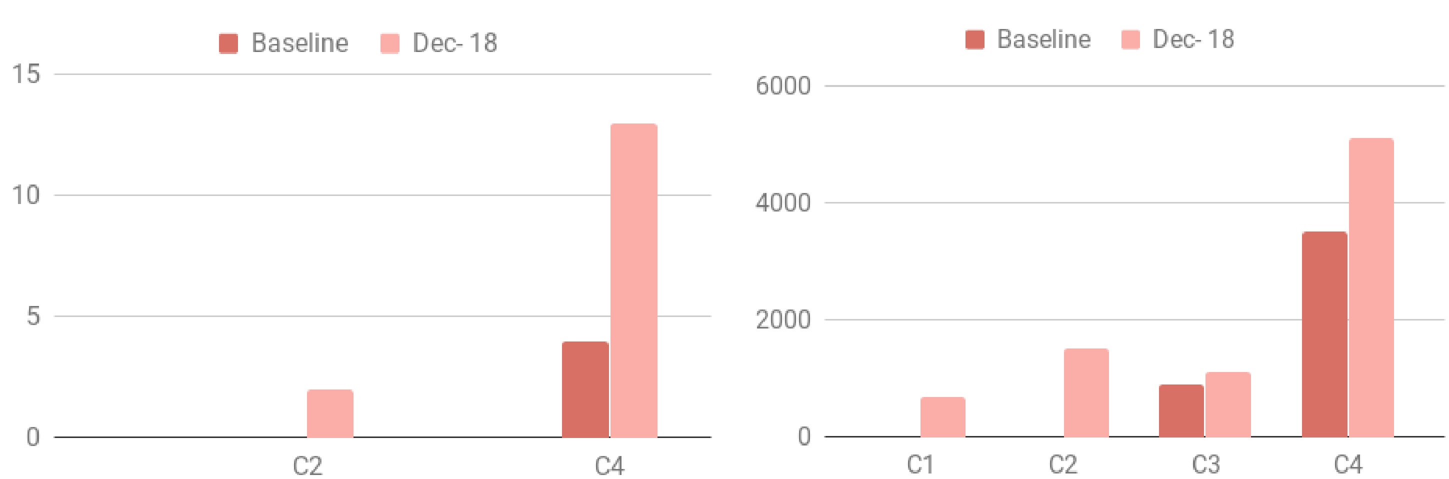

Figure 3.2 : Company client growth per cohort

3.2 Financial Performance

The investment raised by our startups is used as a proxy for evaluating value for money of the Catalyst Fund. We consider the financial return on total investment (ROTI) to determine the net increase in funding per startup for every dollar spent in running the program. By the end of the program - December 2018 - Catalyst Fund had a ROTI of US$8.01. In other words, **for every US$1 put into supporting Catalyst Fund, a startup has raised US$8.01** [5] **on average.**

Raising follow-on funding is also an indication of whether the program was successful at de-risking and getting the startups investor-ready. To date, **80 percent of the startups have raised follow-on capital amounting to US$25.66 million,** with a median of US$843,813 raised per company. When compared with the GALI database, we found that Catalyst Fund companies have on average raised more in equity, debt, and grants than the average GALI financial services social enterprise. It is hard to draw a correlation between being part of Catalyst Fund and being able to raise more funding as a result, given that there are a number of other factors at play and our sample is too small to be significant. Yet the difference is striking, particularly for the average equity raised.

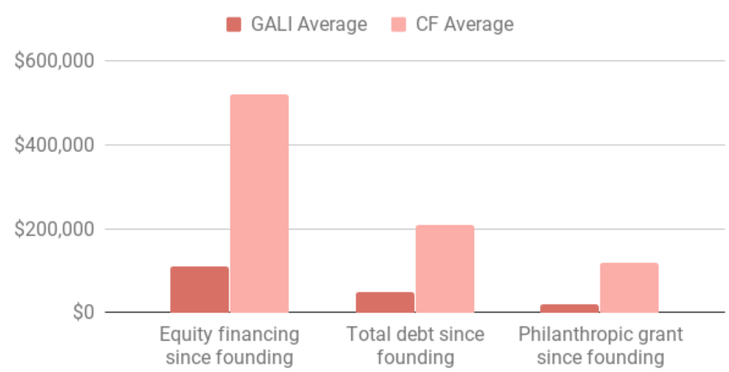

Figure 3.3 : Catalyst Fund performance vs GALI

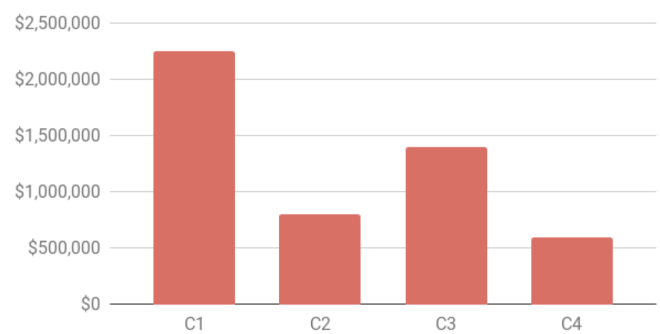

Figure 3.4 : Avg. Follow on funding per cohort - Dec 2018

> ***“It was a very clever solution, at the right time, and it resulted in a huge growth spurt for our business and follow-on investment.”***
>
> ***Catalyst Fund Startup CEO***
>
> ***“Catalyst Fund allows investors to get unique insights into the early stage fintech space.”***
>
> ***Alex Lazarow, Investment Director, Cathay Innovation***
>
> ***“CF’s TA program is unparalleled and is filling a gap in the market that others are not playing in; most technical assistance is beyond the reach and affordability of early stage startups and isn’t tailored to their specific stage and needs.”***
>
> ***Tahira Dosani, Managing Director, AVL***
>
> ***“Love this program. I would love to see us focus even more intensely on impact beyond the startup/investor pairs.”***
>
> ***VB Specialist, BFA***

CATALYST FUND

04

The Path Forward

Photo Credit: Leaf

The Path Forward

NPS	Experience with CF	ROTI
100	4.8 out of 5	US$8.01

Expanding access to and the usage of high-quality financial services for low-income consumers in emerging markets is critical to achieving the Sustainable Development Goals. The digital revolution has already changed the financial sector dramatically, as well as the way in which consumers access finance worldwide. Yet in spite of advancements in technology and infrastructure, 1.7 billion individuals still remain unbanked, and over 3 billion are underserved. Unlocking the benefits of digital financial inclusion will require more innovation and more collaboration across stakeholders. But the early-stage entrepreneurs - who would be the drivers of deeper innovation - are the ones who are facing the biggest barriers to accessing the capital and skills they need to succeed and often find themselves falling into a "valley of death".

Catalyst Fund was founded to solve this challenge. We supported promising early-stage inclusive fintech entrepreneurs with a combination of patient capital and venture-building support to overcome the valley of death. We have also gathered helpful lessons to build the knowledge base of stakeholders in this sector - startups, investors, policymakers, and donors - who can collaborate to catalyze more innovation to positively impact underserved communities.

Based on the data we gathered and on what we heard from program sponsors, investors, startups, and other stakeholders, we believe our efforts have been helpful to catalyze early-stage inclusive fintech and bridge the capital and talent gaps that stifle innovation. This demonstrates the power of philanthropic capital and the power of partnerships across stakeholders - donors, investors, private companies, and field experts - to expand the depth and breadth of impactful solutions.

Catalyst Fund received a net promoter score (NPS) of 100 from startups and a rating of 4.8 out of 5 on startups' overall experience with the program. We asked our startups to rank how they valued the services we offered and found that venture-building support was most valued, probably because they cannot get similar tailored support from other programs. Access to the Catalyst Fund network of investors and other like-minded entrepreneurs was also extremely valuable, particularly for CEOs who are not usually exposed to global investors, and for startups that are focused

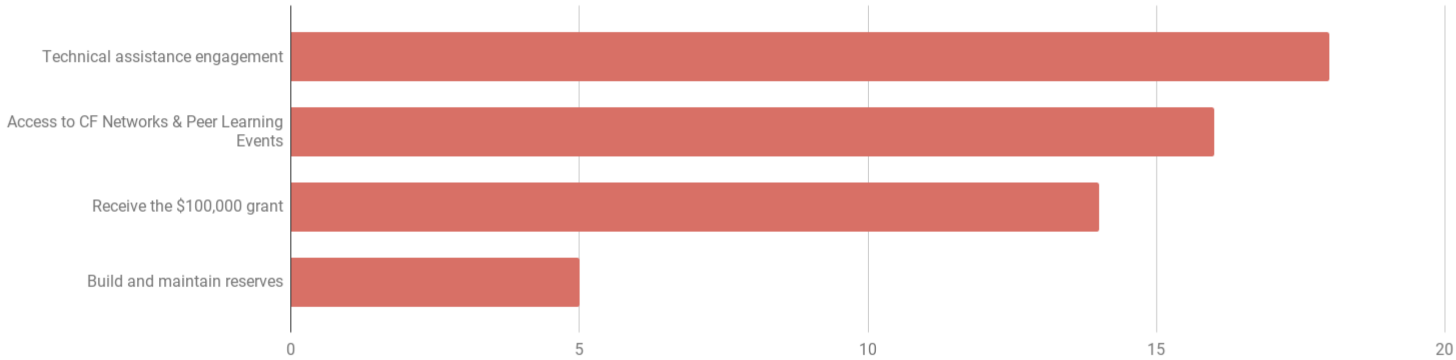

Figure 4.1: Services most valued by the Catalyst Fund portfolio companies

However, we have also learned that additional investment and support is needed to unlock the full potential of inclusive fintech in emerging markets. As part of our next version of Catalyst Fund, we will incorporate the recommendations provided by our partners to strengthen the model and continue to further our goals

Generate more knowledge for the sector by fostering deeper partnerships with investors, banks, and industry stakeholders to unlock more capital to early-stage companies and enable pathways to scale. Working with a network of fintech investors throughout the program has improved startups' chances of finding follow-on investment. Catalyst Fund could engage a larger set of ecosystem actors, including local angels, mainstream investors, and banks, so that more stakeholders expand their knowledge of how fintech can benefit the poor and more capital can be unlocked to inclusive fintech innovators.

Continue to improve venture building as a "lean machine". Catalyst Fund's tailored and hands-on technical assistance delivered by fintech and emerging-market experts is unique and helps ventures to focus on the proof points they need to be on a solid path to growth. Catalyst Fund will continue to make the venture-building support more agile by relentlessly focusing on experiments and proving hypotheses for startups to reach product market fit.

Incorporate the AAA lens to drive deeper impact. Catalyst Fund's commitment to impact ensures that companies build strong value propositions that are accessible, affordable, and appropriate (AAA) for underserved customers in emerging markets. However, measuring the inclusiveness of fintech solutions at the early stage is not easy, and startups need coaching throughout the process. Going forward, we will coach startups on lean measurement from the get-go and continue to gather proof-points for how companies are building AAA products and services for the

Share insights on successes and failures to benefit collective learning. Catalyst Fund's willingness to share its tools and learning from the portfolio companies benefits the sector and highlights gaps and opportunities to spur innovation for financial inclusion. The sector can benefit from lessons from the ground up on successes and failures, and Catalyst Fund will continue to share what we learn from both successes and failures.

Generate demonstration effects by selecting startups based on investment theses that uncover gaps and opportunities to collectively advance the sector, and complement our global work with regional deep-dives in strategic markets to leverage network effects and unlock pathways to scale for fintech innovators.

Develop roadmaps for program sustainability. Catalyst Fund has led to ten times higher investments on average for startups, generating US$8.01 in additional capital for every US$1 invested by the program - an attractive return on total investment. However, it is important that Catalyst Fund considers new models aimed at achieving sustainability in the long term, while maintaining its independence and focus on inclusive fintech and impact.

Endnotes

1 The companies we work with are high-growth ventures which target large, addressable markets and have disruptive business models with high growth and scale potential. The entrepreneurs are ambitious and willing to accept higher risks for high returns. However, given the nature of the environments in which these businesses operate, their failure rate is generally higher than that of other business classes.For more information, refer to: ***The Missing Middles: Segmenting Enterprises to Better Understand their Financial Needs. Oct 2018.***

2 Source: ***Accelerating Early-stage Inclusive Fintech Startups in Emerging Markets:Assessing the Landscape and Catalyst Fund's Model***

3 Source: ***Accelerating Early-stage Inclusive Fintech Startups in Emerging Markets:Assessing the Landscape and Catalyst Fund's Model***

4 Also referred to as technical assistance (TA) in this report.

5 Compared with the GALI average of US$2.93. For more information about ROTI, **Entrepreneurship & Acceleration: *Questions from the Field Return on Investment for Accelerators. April 2018.***

Annex I: Methodology & Evaluation Participants

Methodology

Evaluation purpose

As Catalyst Fund 1.0 completes its three-year journey, this evaluation aims to assess the program's setup, design, and execution, and its effect on startups and the ecosystem. It also aims to extract program-level and startup-level learnings and insights from which the industry can benefit, and offers suggestions for refining future elements of the program. The report evaluates 20 startups that formed Catalyst Fund 1.0. Information was gathered from a number of sources, including Catalyst Fund's own data and internal analysis, qualitative interviews with investors and startups, interviews and surveys with other Catalyst Fund partners and stakeholders (Circle of Investors and newsletter readers), and an external review by experts in this sector. Finally, this evaluation builds on the mid-term evaluation, which was presented to a panel of four external experts during a workshop to discuss lessons learned and areas for improvement.

This evaluation was executed by Catalyst Fund, leveraging an external coach and a panel of external peer reviewers. In recognition of the integrity, such a self-evaluation requires the

- Presenting a full set of unbiased evidence
- Assessing both positive and negative trends
- Using evidence to validate, and in some cases negate, hypotheses
- Demonstrating honesty, introspection, self-criticism, and a willingness to learn and improve.

Data gathering

This was a multiple-step process. Data gathering requests in the form of request sheets, surveys, and interview questions were first developed and then sent to the relevant recipients, who had roughly one month to respond to the remote data requests and surveys. Interviews were conducted during this month as well. Once data had been received and an initial run-through had been made, any follow-ups for clarification took another two

- **Quantitative data:** Data request sheets were developed for each startup, which consisted of standard business performance metrics and impact metrics tailored to the company's specific product and sector.

- **Qualitative data:** These were collected in two primary ways: interviews with startups and investors, and surveys for startups, specialists, circle members, and the wider Catalyst Fund audience. The interviews, which were conducted by an interviewer and note-taker from the Catalyst Fund management team, lasted between 60 and 90 minutes.

Data Analysis

- **Quantitative data:** Data points were used for comparative analyses among cohorts and benchmarking against GALI data, and were analyzed using Excel and STATA.
- **Qualitative data:** Notes collected during interviews were collated into a master sheet. Key responses were grouped into categories to form deeper insights. Quotes from interviews were also highlighted for use in the report.

Limitations of the Evaluation Methodology

There are factors that limit the evaluation. The following points highlight some of the challenges that might limit the data and its interpretation:

- **Diversity of Portfolio.** Each startup is different in terms of location and the product/service they offer. Products/services range from credit to insurance to savings, which means that there will be some differences in data points gathered for each startup.
- **Comparable Programs.** The uniqueness of Catalyst Fund's scope and delivery model might limit finding similar programs with which it could be compared.
- **Size of Portfolio.** With only 20 startups across four cohorts, Catalyst Fund does not have a robust group to evaluate startup performance.
- **Comparing Startup Digital Financial Services (DFS) to "Traditional" Models.** Through anecdotes and insights, DFS will be compared to brick-and-mortar services, MFI, community saving groups, cooperatives or non-governmental organisation (NGO) offerings, payday loans, and/or more traditional mass-market digital financial offerings. However, the comparisons may not have the robust or substantiated data to support the initial high-level conclusions, owing to a lack of available information. Note that for many cases the "traditional model" might be not accessing financial services or informal finance (family, friends, and local lenders).
- **Customer Insight.** Startup sizes are small, and asking them to perform detailed surveys to gather data from their customers might overwhelm them. While lean data gathering is a priority, there are limitations to the number of questions that can be asked. Furthermore, Catalyst Fund does not interface directly with customers.
- **Bespoke Services.** The activities that Catalyst Fund provides to the various startups differ based on their needs, and thus there might not be "like for like" comparisons across the portfolio in terms of services accessed and service delivery.
- **Stage of Portfolio.** Most of our startups are very early-stage in terms of their journey to product market fit, which means they undergo pivots throughout the program and encounter general roadblocks that can slow down operations. As such, it is difficult to gather meaningful unit economics and business metrics for the purpose of the evaluation.
- **Duration of the Catalyst Fund.** The facility is only three years into its work. The types of changes that would demonstrate substantial impact are yet to be realized in many cases. The startups that Catalyst Fund works with are mainly early-stage, and their customer base can range anywhere from five (B2B models) and 1.2 million (B2C models) clients.

Sources of Evaluation Methodology

Evidence is provided through data and information, and insights are provided by the startups themselves (and their customers where information is accessible and appropriate), investors, and Catalyst Fund staff. This includes information collected at the program's inception (baseline), ongoing reporting and learning captured, and data collection and interviews designed specifically

- Self-assessment forms
- Customer relationship management tracker metrics
- Sponsorship forms
- Exit surveys
- Risk assessments by startups and investors
- Tear sheets
- Learning Agenda Matrix Spreadsheet (Learning Scorecards and Learning Themes Heatmap (H-M-L))
- Emails, reports, internal documents
- Customer-level data
- CEO and investor interviews
- Specialist survey forms
- GALI data (used for external

Catalyst Fund Reports Referenced

- Internal mid-term evaluation report (May 2018)
- Accelerating Early-stage Inclusive Fintech Startups In Emerging Markets: Assessing the Landscape & Catalyst Fund's Model
- Proven Strategies for Making Fintech Inclusive

List of Evaluation Participants

IAC members

Tahira Dosani
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Vikas Raj
Managing Director, Accion Venture Lab

Bryan Cayce
VP Investments, Gray Ghost Ventures

Alex Lazarow
Investment Director, Cathay Innovation (Former Principal Investments, Omidyar Network)

Monica Brand Engel
Partner, Quona Capital

Johan Bosini
Partner, Quona Capital

Sheel Mohnot
Partner, 500 Startups

Jenny Johnston
Associate, Omidyar Network

Startups

Jorge Camus
Co-founder, Destacame

Nick Quintong
Co-founder & CEO, PayGo Energy

Christopher Sheehan
Co-founder & CEO, WorldCover

Jonathan Duarte
Co-founder & CEO, Escala Educacion

Kate Woska
Co-founder & CEO, Atikus

Felipe Cunha
Founder & CEO, ToGarantido

Yoann Berno
Founder & CEO, Flowigo

Miguel Duhalt
Co-founder & CEO, Comunidad 4Uno

Rohit Bhatia
Founder, PayLatr

Mark Straub
Co-founder & CEO, Smile Identity

Ruchit Garg
Founder & CEO, Harvesting

Nat Robinson
Co-founder & CEO, Leaf Global Fintech

Frank Schutte
Co-founder & CEO, MobiLife

Tori Samples
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Serge Raemaekers
Founder & MD, Abalobi

Rajkumar KVM
Co-founder & MD, payAgri Innovations

Reeza Zarook
Founder, Rukula

Ben Lyon
Co-founder & CEO, Hover

Kaivan Sattar
Co-founder & CEO, Asaak

Jess Shorland
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Edward Egwalu
COO, Asaak

Alexander Albuquerque
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Founder & CEO, Sokowatch

Vitor Kneipp
Co-founder, Banco Maré

BFA Specialists

Ashirul Amin
Data scientist

Kevin Rejko
Tech engineer

Anne Gachoka
User researcher

Kunal Garg
Product manager

Gabriel White
UX designer

Matt Grasser
AI specialist

Gabriela Zapata
Mexico financial sector specialist

Michelle Hassan
User researcher

Jacob Winiecki
PAYgo energy specialist

Sebastian Barrera
UX designer

Javier Linares
Product manager

Wajiha Ahmed
User and UX researcher

Overall guidance and advisory

Adam Sorensen
Program Officer, Financial Services for the Poor, Bill & Melinda Gates

Colleen Briggs
Executive Director, Community Innovation, Corporate Responsibility, JPMorgan Chase & Co.

Anne Romatowski
Vice President, Global Philanthropy, JPMorgan Chase & Co.

Chris Page
Executive Vice President, RPA

Caren Holzman
Founder & Director, Enabling Outcomes

Mid-term evaluation panelists

Ignacio Mas
Executive Director, Digital Frontiers Institute

Xavier Faz
Senior Financial Sector Specialist, Customer & Provider Solutions, CGAP

Dave Kim
Program Officer, Financial Services for the Poor, Bill & Melinda Gates Foundation

Ryan Falvey
Former Senior Director, Financial Solutions Lab at the Center for Financial Services Innovation

Mid-term evaluation discussants

Scott Onder
Sr. Managing Director, Mercy Corps Ventures

Miljana Vujosevic
Director, Impact Investments - Social Purpose Businesses, Prudential Financial

Amit Lubling
Partner, Prehype

Malika Bhandarkar
Global Fund Manager and Coordinator, Innovation Facility, United Nations Development Program

Miguel Granier
Founder/Director, Invested Development

Annex II: Catalyst Fund's Portfolio

Destacame is a digital financial management platform offering an alternative credit scoring system that gives users control over their data to improve their financial health.

Chile, Mexico | Low-income customer without credit

PayGo Energy is a cookstove solution and distribution system that enables customers to access clean and efficient fuel at a low price.

Kenya | Low-income households | B2C | Payments

Atikus is a SaaS company that helps financial institutions to better identify, quantify, and mitigate their operational and credit risks.

Comunidad 4Uno is an online platform that distributes tailored financial products, such as insurance and debit cards, to low-income and financially excluded domestic workers in Mexico.

Mexico | Domestic employers | B2B2C | Insurtech

WorldCover provides crop insurance to farmers in Africa to protect against loss of yield, by using satellites to monitor rainfall and trigger payouts automatically.

Ghana | Farmers | B2B2C | Insurtech

ESCALA offers automated savings plans to increase access to higher education for low- and middle-income families. Customers also receive additional benefits, such as matching funds from their employers, savings and career advice, and discounts at designated educational institutions.

Colombia | Low and middle-income families | B2B2C | Savings

Flowigo provides SaaS services for inventory, customer review and other business management functions, to small African businesses by integrating with Africa's top services and automating workflows.

Kenya | Solar distributors and lenders | B2B | SaaS

PayLatr is a recurring micro-credit mobile platform offering interest-free monthly credits to low-income households in India to easily pay for retail transactions without cash, credit cards or other pre-paid means.

India | Low-income households | B2C | Digital lending

Smile Identity

Smile Identity uses computer vision, machine learning, human review and local integrations to provide a complete KYC and user identification solution for mobile-first frontier markets.

Africa | FSPs | B2B2C | Digital ID/KYC

HARVESTING

Harvesting is building an Agriculture Intelligence Engine to bring speed, accuracy, and transparency to agri-businesses and financial service providers to deepen the financial inclusion of farmers around the world.

Global | Agricultural stakeholders | B2B | SaaS

Tô Garantido .com.br

ToGarantido acts as an insurance broker that offers insurance solutions and health services through a technological platform based on Artificial Intelligence and advanced data analytics resources.

Brazil | Low-income households | B2C | Insurtech

MobiLife

MobiLife is Africa's first 100% "built for mobile" life insurance, using the power of smartphones to bring effective insurance solutions to low-income consumers.

South Africa | Low-income households | B2C | Insurtech

Abalobi, a fisher-driven mobile app suite, offers a "hook to cook" solution to fishermen and other stakeholders in the fisheries value chain, giving fishermen the ability to set fair selling prices via a marketplace and track a verified digital income stream to access other financial services.

Rukula offers small loans for household consumer durables and electronic items to Sri Lankan financially excluded communities to enhance their quality of life.

Sri Lanka | Low-income households | B2C | Digital lending

asaak

Africa's only collateralized mobile fintech lender and Uganda's first digital lender, **Asaak** offers African entrepreneurs and farmers access to quick, mobile-based collateralized credits.

Uganda | Low-income farmers | B2C | Digital lending

SOKOWATCH

Sokowatch enables informal retailers to order products, anytime via SMS or a mobile app, and receive free same-day delivery of goods to their store. This makes it easier for shopkeepers to source goods and helps manufacturers ensure that their products are consistently available to consumers.

Leaf Global Fintech is a virtual bank serving the stateless and excluded. It offers cross-border asset storage and transport via a mobile platform, which enables the conversion of cash into stable investments through blockchain technology.

Rwanda | Refugees | B2C | Payment

PayAgri is an agri-fintech startup that brings together key players in the Indian agriculture value chain to facilitate trade and funding flows. PayAgri's platform connects farmers and buyers by removing inefficiencies in the value chain, such as middlemen, cash-based transactions and misinformation.

Hover makes USSD-based services more affordable to illiterate and innumerate segments by enabling end-users to interact with financial and informational services via graphical user interfaces.

Global | Mobile money provider | B2B | Payment

Banco Maré offers affordable, secure and scalable digital financial services to low- and moderate-income people living in the Favelas using blockchain technology.

Brazil | Low-income populations in the favelas | B2C | Payment

Annex III: Catalyst Fund Learning Agenda Publications

Learning bucket 1: 10x better value proposition

Key question: How can digital products be 10 times better than the traditional/ MFI ones?

Building trust in digital financial services

- How Do We Increase Trust and Engagement in the Low-Income Customer's Journey
- Why Low-Income Families Don't Send Their Children to College. Hint: It's Not Always About Money
- Early insights on incentivizing Indian customers to go cashless
- In Digital Financial Services We Trust
- Harnessing UX to Test-Drive New Products
- Two Problems, One Solution: How Fintech is Boosting Access to Banking and Insurance for Domestic Workers in Mexico (Spanish version)
- Fintech finds a way to reach domestic workers with financial services in Mexico (Spanish version)
- How do we help Colombian Families Save for College?
- How Can Insurance Help Smallholder Farmers?
- Inclusive Fintech: Four Lessons for Optimizing Customer and Tech Journeys

Six steps for a smart AI strategy

- Machine Learning Meets Credit Scoring: How it Can Help Reduce Loan Delinquency Costs
- What does Machine Learning Have in Store for Inclusive Fintech Startups?
- Racing into Machine Learning: Data Readiness and the Developing World
- How can fintech startups engender trust and best leverage AI and ML for the next generation of financial products?
- Next Steps to an Intelligent AI Strategy: The AI Readiness Toolkit
- The AI-Driven Bank in Emerging Markets

- An Interview with Alex Lazarow of Omidyar Network
- The Intelligent Bank of the Future
- How are Fintech Startups Leveraging Data and Innovative Business Models to Reach Low-income Customers?

Building something customers want

- How Catalyst Fund and PayGo Energy Built the Base of a Micro-Payment Architecture
- Tracking Churn to get to Profitability
- Next-level computer vision: When off-the-shelf software options don't cut it
- Timing isn't quite right for SaaS startups in Africa
- Why We Invested: Meet the newest Catalyst Fund Companies: What we're seeing in insurtech and digital credit
- Why Low-Income Families Don't Send Their Children to College. Hint: It's Not Always About Money
- How Fintechs Can Provide Meaningful Products to Brazil's Thriving Favelas
- How can Digital Financial Products Be 10 times Better To Deepen Financial Inclusion?
- Three Powerful Tools for Fintech Practitioners
- What Does Access to Affordable and Clean Cooking Fuel Look Like?
- Delivering Modern Energy in Kenya, Building on Mobile Money

Learning bucket 2: Limiting factors

Key question: How are DFS companies overcoming barriers to reach everyone with suitable products?

- 5 Barriers Holding Back Fintech Entrepreneurs
- How Fintech is Changing Lives in the Global South
- Three Key Ways that Inclusive Fintech Companies Deepen Financial Inclusion
- Building Trust, Engagement, and Loyalty: Five Ways to Innovate Like a FinTech
- Risky business: how to de-risk your fintech startup before it's too late
- Four Hiring Strategies for Social Ventures to Find and Keep Talent
- Four Steps to Being Agile for Fintech Companies

Learning bucket 3: Ecosystem and Partnerships

Key question: What factors make ecosystems favorable for DFS and how are startups partnering with incumbents?

- How social entrepreneurs can strike partnerships with big companies
- What Banks Don't Know is That I Do Pay My Bills
- Accelerating to Investment: Four Strategies for Securing Follow-on Funding for Fintech Startups
- Early insights on incentivizing Indian customers to go cashless

Learning bucket 4: Facility

Key question: How can we best combine investors, consultants and donors to improve the facility and deliver maximum value to the startups? How is the Facility helping startups overcoming key challenges and risks?

- What is the Investment Climate for Fintech in Emerging Markets?

- An Interview with Tahira Dosani and Vikas Raj of Accion Venture Lab
- Meet the Five Startups Shaping the Future of Inclusive Fintech in Emerging Markets
- Why We Invested: Meet the newest Catalyst Fund Companies
- Three Inside Networking Tips for SOCAP 2018
- Three Essential Tips for Winning Over Investors at SOCAP 2018 and Beyond
- Don't be THAT CEO
- Our SoCAP 16 ReCAP
- Three Ways Social Entrepreneurs Can Increase Their Fundraising Luck at SOCAP
- Getting Early-Stage Fintech Startups Investment-Ready
- SOCAP Conversations: The State of the Inclusive Fintech Field
- What have we learned about catalyzing inclusive fintech startups so far?
- What are Fintech CEOs saying about the future of inclusive fintech?
- How can investors use machine learning to pick the right startups?
- Welcoming Sheel Mohnot to the Catalyst Fund Investors Advisory Committee
- A Tale of Two Catalyst Funds

Industry-level publications

- Accelerating Early-stage Inclusive Fintech Startups in Emerging Markets: Assessing the Landscape and Catalyst Fund's Model
- Infographic: Why Inclusive Fintech Works
- Proven Strategies for Making Fintech Inclusive
- Video: Accelerating Inclusive Fintech

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