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# Catalytic Capital

## Unlocking more investment and impact

A TIDELINE PUBLICATION WITH SUPPORT FROM THE
JOHN D. AND CATHERINE T. MACARTHUR FOUNDATION

TIDELINE

**Tideline authored this research report to provide the impact investing community with greater clarity on 'catalytic capital'. This report aims to provide a broad overview of the state of practice for catalytic capital and, in so doing, create a foundation for existing and potential investors to expand and improve on their use of this important tool. The report was commissioned by the John D. and Catherine T. MacArthur Foundation, a proponent of catalytic capital both in its own investments and in the field of impact investing broadly.**

**About Tideline**
Tideline is a specialized consulting firm that provides tailored advice to clients developing impact investment strategies, products, and solutions. Tideline's mission is to help clients excel in realizing financial and societal value. The firm's clients include financial services firms, institutional foundations, family offices, community development financial institutions, and NGOs. In addition to helping clients devise investment, organizational, and product strategies, Tideline works with field builders in impact investing to conduct custom research on market-level challenges.

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**About the John D. And Catherine T. MacArthur Foundation**
For more than three decades, the MacArthur Foundation has used impact investing as one of many tools to advance its social and environmental goals. Over this time, the foundation has made more than 250 catalytic capital investments, supporting initiatives that deliver valuable services to low-income communities and facilitating the flow of patient, flexible, risk-tolerant financing to promising opportunities that struggle to attract more conventional capital.

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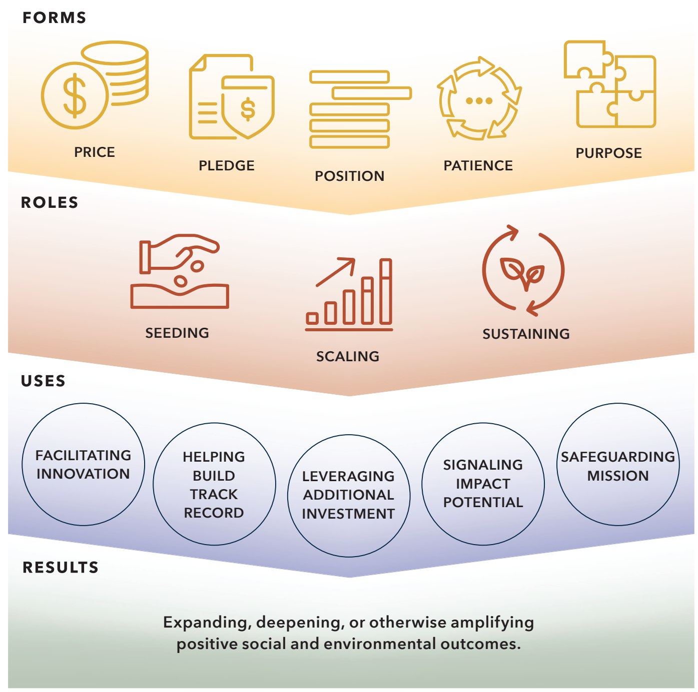
# EXECUTIVE SUMMARY

The amount of capital in impact investments targeting both measurable, positive impact and market-rate, risk-adjusted returns has increased substantially over recent years. This growth has spurred greater recognition that capital is also needed across a broad spectrum of risk-return profiles if impact investing is to achieve its full potential in addressing the world's most pressing social and environmental issues. Catalytic capital is critical for enabling impact investing to continue to drive deep impact, reach new sectors and geographies, and mobilize the trillions of additional private sector investment needed annually to achieve the UN Sustainable Development Goals (SDGs).

- The accompanying report aims to provide a broad overview of the state of practice for catalytic capital and, in so doing, create a foundation for existing and potential investors to expand and improve on their use of this important tool.
- We define catalytic capital as debt, equity, guarantees, and other investments that accept disproportionate risk and/or concessionary returns relative to a conventional investment in order to generate positive impact and enable third-party investment that otherwise would not be possible.*
- The report introduces the *Pathways to Impact* framework, which seeks to guide investors who deploy catalytic capital in a variety of contexts in clarifying the rationale for their catalytic investments. The framework builds on the work of others, including the MacArthur Foundation and the "Impact Investing 2.0" research by Clark, Emerson, and Thornley (2013), to help investors articulate, on a consistent and comparable basis, the **forms** of risk or return concession included in the investment structure (e.g., a subordinated position or long/uncertain duration); the **roles** catalytic capital is expected to play in supporting the investee (e.g., seeding early-stage innovations or scaling impact business models); and the specific **uses** of that capital by the investee (e.g., building track record or leveraging additional investment).
- Typical catalytic capital investors are driven by their mission, values, or an investment mandate that requires them to prioritize impact and include charitable foundations, public development institutions, family offices and high net worth individuals, and select corporations and corporate foundations.
- Capital willing to accept disproportionate risk and/or concessionary returns is in short supply and can have market-distorting effects if not deployed appropriately. Evaluating potential positive and negative impacts of catalytic capital (including its built-in financial concession and the activities it supports) is essential to its effective use.
- Catalytic capital plays a critical role in filling financing gaps for impact enterprises that conventional capital cannot. The report synthesizes prevailing research and practices and thereby aims to inform and inspire greater use of catalytic capital globally.

**CATALYTIC CAPITAL: PATHWAYS TO IMPACT**

Catalytic capital accepts disproportionate risk and/or concessionary return to generate positive impact and enable third-party investment that otherwise would not be possible.



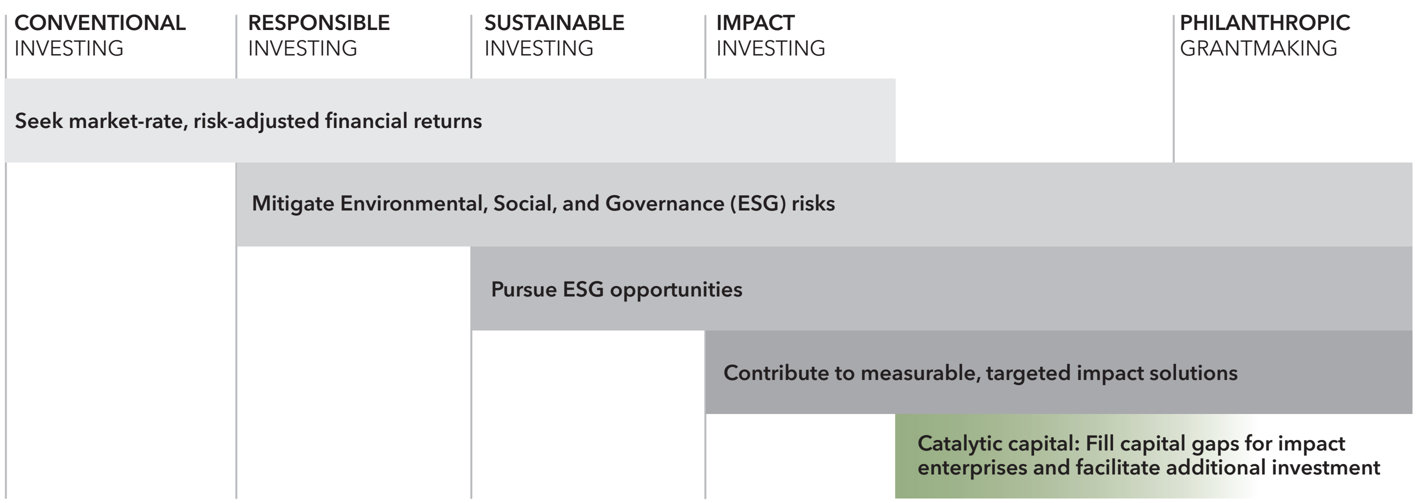

*Though grants can also be important catalytic instruments, the focus of the analysis in the report is investment capital.

# INTRODUCTION

In recent years, mainstream investors seeking market-rate, risk-adjusted returns alongside positive social impact have come to dominate growth in impact investing.[1] However, for decades, investors willing to make financial concessions to achieve positive impact have been essential to the impact investment market's development.[2] The growing appeal of a narrative that emphasizes the possibility of market-rate returns alongside positive impact carries with it the risk of obscuring the ongoing importance of the broader spectrum of capital these pioneering investors have helped create.[3] *Catalytic capital* is a critical financing tool these investors use to support impact when market-rate returns are not possible or appropriate, to enable access to additional capital for investees, and to increase the opportunity set of impact investments available to more conventional investors.

Increased recognition of the unique roles that such flexible, concessionary capital can play in driving impact through investment comes at a crucial time.[4] Private investment is a key component of the capital needed to achieve the UN Sustainable Development Goals (SDGs) but, without the enabling and de-risking effects of catalytic capital, is unlikely to flow to those sectors and geographies where it is most needed.[5] Indeed, without catalytic capital to seed new impact enterprises, develop market infrastructure, and support the entry of new investors through blended finance, the flow of needed capital to some sectors and geographies may take much longer, or not happen at all.[6] Catalytic capital has been instrumental in building pathways for private, commercial investment to support lasting impact and scale in sectors such as US community development and global financial inclusion, for example.[7]

**POSITIONING CATALYTIC CAPITAL IN THE BROADER SPECTRUM OF CAPITAL[8]**



The term catalytic capital has been employed in different, nuanced ways over the years. In the interest of building on those uses and moving the conversation forward, we define catalytic capital as debt, equity, guarantees, and other investments that accept disproportionate risk and/or concessionary returns relative to a conventional investment in order to generate positive impact and enable third-party investment that otherwise would not be possible. The report focuses on investment capital rather than grant capital.[9]

While many publications discuss specific uses of catalytic capital (for example, at a sector or thematic level, or in the context of investment intermediaries or instruments), this report seeks to provide a broader overview of the state of practice for catalytic capital and, in so doing, create a foundation for existing and potential investors to expand and improve on their use of this important tool.

The report covers the following topics:

- **Deploying catalytic capital**
- **The market landscape for catalytic capital**
- **Assessing benefits and risks of catalytic capital**

*The Pathways to Impact* graphic in the first section introduces a consolidated framework that incorporates the forms, roles, and uses of catalytic capital. In addition, the appendix of this report includes other market frameworks helpful for both investors and recipients in understanding when and how to use catalytic capital. An annex to the report includes a broader bibliography of publications related to the concept of catalytic capital.[10]

Much remains to be known about the most efficient and effective ways to invest catalytic capital. Leadership and coordination by pioneering catalytic capital investors will be needed to drive greater adoption of the tool by more investors, along with additional research and clarity on when and how catalytic capital can be best used.

## A LEXICON OF TERMS

"Catalytic capital" is closely related to other terms in use, including *concessionary capital*[11], *impact-first capital*[12], *subcommercial capital*[13], *flexible capital*[14], *and patient capital*[15]. Each of these terms refers to investments that are distinct from "market-rate" impact investments in that they have expected financial returns that are explicitly "below-market-rate"[16] or are affected by the significant uncertainty of an unproven enterprise, market, or innovation.

The term *catalytic capital* puts additional emphasis on the role such financing plays in enabling or 'catalyzing' investors that may not otherwise have made an investment *but for* the catalytic capital invested and in generating impact that would not otherwise have been possible.

For many private foundations in the US, program-related investments (PRIs) are a common instrument for deploying catalytic capital, since the tax code allows PRIs to count towards a foundation's annual distribution requirement, provided: (1) the capital is deployed with the foundation's charitable goals as the primary purpose and (2) financial return is not a significant purpose.[17]

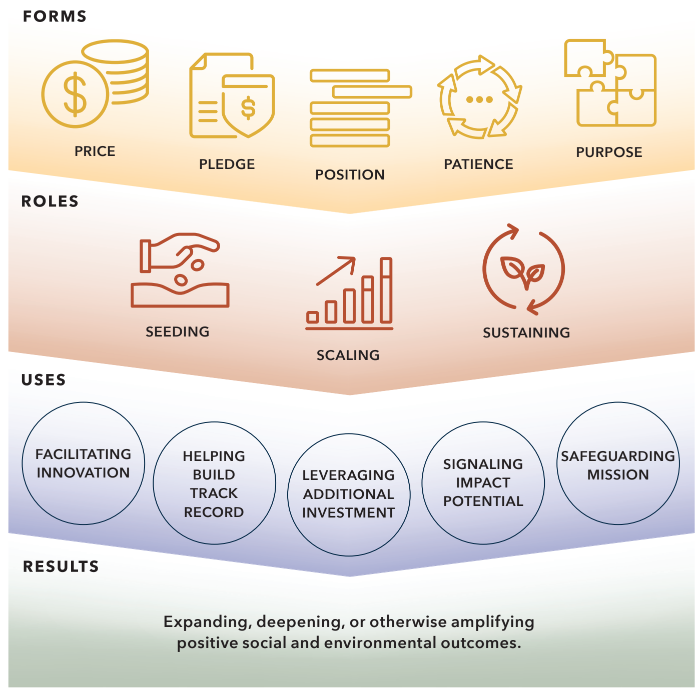
Catalytic capital is also an essential component of other broader domains of impact investing, including:

- *Innovative finance,* which is focused on raising additional capital to target positive social and environmental impacts through introducing new financial products, extending existing financial products to new markets, and/or bringing in new investors.[18]
- *Blended finance,* a form of innovative finance focused on using catalytic capital from public or philanthropic sources to structure investment opportunities with acceptable risk-return profiles for private sector investment that further the SDGs in both emerging and developed markets.[19]
- *Frontier finance,* which often makes use of blended finance and is focused on the need for risk capital for small and growing businesses in emerging markets that often are "too big for microfinance, too small for private equity, too risky and lack sufficient collateral for commercial banks, and lack the growth trajectory that venture capital seeks."[20,21]

# DEPLOYING CATALYTIC CAPITAL

With growing recognition of the importance of catalytic capital also comes the need for more clarity and guidance for investors regarding how and when to deploy catalytic capital. Drawing on existing literature, including the "Five P's" previously articulated by the MacArthur Foundation and the "Impact Investing 2.0" research by Clark, Emerson, and Thornley (2013), the *Pathways to Impact* graphic is an attempt to convey the forms catalytic capital can take, the roles it can play in supporting enterprises, and the concrete ways it can be used to achieve its intended impacts. By defining these distinct forms, roles, and uses of catalytic capital, it aims to provide investors with a structure for clarifying the purpose and positioning of their catalytic capital investments on a consistent and comparable basis. It also forms a foundation for further research and exploration.

**CATALYTIC CAPITAL: PATHWAYS TO IMPACT**
Catalytic capital accepts disproportionate risk and/or concessionary return to generate positive impact and enable third-party investment that otherwise would not be possible.




## FORMS OF CATALYTIC CAPITAL

Catalytic capital can be deployed using any traditional financial instrument, including debt, equity, hybrid debt/equity instruments, or guarantees. Investors can deploy catalytic capital directly to an enterprise or project or indirectly through a fund or other intermediary. When traditional instruments are used as catalytic capital, they are structured to accept disproportionate risk and/or concessionary (expected) financial returns relative to the conventional requirement of market-rate, risk-adjusted returns. The motivations behind the concessionary feature are to drive greater positive impact and enable third-party investment that otherwise would not be possible.

> *"Catalytic capital—sometimes in concert with public subsidies and grants—is often needed to make high-impact transactions suitable and attractive for a broader range of investors."*
>
> **DEBRA SCHWARTZ, MACARTHUR FOUNDATION**[22]

The appropriate financing structure in any given instance will depend on the specific needs of the investee, the flexibility of the capital provider, and the requirements of other more conventional investors seeking to participate.[23]

The concession built into catalytic capital may take a variety of forms, as described by the "five P's" below:[24]

**Price** – accepting an expected rate of return that is below-market relative to expected risk

**Pledge** – providing credit enhancement via a guarantee

**Position** – providing credit enhancement via a subordinated debt or equity position

**Patience** – accepting a longer or especially uncertain time period before exit

**Purpose** – accepting non-traditional terms to meet the needs of an investee (unconventional or no collateral, self-liquidating structures, smaller investment sizes, higher transaction costs, etc.)

Such forms of concession can be built into traditional financial instruments:

- **Debt** instruments (loans and bonds) can be concessionary in various ways, including through below-market interest rates, flexible repayment timelines or generous grace periods, relaxed collateral requirements, and/or less rigid underwriting guidelines than those used by traditional lenders.
- **Equity** instruments can include concessions such as willingness to invest in impact enterprises or investment intermediaries with limited track records, acceptance of significant uncertainty of return of capital relative to potential return on capital, a subordinated position designed to absorb losses before other investments, and/or longer or undefined exit timing compared to traditional equity investments.
- **Hybrid** instruments may take the form of debt instruments with equity characteristics or equity instruments with debt characteristics. Examples include convertible loans, royalty-based lending, redeemable equity, and preferred shares. In addition to the types of concessionary features applicable to debt and equity, a catalytic capital investor may use a hybrid instrument to offer an investee a growth- or revenue-based repayment mechanism to help it manage volatility in revenue.[25]
- **Guarantees** and risk insurance are common instruments used by catalytic capital investors to provide assurance of principal repayment to other investors in the case of default.[26] Such credit enhancement can be a capital-efficient way for catalytic capital investors to enable investment by others, since capital is only drawn if a credit event occurs. Concessions may include a higher loss coverage ratio than conventional lenders would provide or a reduced fee for the guarantee.

In addition to being deployed directly into an enterprise or project, catalytic capital can also serve an important purpose when invested into a fund or other pooled investment vehicle to align the investment requirements of its investors with the needs of its underlying portfolio companies or other investees. Such blended finance funds use catalytic capital strategically to channel greater amounts of capital to enterprises by providing conventional investors access to an aggregated portfolio of underyling investments that otherwise would not meet their target requirements. Therefore, the terms of catalytic capital invested into a fund, and the structure and terms of the fund itself, depend not only on the underlying needs of investees, but also on the risk-return appetite and liquidity requirements of other investors likely to participate.

In these funds, investors of catalytic capital generally accept higher levels of risk without expectation of commensurate return in order to attract other investors, typically by taking a junior or subordinated position in the capital structure with an equity or debt investment, or by providing guarantees or other insurance to senior investors. Upon exit or distribution of proceeds, investors of catalytic capital will often be first in line to absorb some or all of any losses incurred, allowing other investors to benefit from a greater share of any financial returns.

Blended finance vehicles can also be structured to help align liquidity and term requirements between investors and underlying investees by using catalytic capital to fund or supplement liquidity reserves, or to guarantee other investors exit rights in the absence of a functioning secondary market.[27] In addition, some catalytic capital investors have supported other fund structures as alternatives to standard closed-end funds. Evergreen funds and holding companies, for example, can provide investors dividends and appreciation on an ongoing basis rather than relying on exits of underlying assets.[28] Such permanent capital vehicles are one way for catalytic capital providers to direct more patient, long-term capital to impact enterprises.

## ROLES OF CATALYTIC CAPITAL

Catalytic capital investors, with their willingness to invest for impact where other investors will not, can fill capital gaps for investees at various stages of their development. For some enterprises and funds, capital is needed early on as a business model is being refined and before a track record can be developed. For others, catalytic capital is key to supporting impact-oriented growth or raising capital in greater amounts than philanthropic dollars will provide. Still others rely on catalytic capital on an ongoing basis to support business models with important demonstrated impacts that are not financially sustainable without subsidy. The section below summarizes roles catalytic capital can play at different stages of an enterprise or fund's lifecycle.

**Seeding** – Fledgling impact enterprises often need early-stage capital to fund operations but may struggle with uneven cash flows and a long runway to profitability. Catalytic capital can provide essential support to impact enterprises that either have not yet achieved breakeven or have slim operating margins.[29] These impact enterprises may need time to test and refine their business models and/or to adapt to serving new geographies or previously underserved populations.[30] Grants are often important for impact enterprises at this stage, but patient equity and convertible debt can be useful instruments for overcoming early-stage challenges as well.[31]

ACUMEN

In 2007, Acumen made a $1.5 million[32] equity investment (along with technical assistance) to support the early-stage development and expansion of Dial 1298, a service provided by Ziqitza Healthcare Limited (ZHL) for low-income customers in Mumbai. Acumen's investment assumed "greater risk than the financial return would justify," but the long duration of an equity investment afforded the enterprise time to refine its operating model and gain market traction.[33] Acumen continued to support the firm with equity and debt investments in subsequent rounds of funding (investing $2.6 million in total) and Dial 1298 has gone on to raise additional debt investments to fund its growth from financial institutions both inside and outside of India.[34]

**Scaling** – Impact enterprises may have the potential to multiply their impact with capital structured specifically to help them scale and/or replicate their business.[35] Catalytic capital can help impact enterprises realize economies of scale and reach new geographies and population segments. Concessionary debt, equity, and hybrid instruments are often used for this objective.[36] Catalytic capital that aims to de-risk and leverage investment from other investors can also be critical to supporting scale.

Norfund

In 2017, Norfund approved a $2.75 million loan to Nyama World, a supplier of high-quality meat in Malawi, helping the company expand its domestic business, build exports to neighboring countries, and target markets in the Middle East. Nyama World's expansion was intended to reduce poverty in Malawi by increasing the income of smallholder livestock farmers, creating new jobs, and bringing in foreign exchange earnings. The long-term risk capital was provided through a Sharia-compliant secured debt investment.[37]

**Sustaining** – Sometimes catalytic capital is provided to support an investee that requires subsidy on an ongoing basis.[38] For example, an impact enterprise or intermediary may require this kind of capital to preserve its goal of reaching vulnerable beneficiaries or to otherwise operate a business model not designed to be fully commercially viable.[39] Concessionary debt and long-term guarantees are instruments often used to fill this role.[40]

RSF SOCIAL FINANCE

RSF Social Finance provides capital to support impact enterprises working in food and agriculture, education and the arts, and climate and the environment. RSF uses an "integrated capital" approach to lending, whereby they help bring together different forms of financial capital and non-financial resources to reach and support impact enterprises that might not otherwise qualify for funding. This approach relies on the willingness of various investors that invest with RSF (including foundations, family offices, and individuals) to accept financial returns that explicitly weigh the needs of impact enterprises and beneficiaries.[41]

## USES OF CATALYTIC CAPITAL

In addition to the Seeding, Scaling, and Sustaining roles catalytic capital can play for enterprises with various business models and stages of development, investors and investees need clarity and alignment on the concrete activities such capital will support and the targeted impacts associated with those activities. The list below summarizes some of the specific uses of catalytic capital at the investee level:

- **Facilitating innovation** – Experimentation is critical for developing ever more efficient and effective solutions to social and environmental challenges. However, it is often difficult to attract capital from commercial markets to fund innovation given the high risks and uncertain financial returns.[42] Even when an enterprise's innovation is successful, benefits might accrue primarily to the market or society more broadly and not financially compensate that enterprise for the expenses and risks it undertook.[43] The subsidy built into catalytic capital can be critical for providing enterprises with the time and flexibility needed to develop and refine impact-oriented business models.

- **Helping build a track record** – Though some impact enterprises and funds pursue strategies that have demonstrated financial and impact success (relative to expectations), others invest in newer approaches that can be accompanied by significant financial and impact uncertainty. Risk is difficult for investors to assess without any historical information about performance. Catalytic capital can help investees establish proof of concept of a new impact-oriented business model and demonstrate the ability to both achieve intended impacts and repay an investor within both the anticipated timeline and target financial return parameters.

- **Leveraging additional investment** – Some impact investees require significant sums of capital but have risk profiles that are either unfamiliar or otherwise unattractive to more conventional investors.[44] Catalytic capital can help mitigate both real and perceived risks for other investors by blending capital from investors with different risk-return expectations together to create investment structures that work for both the investors and investees.[45] Grants, guarantees, and/or first-loss capital in the form of subordinated debt or equity are common instruments for leveraging capital from more conventional investors and/or helping impact enterprises access capital on more favorable terms.[46]

- **Signaling impact potential** – A reputable investor can increase the credibility and visibility of an investee by providing a "first-in" anchor investment for a larger capital raise, which may lead others to invest.[47] Just as investment by a well-known market-rate investor can signal to other investors the financial promise of an investment opportunity, investment by a prominent catalytic capital investor can signal strong impact potential. Catalytic capital providers may even share components of their due diligence to ease the burden for other potential investors.

- **Safeguarding mission** – Because the disproportionate risk and/or concessionary return catalytic capital investors accept can be so essential to a transaction or an investee, catalytic capital investors often wield significant influence that can be used to to build in social and environmental requirements and greater accountability for impact generation.[48] In this way, catalytic capital can help protect impact enterprises from pressure to drift away from their core mission.

Catalytic capital can support one or more of the above uses, and this list may not be exhaustive.

The *Pathways to Impact* framework that introduces this section represents an initial attempt to organize and segment prevailing methods of using catalytic capital to fill capital gaps faced by impact enterprises. Additional research could help further refine how catalytic capital can be deployed and build on the effort to map forms, roles, and uses of catalytic capital to relevant investment instruments, specific investee needs, and ultimately, the additional social and environmental outcomes supported.

# THE MARKET LANDSCAPE FOR CATALYTIC CAPITAL

While the total amounts and types of catalytic capital required by and available to impact enterprises have not been quantified, this section discusses several indicators that suggest the supply of catalytic capital falls short of the need and profiles various types of investors most involved in providing catalytic capital to date.

**Articulating the need for catalytic capital**

First, we know that the types and numbers of investors willing and able to provide such capital are limited and these investors control a small share of total global investable assets.[49] Most of the world's largest institutional asset owners, such as pension funds, insurance companies, and sovereign wealth funds, have a fiduciary duty and/or investment mandate that prevents them from straying from investments that target market-rate, risk-adjusted financial returns.

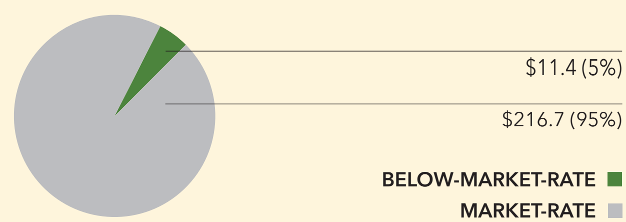
Second, the United Nations estimates that achieving the Sustainable Development Goals (SDGs) by 2030 will require between $5 and $7 trillion annually in global SDG-oriented investment, and that annual private capital flows to SDG-oriented projects and impact enterprises would need to be as much as $1.8 trillion higher than they are today in developing countries alone.[50] How much catalytic capital is needed to help fill that gap is unknown. However, the tool's importance in mobilizing large-scale conventional investment capital into SDG-oriented investments is widely recognized in development finance.[51]

Third, impact investment professionals have long acknowledged the mismatch between the types of capital needed by impact enterprises and the types available to them. In fact, availability of *"appropriate capital across the risk-return spectrum"* has been the top market challenge noted by respondents to the Global Impact Investing Network (GIIN) annual survey in four of the past five years.[52] Respondents articulated a market need for more catalytic capital using a variety of terms, including "concessionary capital," "patient capital," "early-stage capital," and "high-risk capital."[53] Whatever the term used, this unmet need should be a concern for all investors who care about impact, as it impedes the development of new impact industries. The result is fewer impact enterprises ready for investment on conventional market terms and fewer opportunities to achieve impact by blending together capital from investors with differing risk-return expectations.

## SIZING THE CURRENT SUPPLY OF CATALYTIC CAPITAL

As with the supply of other types of impact capital, the supply of catalytic capital is difficult to size without extensive research. Though the investments of some large public development institutions, foundations, family offices, and others are not captured, the GIIN's Annual Impact Investor Survey provides one indication of the scale of impact investments targeting below-market financial returns relative to market-rate investments. In 2018 82 of 229 (36%) investors reported having allocations to investments targeting below-market returns, which comprised approximately $11.4 billion (5%) of the $228.1 billion in total impact assets under management reported.[54]

TOTAL IMPACT INVESTMENT AUM BY TARGET RETURNS (US$ BILLIONS)




**Primary providers of catalytic capital to date**

Catalytic capital investors have greater flexibility, due to their mission or mandate, than conventional market-rate investors to consider customizing their investment terms to suit the specific needs of impact enterprises. The types of investors that make these investments include charitable foundations, public development institutions, family offices and high net worth individuals, impact investment wholesalers, and corporations and corporate foundations. The motivations and mandates for deploying catalytic capital vary by investor type and furthermore by each individual investor.

**Public development institutions** include bilateral development aid agencies and development finance institutions (DFIs) as well as multilateral development banks (MDBs).[55] These institutions have the ability to deploy relatively large amounts of capital and likely represent the largest source of risk-tolerant capital for impact investment, but because they are reliant on taxpayer funding and many are incentivized to be self-sustaining, only some of them have flexibility to deviate significantly from market-rate investment strategies.[56] DFIs and MDBs often limit investment to more mature sectors in developing countries, such as infrastructure and financial services. However, some DFIs do have the ability to use catalytic capital in traditionally underdeveloped markets to provide seed capital to new fund managers, for example, or risk capital to impact enterprises.[57] DFIs and MDBs may also facilitate private sector co-investment by providing guarantees and risk insurance, and development agencies generally have the additional flexibility to provide grant funding.[58]

FMO
Entrepreneurial Development Bank

Set up in 2006 and managed on behalf of the Dutch Ministry of Foreign Affairs, MASSIF is FMO's financial inclusion fund. MASSIF enhances financial inclusion for micro-entrepreneurs and small- and medium-sized enterprises (MSMEs) that are disproportionately affected by a lack of access to financial services. The Fund supports intermediaries that reach out to MSMEs in fragile and low-income countries, MSMEs in rural areas and those dependent on agriculture, women-owned MSMEs, and intermediaries providing access to productive goods and services for base-of-the-pyramid individuals.[59]

Reflecting their mission-driven nature, **charitable foundations** play a key role in providing catalytic capital. Regulations in the United States, for example, allow US foundations to count investments primarily motivated by charitable purpose toward their annual 5% "payout" (grant-making) requirement. Though these "program related investments" (PRIs) offer a flexible financing tool, relatively few US foundations make significant use of them due, in part, to lack of clarity on the unique impacts of PRIs and the different skillsets required of foundation staff to make and manage investments.[60]

Bill & Melinda Gates foundation

The Bill & Melinda Gates Foundation has allocated $2 billion to PRIs to scale enterprises that serve the poor, often collaborating with other investors and using a range of financial tools, including direct equity investments, fund investments, loans, credit enhancements, and guarantees.[61]

**Family offices and high net worth individuals (HNWIs)** enjoy greater discretion and flexibility than other investors in their decision-making and are often motivated by factors beyond financial considerations, such as aligning with their own values, contributing to a community, or building a legacy. Some family offices and HNWIs have significant appetite for risk, allowing them to operate as nimble providers of catalytic capital and consider more innovative transactions.

ceniarth

Ceniarth, a family office based in the UK, plans to invest $300 million in direct and fund investments over the next ten years and target capital preservation rather than market-rate returns, using a mix of concessionary debt, private credit, real estate and real assets, as well as patient equity.[62,63]

**Impact investment wholesalers** are an emerging category of catalytic capital investors. These entities are explicitly designed to channel capital into impact intermediaries and enterprises to contribute to market development. A wholesaler may receive its funding from dormant accounts, public development institutions, governments, institutional investors, foundations, individuals, development aid, or some combination, and can be a standalone institution or operate within a larger entity. They seek "to invest where, but for the wholesaler's capital, the investees could not raise enough money" to deliver impact.[64]

BIG SOCIETY CAPITAL

Big Society Capital, a UK wholesaler managing £585 million, connects investment to social enterprises and non-profits creating social change. BSC invests in intermediaries including property funds, loan funds, venture funds, and social banks to help them sustain or grow their operations and reach more people throughout the UK, alongside developing the market. Increasingly BSC works with development partners to address specific social issues where social impact investment could work with other tools to achieve deep and lasting impact.[65, 66]

A few **corporations and corporate foundations** make catalytic capital investments as part of their social responsibility strategies, often motivated by reputational benefits in addition to social and environmental objectives. Unless funded out of a corporate foundation, catalytic capital investments by corporations are generally confined to activities that contribute to the corporation's business objectives and, even then, may not have flexibility to compromise on financial terms.[67]

Shell Foundation

Shell Foundation, a leader among corporate foundations in venture philanthropy and impact investing, focuses on access to energy, transportation, information, and employment by providing grants for early-stage funding of start-up enterprises followed by patient, flexible financing to build operational capacity once an enterprise has proven viability.[68]

While additional effort to size the demand for and supply of catalytic capital would be helpful, the numerous indicators of significant need, together with the limited and concentrated sources of catalytic capital, point to a material gap.

*"For those with the flexibility and fiduciary responsibility to pursue direct impact in truly marginalized and underserved regions and communities, it's necessary to grapple with the reality that these contexts often require concessionary rates of return, an appetite for a range of risks (geopolitical, currency, security, etc.), as well as a need for creative structures and patient timelines. We find it unhelpful when advisors, fund managers and even asset owners declare that you can have it all, when the reality is that it depends on what 'it' is."*

GREG NEICHIN AND DIANE ISENBERG, CENIARTH, LLC[69]

# ASSESSING BENEFITS AND RISKS OF CATALYTIC CAPITAL

When deciding to make an impact investment, or monitoring that investment's performance over time, all investors (whether they seek market-rate or concessionary financial returns) take impact considerations into account, though some may be more rigorous in their methods than others. In an effort to establish industry consensus regarding the definition and components of impact, starting in 2017 the Impact Management Project (IMP) gathered input from over 2,000 enterprises, investors, and other practitioners.[70]

The IMP's five dimensions of impact are a helpful starting point for ensuring a comprehensive and disciplined approach to deciding when to make a catalytic capital investment. Investors can use these dimensions to construct an approach, aligned with their specific investment philosophy, to identify areas of investment need and make use of both qualitative and quantitative tools for monitoring and assessment:[71]

- **What:** what outcomes the enterprise is contributing to and how important the outcomes are to stakeholders.
- **Who:** which stakeholders are experiencing the outcome and how underserved they were prior to the enterprise's effect.
- **How Much:** how many stakeholders experienced the outcome, what degree of change they experienced, and how long they experienced the outcome for.
- **Contribution:** whether an enterprise's and/or investor's efforts resulted in outcomes that were likely better than what would have occurred otherwise.
- **Risk:** the likelihood that impact will be different than expected.

Understanding the "What, Who, and How Much" of impact is fundamental to the value proposition of any impact investment, as these dimensions describe an impact enterprise's potential to benefit society.

However, with capacity and data lacking in many sectors, measuring even these fundamental "What, Who, and How Much" dimensions is difficult for impact investors and can be even more so for catalytic capital investors, who often target untested business models, enterprises operating in underdeveloped markets, and/or less tangible and longer-term system-level impacts.[72, 73] Notwithstanding the challenges, identifying and (to the extent feasible) quantifying these fundamental dimensions of impact is foundational to assessing the potential benefits of catalytic capital.

The fourth and fifth dimensions, "Contribution" and "Risk," are the basis for assessing the potential positive and negative impacts of an investment relative to what would likely happen absent the investment. The potential powerful effect of the financial concession in catalytic capital makes these two dimensions especially relevant for catalytic capital investors as discussed in the sections that follow.

### CONTRIBUTION

Contribution encompasses both "enterprise contribution" and "investor contribution." Enterprise contribution is an enterprise's effect on a societal and/or environmental outcome (in terms of the "What, Who, and How Much") that would not have occurred otherwise. All impact investments involve an implicit assumption, if not a validation, of positive enterprise contribution. Investor contribution refers to an investor's efforts to facilitate an investee's impact. For catalytic capital investors, the financial concession in their investment is a key part of their intended contribution to support an investee's financial sustainability and impact on society.[74]

Investor contributions may be financial (the intent of many catalytic capital investors, specifically) or non-financial (a common approach for many impact investors, broadly).[75] Examples of financial contributions include offering financing with built-in "subsidy" in the form of one of the "five P's" described earlier in order to improve investment terms for an investee or to mobilize additional capital from other investors. Non-financial contributions can include providing technical advice or capacity building, facilitating partnerships, or strengthening an investee's operations and impact management practices.[76] All of these activities can contribute to improved efficiency, effectiveness, and/or scale of the enterprise's ultimate impacts.

**INVESTOR CONTRIBUTION IN PRACTICE**

**Launched in 2000, the John D. and Catherine T. MacArthur Foundation's Window of Opportunity initiative sought to preserve and improve the supply of affordable housing in the US by addressing a critical business model challenge faced by nonprofit affordable housing developers: the need for enterprise-level (as opposed to project-level) financing to allow for more agility in the competition to acquire and execute affordable housing properties. These nonprofit developers were often unable to compete with market-rate developers due to the significant time and cost of assembling project-based funding from multiple sources, often including government subsidies.**

**By filling a financing gap for organizations with limited ability to raise equity, MacArthur's investments of more than $150 million over a period of about 15 years enabled dozens of nonprofit affordable housing organizations and supporting blended funds to attract more than $9 billion of additional permanent capital from conventional lenders, improve their internal capacity, expand into new markets, better execute their overall mission, and preserve more than 150,000 units of affordable housing.[77, 78]**

Photo provided by NYC Acquisition Fund

While a range of methods exist for assessing enterprise contribution—including evidence-based research, stakeholder feedback, and experimental methods—investors must consider the complexity, cost, and burden on enterprises entailed by various approaches.[79] Many investors try to balance rigor with practicality by selecting and monitoring output metrics that, viewed together, can serve as meaningful proxies for an enterprise's material positive and negative effects on society.[80]

Measuring investor contribution is also challenging, as it can be difficult to isolate the effect of one investor on an enterprise. Some evidence of *causality* linking an investor's activities to the eventual outcomes for an enterprise is essential to a more definitive assessment of an investor's contribution.[81, 82] Qualitative evaluation can help provide such evidence and inform answers to the questions of whether a catalytic capital investor's financial concession is essential to an enterprise's growth and sustainability and/or to the decisions of other investors to invest.



Photo provided by Gorden Walek, for LISC Chicago

## IMPACT RISK

The concept of impact risk covers both risks that intended impacts will not be achieved as well as risks of unintended consequences. Consideration of impact risks throughout the investment lifecycle is important for all impact investors. Catalytic capital investors, in particular, consider the potential negative, market-distorting effects that could result from the effective subsidy provided via their financial concession. This effort helps determine whether the use of subsidy is appropriate and unlikely to displace conventional market-rate capital.

As Omidyar Network highlights, subsidy has the potential to result in:[83]

- *Limited scaling of low-profit (or no-profit) enterprises* if they are not nudged toward sustainability and conventional market-rate capital sources;[84]
- *An unequal competitive playing field* that arbitrarily supports one enterprise over competitors or prevents potential competitors from entering a market, depriving consumers of the potential for better service and lower prices;[85] and/or
- *A loss of credibility for the impact investing industry* as a whole if catalytic capital providers use their subsidy on inefficient enterprises and business models with little potential for significant impact and scale.

Omidyar Network encourages investors to examine whether they might be unduly influencing competition in a sector when deciding whether and how to deploy concessionary investment capital, and to try to ensure concessionary capital has clear intended impacts at the enterprise and/or market level.[86]

As a result of their ability to prioritize impact over financial performance, catalytic capital investors play a particularly important role in setting an example for impact assessment, measurement, and management for the rest of the impact investing field. Data for the "What, Who, How Much, Contribution, and Risk" of an impact investment may at times be incomplete or unattainable, and assessing the unique contribution and risks of concessionary capital is as much an art as a science. Despite the challenges, leading catalytic capital investors make their best effort, balancing practicality and rigor, to understand these dimensions for each of their investments.

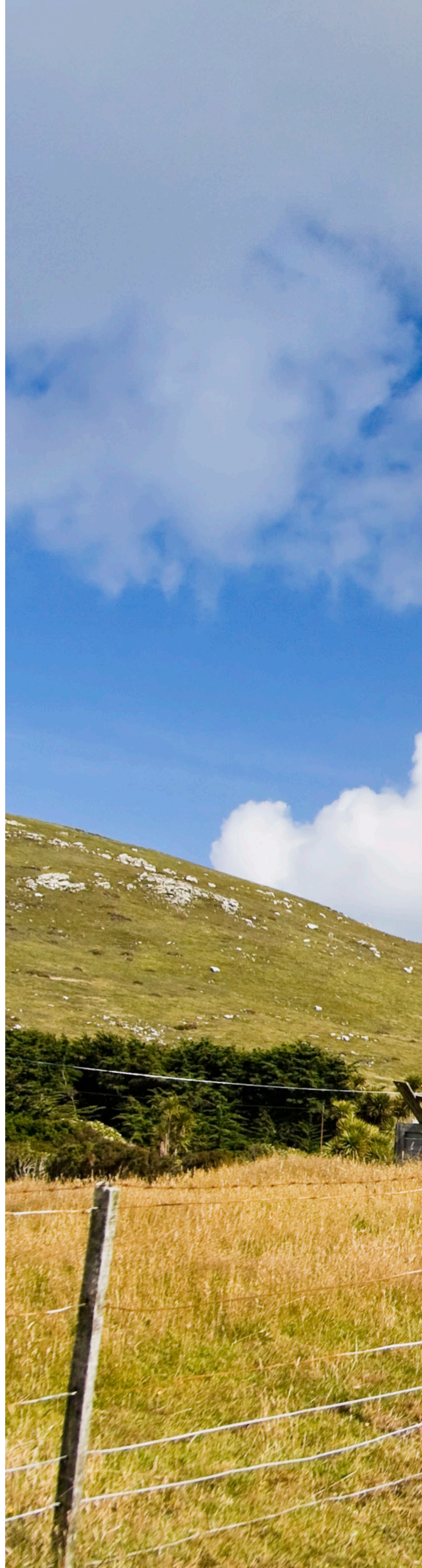
> *"Appropriateness of subsidy is strongly influenced by the nature of the market being served: subsidies may be necessary to kick-start firms serving the very base of the economic pyramid, but are less essential—and potentially harmful—when directed at firms serving those with significant disposable income."*
>
> **MATT BANNICK AND PAULA GOLDMAN, OMIDYAR NETWORK**[87]

# CONCLUDING THOUGHTS

Although it is one of many tools in the impact investing market, catalytic capital plays a critical role by providing enterprises with financing on concessionary terms in order to generate impact and enable additional third-party investment that would not otherwise be possible. Investors with the willingness and ability to be flexible on risk-return requirements are relatively rare in capital markets today but invaluable for the growth and scaling of impact enterprises and development of new impact industries. Catalytic capital helps impact enterprises overcome barriers to accessing more conventional market-rate investment, and in blended finance, plays a critical role in bridging the gap between the terms required to facilitate investments that contribute to achieving the SDGs and the terms available from conventional market-rate investors.

While some investors have used catalytic capital for a long time, more guidance and consensus around best practices could increase investor use of catalytic capital more broadly. Topics requiring further exploration include: sizing of the demand for and supply of catalytic capital, including by sector and geography; refined segmentation and mapping of the forms, pathways, and uses of catalytic capital to instruments, enterprise needs, and impact outcomes; continued research into financing mechanisms, instruments, and methods for deploying catalytic capital; and adoption and refinement of tools and frameworks for assessing the contribution of and risks associated with catalytic capital.

The sheer magnitude of the world's social and environmental challenges demands urgency in filling financing gaps for those enterprises dedicated to contributing solutions. Leadership and coordination by those pioneering investors who have long used catalytic capital to fill such gaps, along with additional research and clarity on the most effective ways to use the tool, could promote innovation and adoption by a broader set of investors.



# Appendices

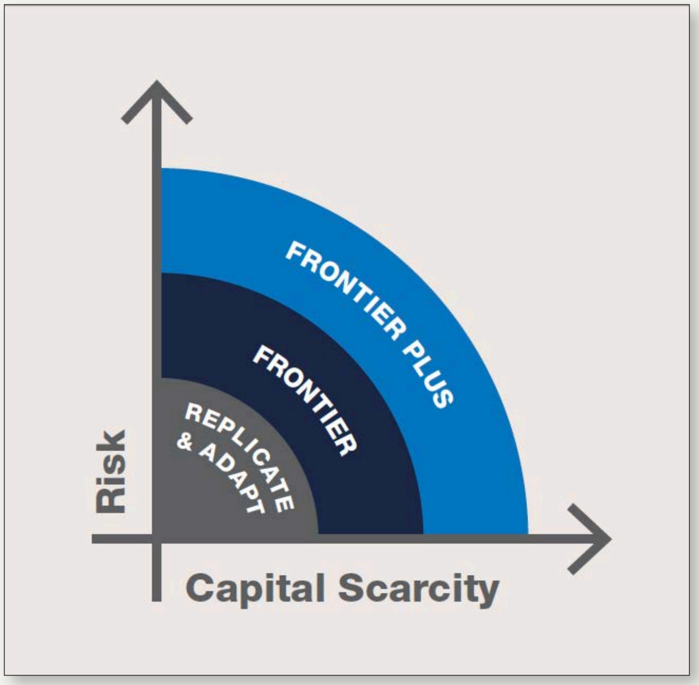
## FRAMEWORK 1: OMIDYAR NETWORK'S "FRONTIER CAPITAL" SEGMENTATION

In its 2015 Frontier Capital report, Omidyar Network divides enterprises into the following three categories based on the maturity of their business model and target customer base:

- **Replicate and Adapt** – Proven business models, where the bulk of existing venture capital money is already flowing
- **Frontier** – Unproven business models that are asset-light and serve both lower- and middle-income populations
- **Frontier Plus** – Unproven business models that may be asset intensive, serve only lower-income groups, and/or operate in countries with less-developed capital markets

Because they are asset-light and serve a mixed-income base, "Frontier" enterprises are more likely to attract traditional venture capital funding, according to Omidyar Network. "Frontier Plus" enterprises, however, frequently require more creative and flexible financing from pioneering investors and grantmakers—or, in other words, catalytic capital.[88]

Figure 1: From Bannick, M. et al. (2015). *Frontier Capital: Early-Stage Investing for Financial Returns and Social Impact in Emerging Markets.* Omidyar Network.



## FRAMEWORK 2: MONITOR DELOITTE'S TAXONOMY OF FACTORS AFFECTING ENTERPRISE SUSTAINABILITY AND SCALE

In its 2017 report *Reaching Deep in Low-Income Countries*, Monitor Deloitte examined enterprises serving customers at the Base of the Pyramid (BoP) and organized factors that affect enterprise profitability, sustainability, and scale (key considerations for conventional investors) into three overarching categories:

- **Asset Intensity (heavy vs. light):** The asset intensity of an enterprise can affect its ability to serve customers at the BoP, particularly if the amount of capital required to finance key inputs places strain on the financial health of an organization and/or increases the risk profile of the enterprise for investors. For example, an enterprise requiring physical infrastructure to manufacture, package, and transport goods may experience more difficulty in expanding to a new, challenging market than an enterprise with a product that can be digitized or transmitted through the internet.
- **Product Preference (push vs. pull):** Where a product falls on the push-pull spectrum depends on the value it provides to the customer (adjusting for time and risk). "Pull products" (e.g., food) may be viewed as more desirable as they offer the customer a high return relatively quickly. "Push products" (e.g., insurance) may require more customer education and marketing. Enterprises selling push products may need to devote scarce resources to ensuring the benefits of the product are understood.
- **Customer Base (narrow vs. wide):** Enterprises may focus their efforts on a single low-income segment or a wide range of customers from across income levels. An enterprise may reach a wider customer base by selling different customers the same product at the same or different prices or having a segmented product offering with different products at different prices for different income levels. Having a wider, more diversified customer base can facilitate the financial sustainability and growth of an enterprise.[89]

Promising enterprises that have more difficulty attracting conventional capital as a result of their business model may be good candidates for catalytic capital.

Figure 2: From Dassel, K.; Cassidy, J. (2017). *Reaching Deep in Low-Income Markets: Enterprises Achieving Impact, Sustainability, and Scale at the Base of the Pyramid*. Monitor Deloitte.

| Asset intensity | | Product preference | | Customer base | |
|---|---|---|---|---|---|
| **Heavy** | **Light** | **Push** | **Pull** | **Narrow** | **Wide** |
| Physical product; requires manufacturing | Digital/mobile products | Not easily exchangeable | Provides fungible purchasing power | Revenue from one income segment | Different income segments with varying revenue contribution |
| Large sales and distribution network | Shifted risk of sales and distribution | Nice-to-have amenities | Necessary economic inputs | Relevant to only a particular customer segment | Undifferentiated products |
| Highly skilled labor | Paraskilled labor | Expensive non-replaceable good | Cheaper substitute | Single product, single price | Multiple products, different prices |
| Physical facilities | No/limited physical presence | Difficult-to-demonstrate or long-term benefits | Obvious or immediate benefits | Limited business model risk | Need to distribute risk across income levels |

## FRAMEWORK 3: THE IMPACT MANAGEMENT PROJECT'S DIMENSIONS OF ENTERPRISE IMPACT

The Impact Management Project's "Five Dimensions of Impact" is intended to provide a holistic understanding of an enterprise's positive and negative impact across the following categories:

- **What:** What outcomes to the enterprise's activities drive, and how important are they to the people (or planet) experiencing them?
- **Who:** Who experiences the outcome and how underserved are they in relation to the outcome?
- **How much:** How much of the outcome occurs? What is its scale, depth, and duration?
- **Enterprise contribution:** What is the enterprise's contribution to the outcome, accounting for what would have happened anyways?
- **Risk:** What is the risk to people and the planet that impact does not occur as expected?

The five dimensions are broken down into 15 categories of data to enable more comprehensive and consistent comparisons of potential impact returns and risks between potential investments, as in the example below.[90] This framework can help clarify what specific additional enterprise impacts catalytic capital can help support.

Figure 3: From Impact Management Project. (2018). "How Enterprises Manage Impact."

**Using the impact data categories to benchmark performance**
*Illustrative example*

| | IMPACT DATA CATEGORIES | ENTERPRISE 1 | ENTERPRISE 2 | ENTERPRISE 3 |
|---|---|---|---|---|
| WHAT | Outcome in period: Filter for poverty reduction | Poverty reduction for households | Decent income for employees | Improved access to cash loans for micro-businesses |
| | Outcome threshold | Decent household income above international poverty line | Living wage defined by government agencies | Decent access to cash loans |
| | Capital type | Economic capital | Economic capital | Economic capital |
| | SDG target and indicator | SDG 1.2 | SDG 8.5 | SDG 1.4 |
| | Importance of outcome to stakeholder | Very important | Important | Slightly important |
| WHO | Stakeholder | Households | Employees | Entrepreneurs |
| | Geography: Filter for Nepal | Nepal | Nepal | Nepal |
| | Target area | Western Region | Kathmandu | Western Region |
| | Baseline | Underserved | Well-served | Underserved |
| HOW MUCH | [Scale] Number of stakeholders experiencing outcome | 10 households | 2,300 employees | 50 micro-businesses |
| | [Depth] Degree of change experienced by stakeholders | High degree of positive change | Marginal degree of positive change | Marginal degree of positive change |
| | [Duration] Time period for which stakeholders experience outcome | No data available | 14 months | 3 years |
| ENTERPRISE CONTRIBUTION | [Depth] Estimated degree of change that would occur otherwise | Likely better | Likely same | Likely better |
| | [Duration] Estimated time period for which outcome would last for otherwise | No data available | Likely same | Likely better |
| RISK | Type and level of risk | High evidence risk | Various | Various |

Source: Impact Management Project analysis.

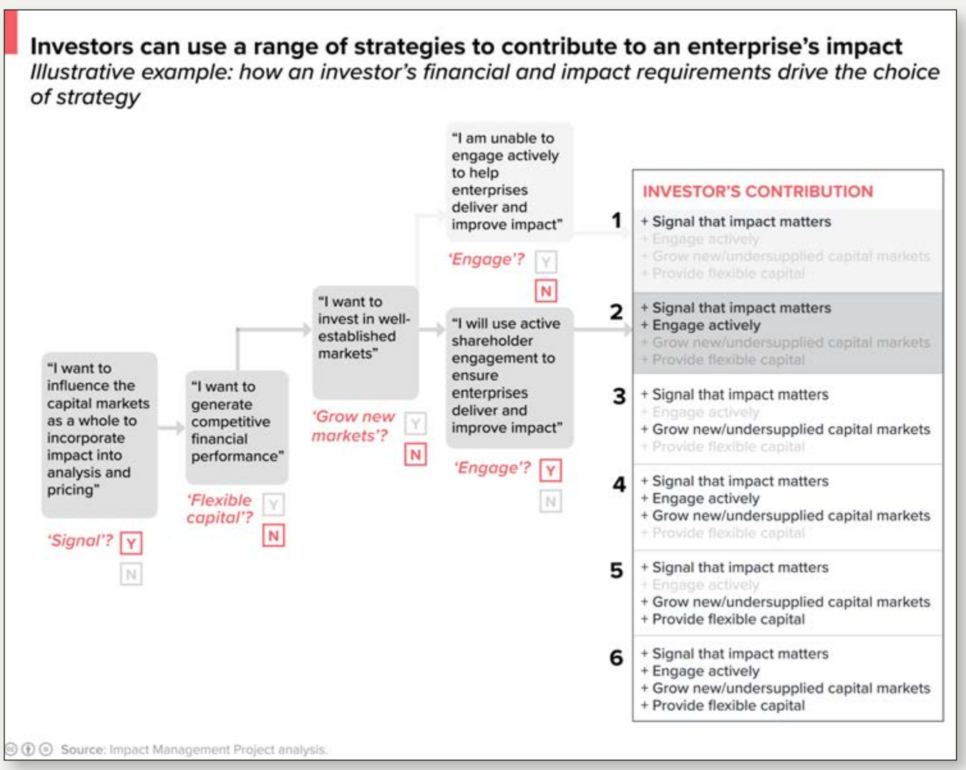
## FRAMEWORK 4: THE IMPACT MANAGEMENT PROJECT'S INVESTOR CONTRIBUTIONS

The Impact Management Project details various contributions, often used in combination, that investors may make to enable the enterprises they invest in to have an impact:

- **Signal that measurable impact matters:** The investor commits to factoring in the impact an enterprise has, such that—if all investors did the same—it would lead to a 'pricing in' of social and environmental effects by the capital markets. Often referred to as values alignment, this strategy expresses the investors' values and is an important baseline. But alone, it is not likely to advance progress on societal issues when compared to other forms of contribution.
- **Engage actively:** The investor may use expertise, networks and influence to improve the environmental/societal performance of businesses. Engagement can include a wide spectrum of approaches—from dialogue with companies, to creation of industry standards, to investors taking board seats and using their own team or consultants to provide hands-on management support (as often seen in private equity). This strategy should involve, at a minimum, significant proactive efforts to improve impact.
- **Grow new or undersupplied markets:** The investor anchors or participates in new or previously overlooked opportunities. This may involve more complex or less liquid investments, or investments in which some perceive risk to be disproportionate to return.
- **Provide flexible capital:** The investor recognizes that certain types of enterprises do require acceptance of lower risk-adjusted financial return to generate certain kinds of impact and designs a product or offers terms accordingly.

An investor's intentions and constraints often shape which of these strategies is employed. The diagram below illustrates a few examples of how intentions and constraints drive different combinations of strategies that investors use to contribute to impact.[91]

Figure 4: From Impact Management Project. (2018). "How Do Investors Set Impact Goals?"



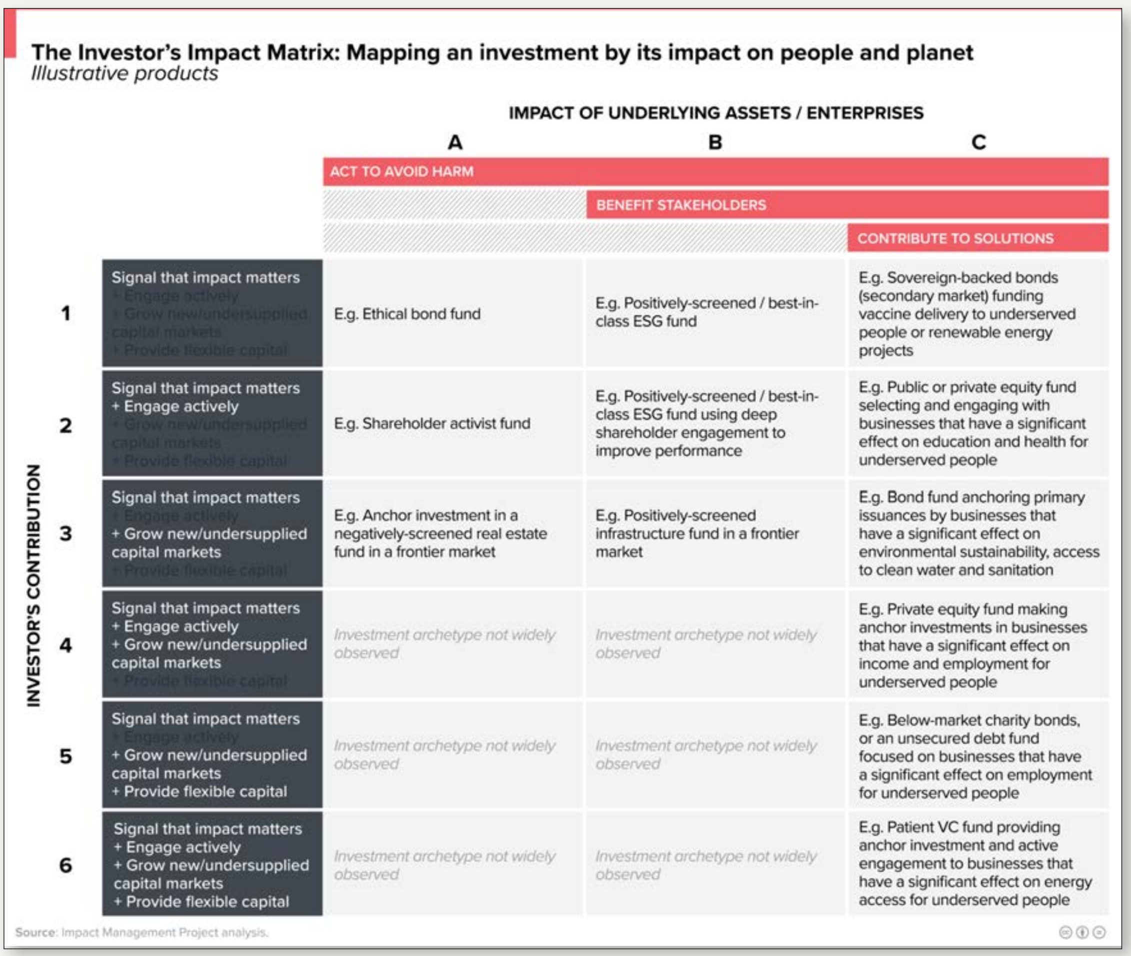
## FRAMEWORK 5: THE IMPACT MANAGEMENT PROJECT'S INVESTOR IMPACT MATRIX

The Impact Management Project's Investor Impact Matrix can help investors map an investment by its impact on people and planet. The matrix classifies illustrative investment products according to intended enterprise impact and investor contribution.[92]

In this matrix, the intended enterprise impact is broadly classified into three types, each of which builds on the one prior:[93]

- At a minimum, enterprises can ***act to avoid harm*** for their stakeholders, by, for example, decreasing their carbon footprint or paying an appropriate wage; such 'responsible' enterprises can also mitigate reputational or operational risk (often referred to as ESG risk management), as well as respect the personal values of their asset owners.
- In addition to acting to avoid harm, enterprises can actively ***benefit stakeholders***, by, for example, proactively up-skilling their employees, or selling products that support good health or educational outcomes; these 'sustainable' enterprises are doing so in pursuit of long-term financial outperformance (often referred to as pursuing ESG opportunities).
- Many enterprises can go further—they can use their capabilities to ***contribute to solutions*** to pressing social or environmental problems, such as enabling an otherwise underserved population to achieve good health, educational outcomes or financial inclusion, or hiring and providing skills training to formerly unemployed individuals.

Figure 5: From Impact Management Project. (2018). "How Do Investors Classify and Communicate the Overall Impact of a Portfolio?"



**The Investor's Impact Matrix: Mapping an investment by its impact on people and planet**
*Illustrative products*

IMPACT OF UNDERLYING ASSETS / ENTERPRISES

| INVESTOR'S CONTRIBUTION | | A: ACT TO AVOID HARM | B: BENEFIT STAKEHOLDERS | C: CONTRIBUTE TO SOLUTIONS |
|---|---|---|---|---|
| 1 | Signal that impact matters | E.g. Ethical bond fund | E.g. Positively-screened / best-in-class ESG fund | E.g. Sovereign-backed bonds (secondary market) funding vaccine delivery to underserved people or renewable energy projects |
| 2 | Signal that impact matters + Engage actively | E.g. Shareholder activist fund | E.g. Positively-screened / best-in-class ESG fund using deep shareholder engagement to improve performance | E.g. Public or private equity fund selecting and engaging with businesses that have a significant effect on education and health for underserved people |
| 3 | Signal that impact matters + Grow new/undersupplied capital markets | E.g. Anchor investment in a negatively-screened real estate fund in a frontier market | E.g. Positively-screened infrastructure fund in a frontier market | E.g. Bond fund anchoring primary issuances by businesses that have a significant effect on environmental sustainability, access to clean water and sanitation |
| 4 | Signal that impact matters + Engage actively + Grow new/undersupplied capital markets | *Investment archetype not widely observed* | *Investment archetype not widely observed* | E.g. Private equity fund making anchor investments in businesses that have a significant effect on income and employment for underserved people |
| 5 | Signal that impact matters + Grow new/undersupplied capital markets + Provide flexible capital | *Investment archetype not widely observed* | *Investment archetype not widely observed* | E.g. Below-market charity bonds, or an unsecured debt fund focused on businesses that have a significant effect on employment for underserved people |
| 6 | Signal that impact matters + Engage actively + Grow new/undersupplied capital markets + Provide flexible capital | *Investment archetype not widely observed* | *Investment archetype not widely observed* | E.g. Patient VC fund providing anchor investment and active engagement to businesses that have a significant effect on energy access for underserved people |

Source: Impact Management Project analysis.

## FRAMEWORK 6: BILL & MELINDA GATES FOUNDATION PRI ASSESSMENT METHODOLOGY

The Gates Foundation Strategic Investment Fund (SIF), responsible for deploying program-related investments (PRIs) at the Bill & Melinda Gates Foundation, uses a rubric when it deploys PRIs to consider the following questions related to the enterprise-level impacts it targets, its investor contribution, and potential risks:

- **Impact:** "Are we achieving program goals?"
- **But for:** "Would this happen without us?"
- **Sustainability/scalability:** "Are we promoting rational market solutions?"
- **Risk:** "How much risk/subsidy are we absorbing?"
- **Leverage:** "Are we drawing in external capital?"
- **Portfolio:** "Is this within our exposure limits?"
- **Oversight:** "How much burden is it on our portfolio management?"

These questions help the foundation consider potential benefits (impact, "but for" additionality, sustainability, and leverage) relative to potential risks and costs (subsidy, staff resources, etc.) in a consistent way.

The scorecard excerpted below illustrates the SIF team's use of the rubric when considering an $11 million equity investment (alongside a $4 million grant) in bKash, an impact enterprise in Bangladesh that provides mobile banking services to underserved populations.[94]

Figure 6: From Bank, D. et al. (2016). *Making Markets Work for the Poor: How the Bill & Melinda Gates Foundation Uses Program-Related Investments. Stanford Social Innovation Review.*

**INVESTMENT RATIONALE**

| FACTOR | RATING<br>Good<br>Acceptable<br>Below standards | RATIONALE |
|---|---|---|
| **Impact:** Are we achieving program goals? | Good | bKash is the most viable mobile payment platform in Bangladesh with the potential to financially include tens of millions of low-income people and represents the first "quasi-bank-led" payment platform to achieve scale |
| **But for:** Would this happen without us? | Good | Given geographic and governance considerations, bKash is unlikely to access traditional private equity capital in near term |
| **Sustainability/ scalability:** Are we promoting rational market solutions? | Acceptable | While heavily subsidized, the foundation's investment will catalyze the broadening of bKash's bank relationships, promote new investor access, and increase the likelihood of a "stand-alone" bKash able to scale up sustainably |
| **Risk:** How much risk/subsidy are we absorbing? | Acceptable | The investment's risk-reward is poor given the Company's operating, market, and governance uncertainties and the limited history of private equity exits in Bangladesh |
| **Leverage:** Are we drawing in external capital? | Below standards | bKash has received $17.0MM of outside capital to date, but the proposed transaction does not include leverage |
| **Portfolio:** Is this within our exposure limits? | Good | Experimental investment that will help guide FSP PRI strategy development |
| **Oversight:** How much burden is it on our portfolio management? | Below standards | Given the importance of the bKash deployment, the Company's difficult governance situation, and the ongoing role of foundation in the investment, oversight burden will be high |

## *Endnotes*


1 The Global Impact Investing Network (GIIN) defines "impact investments" as "investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return" (GIIN 2019).

2 Ford Foundation. (1991). *Investing for Social Gain: Reflections on Two Decades of Program-Related Investments.*

3 It is also important to acknowledge that determining what constitutes a "market-rate, risk-adjusted return" is complicated for many kinds of impact investments, given often short track records, unfamiliar risks, uncertain liquidity, and limited sets of comparable investments for benchmarking (see O'Donohoe 2013). In some cases, differing perceptions of risk between conventional investors and impact investors targeting market-rate, risk-adjusted returns may justify the latter's acceptance of a lower financial return (see Swan, Looney, Walker 2018).

4 Bannick, M.; Goldman, P.; Kubzansky, M.; Saltuk, Y. (2016). *Across the Returns Continuum. Omidyar Network.*

5 United Nations Conference on Trade and Development (UNCTAD). (2014). *World Investment Report 2014.*

6 Bouri, A.; Mudaliar, A.; Schiff, H.; Bass, R.; Dithrich, H. (2018). *Roadmap for the Future of Impact Investing: Reshaping Financial Markets.*

See "Clarify the Roles of Various Types of Capital" as one of the goals identified for investors.

7 US National Advisory Board on Impact Investing. (2014). *Private Capital, Public Good: How Smart Federal Policy Can Galvanize Impact Investing—and Why It's Urgent.*

8 Adapted from Barby, C.; Pederson, M. (2014). *Allocating for Impact: Subject Paper of the Asset Allocation Working Group.* Bridges IMPACT+ and UBS for the Social Impact Investment Taskforce established under the UK's Presidency of the G8.

9 Each investor may have different thresholds for the extent to which their catalytic capital takes on higher risks or lower returns. Some investors may be willing to accept varying degrees of below-market-rate financial returns as long as the returns are expected to be positive in absolute terms, while other investors targeting more pronounced catalytic effects may be more willing to accept the risk of a likely loss on principal.

10 See Tideline. (2018). "Catalytic Capital Resource Library" at https://tideline.com/wp-content/uploads/Tideline-Catalytic-Capital-Resource-Library_March-2019.pdf

11 O'Donohoe, N.; Leijonhufvud, C.; Saltuk, Y. (2010). *Impact Investments: An Emerging Asset Class.* J.P. Morgan Global Research, in partnership with the Global Impact Investing Network (GIIN) and Rockefeller Foundation.

12 Bridges Fund Management. (2015). *The Bridges Spectrum of Capital: How We Define the Sustainable and Impact Investment Market.*

13 Bannick, M.; Goldman, P.; Kubzansky, M.; Saltuk, Y. (2016). *Across the Returns Continuum.* Omidyar Network.

14 Impact Management Project (2018). "How Investors Manage Impact."

15 Novogratz, J. (2016). "Making the Case for Patient Capital." Acumen.

16 Global Impact Investing Network (GIIN). (2018). *Annual Impact Investor Survey.* Supported by United States Agency for International Development (USAID) and Department for International Development's Impact Programme (DFID).

17 Internal Revenue Service. (2018). "Program-Related Investments."

With impact investments deployed out of a foundation endowment (commonly referred to as mission-related investments, or MRIs) financial return is a significant factor, but even with MRIs, foundations are not obligated to *maximize* risk-adjusted financial return as long as they "support, and do not jeopardize, the furtherance of the private foundation's charitable purposes." (IRS Notice 2015-62)

18 Guarnaschelli, S.; Lampert, S.; Marsh, E.; Johnson, L.; Wallace, S. (2014) *Innovative Financing for Development: Scalable Business Models that Produce Economic, Social, and Environmental Outcomes.* Innovative Financing Initiative, an initiative of the Global Development Incubator.

19 Adapted from Convergence. (2018). *The State of Blended Finance 2018.*

20 Hornberger, K.; Chau, V. (2018). *The Missing Middles: Segmenting Enterprises to Better Understand Their Financial Needs.* Dalberg Advisors, supported by the Collaborative for Frontier Finance (Omidyar Network/Dutch Good Growth Fund).

21 Bannick, M.; Goldman, P.; Kubzansky, M. (2015). *Frontier Capital: Early-Stage Investing for Financial Returns and Social Impact in Emerging Markets.* Omidyar Network.

22 Schwartz, D. (2017). "Catalytic Capital: An Essential Tool for Impact." MacArthur Foundation.

23 Though often grant-funded, market-shaping mechanisms (including mechanisms to establish market demand for a product or service where it does not exist) are other tools that can be used in combination with catalytic capital to help enterprises overcome the persistent challenges of market failure (see Lin, A.; Wilson, J. (2014) from USAID as one resource for more information on market shaping mechanisms).

24 These "five P's" were first articulated by the MacArthur Foundation's Debra Schwartz in a presentation and were written up in Brest and Born (2013).

25 Armeni, A.; Ferreyra de Bone, M. (2017). *Innovation in Financing Structures for Impact Enterprises: Spotlight on Latin America.* Transform Finance.

26 Schiff, H.; Dithrich, H. (2015). Scaling the Use of Guarantees in US Community Investing. Global Impact Investing Network (GIIN), supported by the Kresge Foundation.

27 Armeni, A.; Ferreyra de Bone, M. (2017). *Innovation in Financing Structures for Impact Enterprises: Spotlight on Latin America.* Transform Finance.

28 Topping, M. (2014). *Evergreen Alternatives to the 2/20 Term-Limited Fund.* White & Case LLP published by Emerging Markets Private Equity Association (EMPEA).

29 Clark, C., Emerson, J., Thornley, B. (2014). *The Impact Investor: Lessons in Leadership and Strategy for Collaborative Capitalism.*

30 Ogden, T. (2016). The Case for Social Investment in Microcredit. Financial Access Initiative (FAI) at NYU Wagner.

31 Echoing Green and Enclude. (2017). *Echoing Green Portfolio Segmentation: Accelerating Capital to For-Profit and Hybrid Enterprises.*

32 All dollar ($) amounts are in USD unless otherwise noted.

33 Brest, P.; Born, K. (2013). "Unpacking the Impact in Impact Investing." *Stanford Social Innovation Review.*

34 Bayrasli, E. (2015). *From the Other Side of the World: Extraordinary Entrepreneurs, Unlikely Places.*

35 Koh, H.; Karamchandani, A.; Katz, R. (2012). *From Blueprint to Scale: The Case for Philanthropy in Impact Investing. Monitor Group in collaboration with Acumen Fund.*

36 Ogden, T. (2016). *The Case for Social Investment in Microcredit.* Financial Access Initiative (FAI) at NYU Wagner.

37 Norfund. (2018). *Development Impact Case Study: Nyama World Malawi.*

38 Clark, C. et al. (2014). *The Impact Investor: Lessons in Leadership and Strategy for Collaborative Capitalism.*

39 Some market participants would not include capital provided with the expectation of a need for ongoing subsidy in a definition of 'catalytic capital', which they view as intentionally temporary and time-bound (for an example, see Goldman et al. 2016). For the purposes of this report, this role of providing ongoing subsidy is described as catalytic because of its importance in supporting ongoing investment from an investee's other funders and investors.

40 Goldman, L. et al. (2016). *Inflection Point: Unlocking Growth in the Era of Farmer Finance.*

41 Clark, C.; Soriano, J. (2014). *Impact Investing 2.0 Case Study: RSF Social Finance's Social Enterprise Lending Program.*

42 Ogden, T. (2016). *The Case for Social Investment in Microcredit. Financial Access Initiative (FAI) at NYU Wagner.*

43 Kubzansky, M.; Breloff, P. (2014). "On Innovators and Pinballs: Five Paths to Scale in Early-Stage Impact Investing." *In Stanford Social Innovation Review.* Fall 2014.

44 Clark, C. et al. (2014). *The Impact Investor: Lessons in Leadership and Strategy for Collaborative Capitalism.*

45 Bouri, A.; Mudaliar, A. (2013). *Catalytic First-Loss Capital.* Global Impact Investing Network (GIIN).

46 Ogden, T. (2016). *The Case for Social Investment in Microcredit.* Financial Access Initiative (FAI) at NYU Wagner.

47 Clark, C. et al. (2014). *The Impact Investor: Lessons in Leadership and Strategy for Collaborative Capitalism.*

48 Convergence. (2018). *The State of Blended Finance 2018.*

49 Brigandi, T.; Ortel, S. (2018). "The Seven Kinds of Asset Owner Institutions." CFA Institute.

50 United Nations Conference on Trade and Development (UNCTAD). (2014). *World Investment Report 2014.*

This $1.8 trillion figure is a portion of the total $2.5 trillion estimated annual public and private funding gap and represents the upper end of the $0.9 to $1.8 trillion range for potential participation of the private sector estimated in the report.

51 Convergence. (2018). *The State of Blended Finance 2018*.

52 J.P. Morgan & Global Impact Investing Network (GIIN). (2014 and 2015). *Annual Impact Investor Survey;* Global Impact Investing Network (GIIN). (2016, 2017, and 2018). *Annual Impact Investor Survey*.

53 Global Impact Investing Network (GIIN). (2018). *Annual Impact Investor Survey*.

54 Data from Global Impact Investing Network (GIIN). (2018). *Annual Impact Investor Survey*.

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Tideline is a consulting firm that provides tailored advice to clients developing impact investment strategies, products, and solutions.