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Evaluating the Impact of Blended Finance:

Convergence's Case Study Portfolio Revisited

CONVERGENCE
BLENDING GLOBAL FINANCE

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Executive Summary

This report reflects on the portfolio of case studies on blended finance transactions that Convergence has produced since 2015. Convergence case studies are a knowledge product designed to provide a detailed and comprehensive dive into an individual blended finance transaction in order to build the evidence base for blended finance as a development tool and support practitioners and prospective investors in future blended finance endeavours. Our case studies provide an end-to-end analysis of a deal, from transaction design and structuring, to fundraising and launch of follow-on transactions.

While the repository of research relating to the launch and ongoing operations of blended finance transactions continues to deepen, little information is accessible on the ex-post performance of these deals. This report revisits our case studies transactions to capture this valuable data.

Critically, we demonstrate:

i. The financial performance realized by commercial investors in these transactions; and

ii. the development impact generated for beneficiaries in emerging markets by these deals.

Such data and information are fundamental to bolstering the economic and development impact argument of blended finance.

The report is based on information gleaned from a survey sent to past case study sponsors, in-depth interviews with a sub-set of case study sponsors, and additional research conducted by Convergence.

Key findings from the report include:

- Case study transactions have impacted over 200 million beneficiaries, including creating 124,000 jobs and displacing 86 million tons of CO_2 equivalent through renewable energy alternatives.
- No case study respondents achieved lower than expected development impact, while nearly 75% of respondents found the impact tracking and measuring experience was as initially expected in terms of complexity and resource intensity.
- Commercial investments into case study transactions yielded market-rate or better risk-adjusted returns.

Finally, the report identifies a series of forward-looking perspectives based on our past findings from across the case study portfolio, that we believe will remain or become relevant in the blended finance market:

- It will take forethought to direct blended finance at building a pipeline of commercially bankable investment opportunities if the field is to reach scale.
- Calls for for Multilateral Development Bank (MDB) and Development Finance Institution (DFI) reform are growing louder and a greater diversity of stakeholders, including deal sponsors and private sector investors, have become vocal about the issue; changes to their existing investing mandates will improve how they use blended finance to mobilize private sector capital.
- Incorporating climate outcomes into blended finance transactions, where appropriate, will draw-in private sector investors.

Introduction

Since 2015, Convergence has written 28 case studies detailing the process of bringing blended finance structures to market. Case studies have served as a critical tool for building the evidence base of blended finance across sectors, geographies, and asset classes. Through a combination of in-depth research and direct engagement with blended finance participants, including deal sponsors, investors, and downstream borrowers of blended capital, our case studies have aimed to enhance market transparency, identify concessional and commercial investment terms where possible and share the candid perspectives and experiences of past participants, to illustrate common challenges and proven solutions.

In this case study retrospective, we look back at our entire case study portfolio to uncover two ex-post outcomes of blended finance transactions:

i. the financial performance realized by commercial investors, and

ii. the development impact on beneficiaries in developing countries.

Since the outset of our case study portfolio, the knowledge base and theoretical understanding of blended finance structures has grown significantly. Yet, there remains insufficient data regarding the actual results, both financial and impact, of blended finance deals. To scale blended finance to achieve the "billions to trillions" agenda, endline data is becoming even more critical for risk-adjusted returns benchmarking, risk pricing, and reinforcing the impact case for private investment opportunities in emerging markets. While this retrospective surveys only a small sub-set of the entire blended finance market, it serves as an indicator of the real-world application of blended finance and its successes in delivering both market-rate returns in developing economies and improvement in the lives of local populations.

The report is organized into six Parts:

- **Part I** analyzes the impact achieved by our case study transactions, followed by
- **Parts II - IV** assesses the financial performance of our case study transactions
- **Part V** takes a deeper dive into a collection of past case study deals to explore their performance since our initial engagement.
- **Part VI** looks back on the portfolio of key insights and lessons derived from the case studies to explore what themes remain relevant today, which have become less pertinent as the market has developed, and what considerations we expect will be important for blended finance going forward.

Methodology

The report examines the 28 blended finance transactions that comprise Convergence's case study portfolio to date. All transactions target developing economies, with the exception of two transactions; The Forest Resilience Bond (FRB) and the American South Real Estate Fund (ASREF). These transactions targeted development outcomes in California, United States, and the southern United States respectively. Data obtained and portrayed in this report was sourced through desk research conducted by Convergence at the time of writing the case studies, contemporaneously during the production of this report, and via a survey sent to all case study sponsors (transaction sponsors). Of the 27 survey invitations sent to case study sponsors (ASREF was still in production at the time of survey), Convergence received 15 responses (55% response rate). The survey contained questions related to development impact tracking, financial performance, and contemporary blended finance activity. The survey intended to source updated data on case study transactions from the time of initial publication, with all new information presented on an anonymized / aggregate basis.

Note on financial performance data: To adhere to confidentiality requirements of survey respondents, all financial performance information is anonymized and presented on interval scales.

All financial returns information is presented using an internal rate of return (IRR). Data is divided two ways:

i. commercial vs. concessional rate instruments; and
ii. debt instruments vs. equity instruments.

Within these sub-sets, **returns figures are aggregated across all risk positions in a transaction**. Where a case study features multiple deals, returns data for each transaction is considered separately. Survey responses had varying degrees of completeness relating to financial performance and not all survey questions applied to each transaction. Convergence performed external research to supplement survey responses, improve the accuracy of the data, increase the sample size and, where appropriate, approximations were used.

28 case studies produced

$4.1B in total deal volume

26 transactions in developing countries

2 transactions in the United States

5 bonds/notes

2 companies

11 funds

2 impact bonds

5 projects

203M* total beneficiaries impacted

124,000 jobs directly & indirectly created

86M tons CO_2 equivalent avoided as a direct result of transactions

717MW newly installed renewable energy capacity

30+ Number of follow-on blended finance transactions engaged by case study sponsors

Figure 1A: Summary of Convergence case study portfolio
**Metrics aggregated based on contemporary data provided by transaction sponsors. Includes both direct beneficiaries of blended capital and indirect or ultimate beneficiaries.*

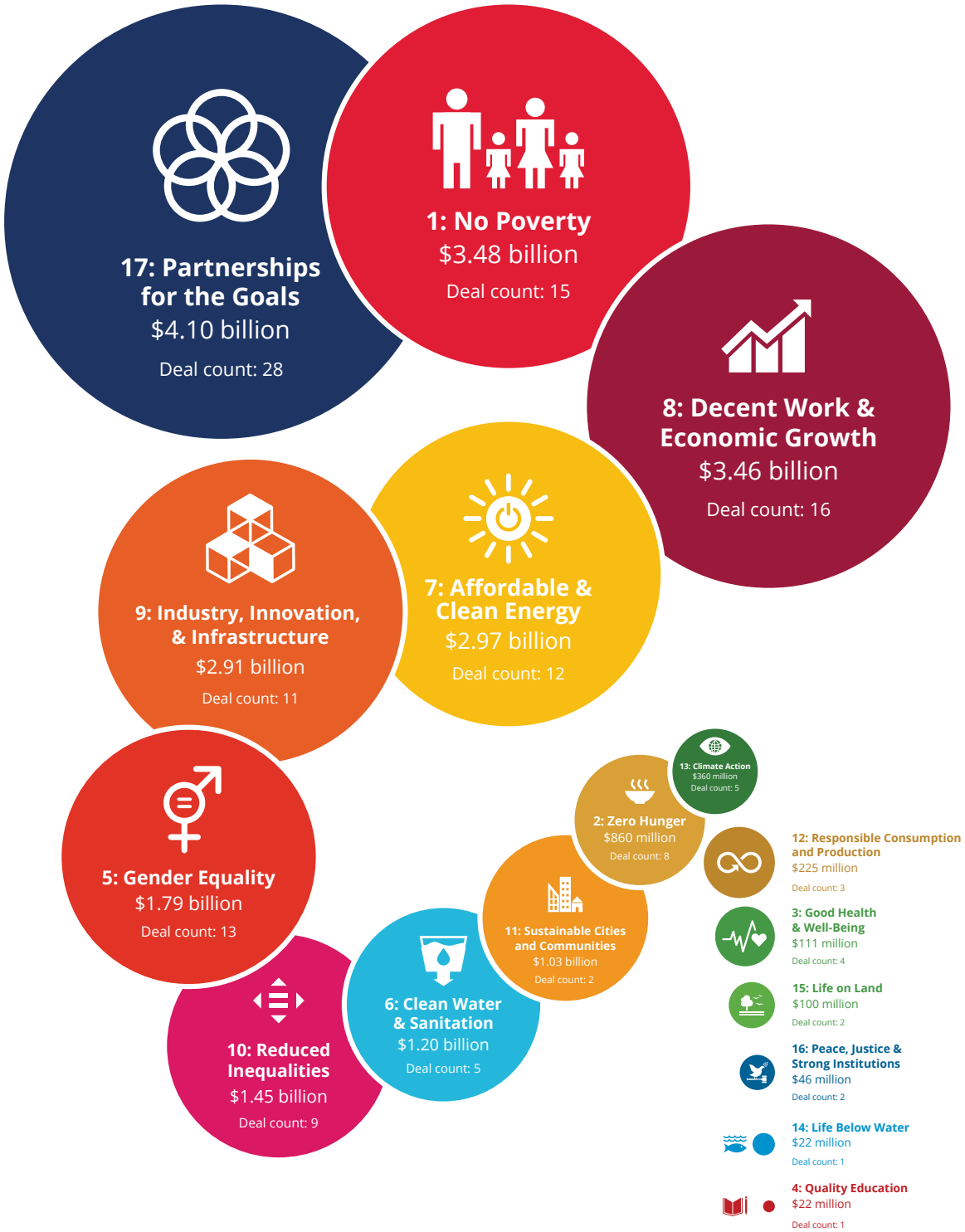


Figure 1B: SDG targeting and mobilization achieved by Convergence case study transactions. Metrics aggregated based on contemporary data provided by deal sponsors.

Part 1 Impact Revisited

The state of the Sustainable Development Goal (SDG) financing gap is dire. With only seven years remaining to meet the targets set out in 2015 and following the economic and social disruptions caused by the COVID 19 pandemic, the Organization for Economic Cooperation and Development (OECD) estimates that $3.9 trillion must flow to developing markets annually. Official development assistance (ODA) and other philanthropic / charitable capital flows only totalled $185 billion in 2021. Scaling investment to the SDGs will require greater participation of the private sector, specifically the institutional investor class, who in 2021, held more than 30% of global assets. This in turn necessitates more strategic use of scarce development funds by donors and philanthropic actors for the purpose of mitigating investment risk and / or enhancing the risk-adjusted returns of emerging market opportunities to become better aligned with institutional investor investment requirements.

Convergence's case study portfolio has provided strong evidence of the possible development impact that can be created through the mobilization of private sector investment to SDG-targeting transactions. These 28 blended finance transactions have served or impacted the lives of over 200 million beneficiaries (directly and indirectly). This includes for example, providing access to stable and affordable sources of electricity in previously un(der)served communities, or enhancing access to better farming inputs, new technologies and sturdier supply chains for smallholder farmers to increase incomes and foster local economic development in rural areas.

Overall, these 28 transactions have delivered over $4 billion to the SDGs, targeting all 17 goals across the portfolio. The two most commonly targeted SDGs have been Goal 8: Decent Work and Economic Growth (16 deals) and Goal 1: No Poverty (15 deals)[1]. Total financing volume towards these two SDGs was also highest, totaling $3.4 billion each[2]. Other frequently targeted SDGs include Goal 7: Affordable and Clean Energy (12 deals, $2.9 billion total financing), Goal 9: Industry, Innovation and Infrastructure (11 deals, $2.9 billion total financing), and Goal 10: Reduced Inequalities (9 deals, $1.4 billion total financing). Emphasizing the different ways blended finance can grow private sector investment in gender-lens transactions has also been a focus of our case study work. Almost 50% of case study transactions met Goal 5: Gender Equality criteria, catalyzing nearly $2 billion towards the promotion of gender equality. Some examples where a gender-lens investment strategy was applied include Women's World Banking Capital Partners II (WWBCPII), BlueOrchard Japan ASEAN Women Empowerment Fund (JAWEF), and the Refugee Impact Bond.

While certain impact themes have featured prominently across several of our case study transactions, such as financial inclusion, access to energy and income growth, there is minimal standardization in the metrics used to track and measure impact performance in these areas. That is, impact tracking and monitoring frameworks appear to be bespoke and distinct. Some transactions have explicitly prioritized input metrics, often related to target levels of private sector mobilization, like the Emerging Africa Infrastructure Fund (EAIF) and the African Local Currency Bond Fund (ALCB), as a marker of eventual development impact generated. We have also observed wide variability in output (first order or direct) impact metrics. Naturally, output metrics are tightly linked to the context of the intervention, but even among similar transaction structures in our portfolio, with comparable investment mandates, it is difficult to compare direct output metrics in our transaction sub-set. Conversely, outcome (second order or indirect) impact metrics offer more opportunity for benchmarking and aggregation *(See Box 1 on the following page for definitions of impact outputs and impact outcomes)*. Outcome metrics typically focus on the broader, more generalized, even macro-level impact contributions of blended finance transactions.

1 Excluding Goal 17: Partnerships for the Goals. All blended finance transactions by definition, fulfill Goal 17 criteria, specifically targets 17.1, 17.2, and 17.3.

2 Blended finance transactions can target multiple SDGs, resulting in SDG financing totals that exceed the total portfolio deal value.

Four outcome metrics were commonly implemented in our case study transactions;

i. number of beneficiaries served (mentioned above);

ii. number of jobs created (direct and indirect);

iii. the amount of CO_2 equivalent avoided as a result of the transaction's core purposes; and

iv. the amount (megawatts, MW) of newly installed renewable energy capacity or total amount of electricity produced resulting from newly installed renewable energy sources (megawatt hours, MWh).

To date, case study deals have impacted the lives of 203 million people, created 124,000 jobs directly or indirectly, displaced 86 million tons of CO_2 equivalent, and installed 717 MW of renewable energy capacity.

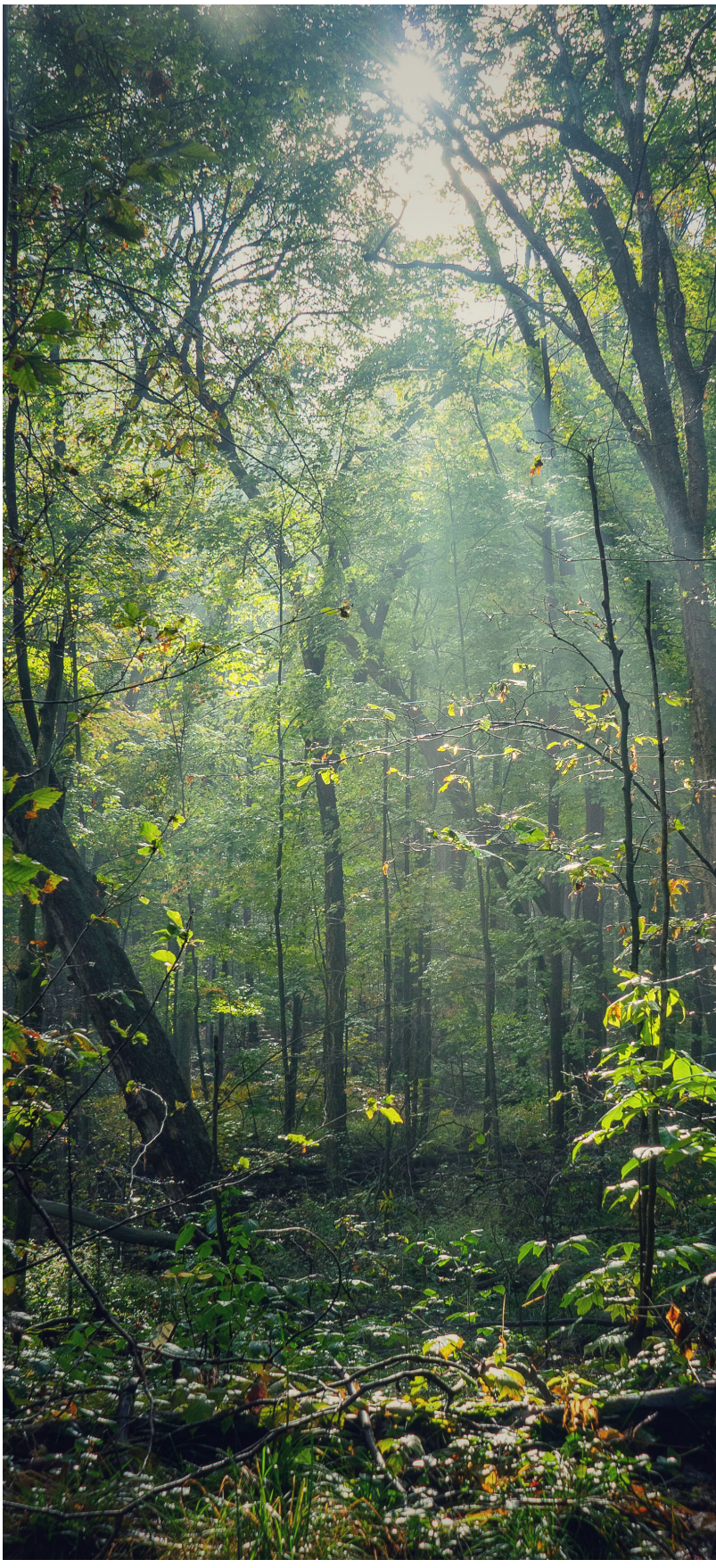
Impact outputs vs. impact outcomes

The case study transactions often target, track, and measure development impact at multiple orders or levels of granularity to fully capture the interventions' effects; typically impact outputs and impact outcomes. Both are defined below:

i. **IMPACT OUTPUTS** – Also referred to as **direct impacts or first-order impacts**, impact outputs are the **direct development impact consequences** of a transaction. They can be considered the primary intended development effect(s) of the transaction and are usually realized **more immediately than impact outcomes**. An example of an impact output would be the number of vaccinations administered by a vaccination program.

ii. **IMPACT OUTCOMES** – Also referred to as **indirect impacts or second-order impacts**, impact outcomes are the **follow-on / subsequent development consequences** of a transaction and are a longer-term effect of an intervention. Impact outcomes can be considered a primary impact target of a transaction. Using the same vaccination example above, an impact outcome would be % reduction in the prevalence of X disease as a result of the number of vaccinations administered.

Box 1: Comparison of impact outputs and impact outcomes



Impact Experiences

Convergence sought to capture the individual experiences of our case study sponsors implementing the development or impact components of their blended finance transactions. Our case study sponsors comprise a diversity of organizational types, from philanthropic organizations to impact investors to private fund managers, possessing varying degrees of prior impact tracking and reporting experience, ranging from impact-first firms to first-time participants in a transaction intended for development.

Convergence received 15 survey responses related to:

i. impact performance expectations to date;

ii. impact tracking and reporting experiences; and

iii. the frequency of publicly available impact reports.

Convergence found that 60% of respondents achieved impact results in line with initial expectations / targets, while 40% had achieved impact outcomes that exceeded initial expectations / targets. **No respondents reported that the transaction generated lower than expected impact results.** Half of the transactions that reported higher than expected impact were operating in the agriculture sector, and one third in the energy sector. More than 50% of the deals that met impact expectations targeted financial inclusion as their primary impact theme.

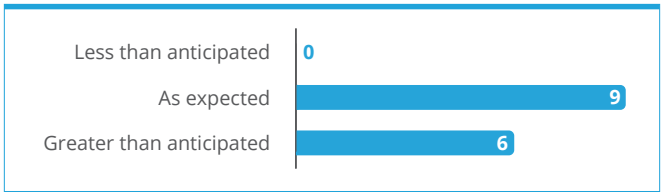


Figure 2: Amount of impact generated by transaction, number of survey responses

In terms of sponsor experiences tracking and reporting impact (both first and second order impact more than 70% of respondents stated that their experience was as initially expected at the outset of the intervention. Just under 30% found impact tracking and reporting to be more difficult or complex than initial expectations, while no deal sponsors found the impact tracking and reporting experience to be less difficult or complex than initially expected.

Deal sponsors and fund managers of any development-oriented transaction, including blended finance transactions, must consider and contend with numerous factors when designing an impact framework, including how will outcomes be captured, what form will impact data take, and for what purpose will that data be used. Finding the right balance between the granularity of impact metrics and ease and efficiency of capture is critical.

When developing impact tracking and reporting procedures, deal sponsors of blended finance deals should consider the type of impact-oriented investors involved. Some impact investors may bring experience, tools, and approaches to enhance the impact architecture. Others, such as many development agencies, may require stringent impact procedures in order to invest. Matching investor expertise and investing restrictions with transaction needs and sponsor capacities can help ensure a better impact tracking and reporting experience. Managers of blended funds should also take into account the operational capacity of their own intended investees when developing impact indicators and targets. Earlier stage companies with smaller human capital, may find it more difficult to meet complex reporting requirements, such as tracking second order impact, until they can scale the size of their staff. Lastly, the types of indicators and impact metrics used to measure development outcomes will affect the tracking and reporting experience. Broader metrics can be more easily captured and offer greater comparability to other transactions, but offer less insight into the beneficiary experience. Conversely, narrower, more distilled metrics provide greater clarity into how impactful a transaction is, but over-specialization can hinder a transaction's ability to attract investors less familiar with the context.

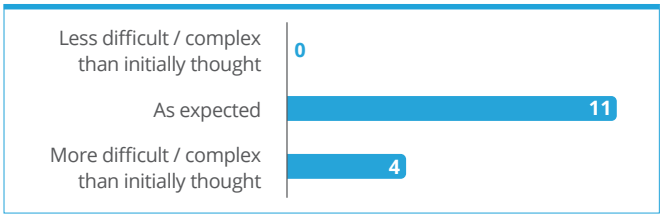


Figure 3: Impact tracking and reporting experience, number of survey responses

All survey respondents publicly disclose impact reporting. This is in sharp contrast to the wider blended finance market, where Convergence cannot confirm a public impact reporting methodology in more than 60% of transactions. Nine deal sponsors report on an annual basis, four (all fund transactions) on a quarterly basis, one on a semi-annual basis, and one on a periodic basis.

Part 2 Financial Performance of Commercial Capital

Blended finance is designed to deliver on two core objectives;

i. mobilizing private sector capital to finance activities that generate development impact, while

ii. providing attractive risk-adjusted returns to those investors.

Blended finance is a structuring approach that allows different investors (whether impact-oriented, market-returns seeking, or a balance of both) to invest alongside each other while achieving their own investment objectives. While blended finance offers the promise of market-rate returns to commercial investors, institutional investors comprise only a small proportion of investment activity in the blended finance market, accounting for only 5% of commitments made to blended deals, as captured in Convergence's Historical Deals Database (HDD). The lack of available benchmarks for risk-adjusted returns yielded by blended finance transactions remains a barrier to more frequent and scaled investment from this investor class. In this section, we aim to provide more clarity on target and achieved investment returns in the blended finance market based on the 28 transactions in our case study portfolio.

As Convergence's case study portfolio illustrates, concessional capital can be deployed across the four blended finance archetypes to enhance expected financial performance of blended finance investments without jeopardizing impact potential. Concessional debt or equity refers to concessionally priced capital within the capital stack. Concessional capital can occupy the junior position of a transaction's capital stack to absorb initial losses and reduce downside risk for more senior private sector investors, without seeking commensurate returns. It can also rank *pari passu* with senior investors but be priced below-market to improve the borrower's credit quality and reduce counterparty risk. Similarly, concessional guarantees and risk insurance lower the financial risk of credit events (defaults). Concessional capital may also refer to grants, such as technical assistance (TA) and design-stage grants used to improve investee processes and transaction design respectively.

It is important to note that in the absence of concessional capital, these transactions would be commercially unfeasible, due to real or perceived risks or issues stemming from the project's financial feasibility. If private sector investors fully priced-in the risk, they would seek higher returns, but that higher cost of capital would make the structure untenable because its expected cashflow is insufficient to deliver the return or because the cost of the service being delivered to the ultimate customers (such as in the case of a power plant) is unaffordable. Within the concept of minimum concessionality, the inclusion of concessional capital in blended finance transactions maximizes expected risk-adjusted returns for private sector investors within what is economically feasible for the opportunity.

Debt Returns vs. Equity Returns

Based on survey results, Convergence has collected 23 commercial returns observations: 8 equity investments and 15 debt investments.

Seven of eight equity returns (realized) observations exceeded 10% internal rate of return (IRR), with most falling within 11-15% IRR (4 observations) and two observations between 16-20% IRR. Debt investments provided a slightly tighter range of distribution; 40% of observations were between 1-5% IRR, 40% between 6-10% IRR, and 20% over 10% IRR. These findings are in line with fundamental cost of capital principles. Equity investors take more risks than lenders: they receive distributions only after lenders are paid, and typically have no automatic exit for their shares; in return they seek potential upside returns. Conversely, debt (specifically senior debt) takes priority in returns distribution or in the event of default, has a defined exit path, and shares no upside.

The returns data for blended finance transactions is roughly in line with trends found in the wider private equity and private debt markets. According to Prequin, median emerging market private equity (direct and indirect through funds of funds) returns were 8% IRR for funds in vintage years 2006-2015. By comparison, the global median IRR for private equity fund vintages 2016-2021 was 18.8%. On average, equity investments from our case study transactions of vintages 2006-2015 (5 observations) marginally outperformed the overall emerging market median. Similarly, debt returns from our case study portfolio were aligned with global private debt (direct and indirect) trends; McKinsey found that between 2008-2018, global median private debt returns stood at 9.4%, while the European Investment Fund observed yields on senior loans within the European Union to be between 7-8% (2021).

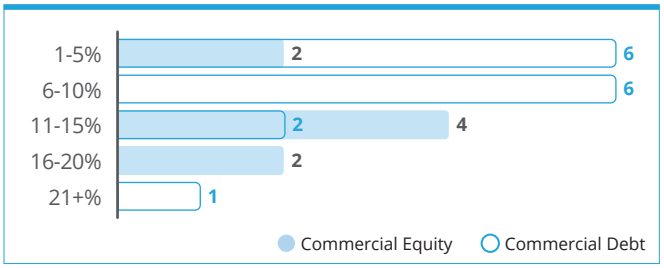


Figure 4: Commercial returns by instrument type, number of survey observations

Deal Type

Most (6 of 8) of the equity investment observations captured in the survey were participations in private equity funds. Unlevered private equity funds all returned above 11% IRR, with the one levered fund returning 1-5% IRR[3]. Private debt funds produced a wider range of returns, including 1-5% IRR, 6-10% IRR, and 11-15% IRR.

Direct equity investments (2 observations) into companies (later series rounds) have recorded yields of 11-15% IRR, while angel and pre-seed investors are positioned to achieve returns of 25% + IRR. Direct debt investment is a common instrument in the blended finance market, with senior debt comprising over 25% of all commercial investments captured by Convergence and over half of all debt investments. Direct debt financing in our case study portfolio is primarily directed in the form of project finance towards the energy sector, with returns hovering around 5% and one instance of over 21%. Another form of direct debt financing is channeled into Development Impact Bonds (DIBs), whereby private sector investors provide upfront loans to a service provider, with the degree of returns contingent on the service provider reaching pre-defined development targets. Both of the DIBs in our case study portfolio have returned upwards of 6%.

Blended bonds / notes in our case study portfolio have typically yielded between 1-5% (4 observations), with a single instance yielding between 6-10%. According to JP Morgan, the rolling average 5-year returns on emerging market bonds between 2006-2020, have exceeded 4% IRR in 94% of the periods. All blended issuances were privately placed with commercial investors given their relatively small ticket size. Most large-scale private sector investors are governed by liquidity requirements that prevent investment in publicly listed securities below a $250 million threshold.

3 A levered fund raises debt capital through senior securities at the fund level, in addition to issuing shares, to try and grow its investment portfolio and increase income and return. An unlevered fund only uses capital raised by issuing shares in the fund.

Generally, emerging market corporate bonds present an efficient channel for commercial investors, particularly institutional investors who need to allocate risk capital to assets that match their long-term liabilities. In a 2020 study, Bank of America found that investment grade emerging market corporate issuances yield about 60 basis points (bps) above US corporates, while high yield or speculative bonds in emerging markets feature an even greater spread on average at around 150 bps. All fixed income transactions in our case study portfolio were investment grade, a result of the risk-mitigation benefits afforded by the blended finance components incorporated into the issuance architecture, as well as the sovereign credit rating where the assets are held and the financial health of the issuing entity itself. Again, for many large-scale investors, like pension funds and insurance companies, investment grade status is a requirement when investing in capital markets. To generate greater and more consistent appetite for blended bonds / notes among private sector investors, transaction sizes will need to increase.

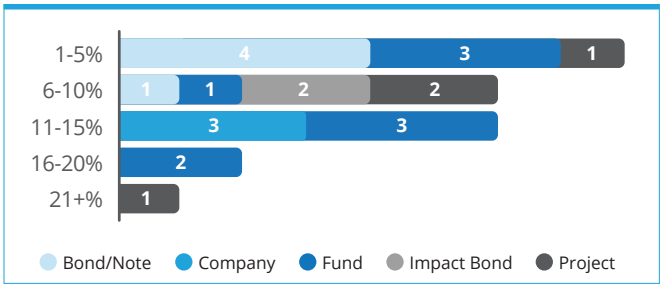


Figure 5: Commercial returns by transaction type, aggregated across equity and debt instruments, number of survey observations

Deal Sector

Returns on equity instruments primarily come from investments into the energy sector, with 80% of observations (4 of 5) achieving over 11% IRR. This includes both direct investment into companies and indirect or intermediated equity investments through energy sector-focused private equity funds. A private equity fund has also delivered equity returns of 11-15% IRR in the housing and real estate sector.

Returns on debt investments in the energy sector (9 observations) provide comparatively wider variability, with returns ranging from 1-5% to 21%+. Bonds / notes delivering capital to the energy sector occupy the lower end of this returns spectrum and are more associated with the "less-risky" refinancing stage of the project finance lifecycle. Conversely, project transactions raising commercial financing for the higher risk construction stage of energy asset development have delivered debt returns typically above 5%.

The transactions targeting the agriculture sector in our case study portfolio have exhibited a range of debt returns (4 observations, 3 debt instruments), with 50% of debt investments yielding above 10%. The agriculture transactions that have primarily focused on conservation activities have produced lower returns for lenders (however, still in line with expectations), while those that have interlinked energy-related outcomes with agricultural practices have higher returns profiles.

We have captured a total of 4 observations on returns in the financial services sector (2 equity instruments, 2 debt instruments), all delivered through financial intermediaries (private debt funds and levered and unlevered private equity funds). Debt returns fell between 1-5%, while equity returns were more disbursed; 1-5% IRR and 16-20% IRR. The financial services sector is one of the most common sectors targeted by blended finance transactions and has a proven ability to attract private investor appetite given conventional revenue streams and investment structures. With lower perceived risk, returns expectations are reduced accordingly.

Figure 6: Commercial returns by sector and underlying deal type. Each data point represents a unique investment into the corresponding transaction type.

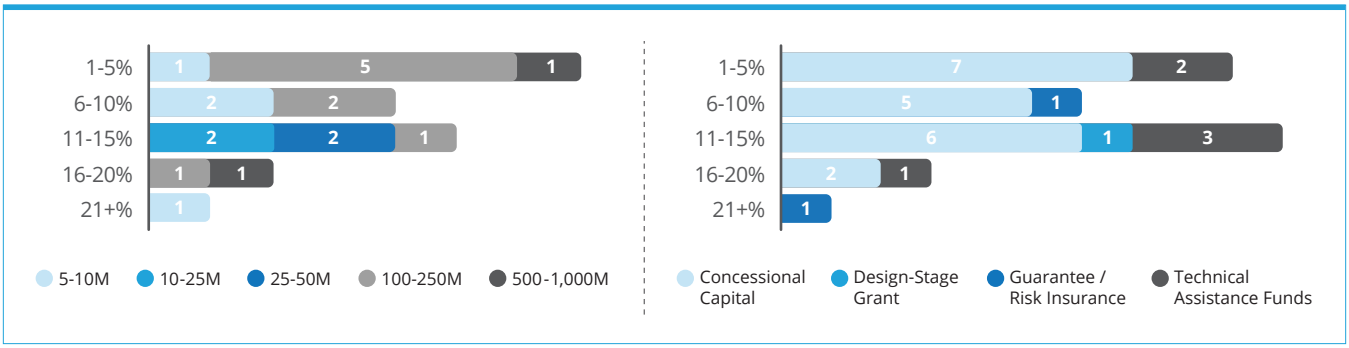
Deal Size & Blending Archetype

We have captured the most commercial returns observations for transactions between $100-250 million in size (9 observations). More than 75% of these deals yielded returns under 10% IRR (aggregated equity and debt investments) and feature bonds, funds, and projects. For smaller transactions (<$50 million, 8 observations), the returns distribution is dispersed, ranging from 1-5% IRR to over 21% IRR (venture stage company transaction). While the largest transaction within our case study portfolio (>$1,000 million, private debt fund) has yielded returns on the lower end of the equity returns spectrum at 1-5%, its strategy as a debt player would have led it to take lower-risk, lower-return positions; moreover, its investment activities are guided by a private sector mobilization mandate which caps returns on downstream investments.

Regardless of the blending archetype utilized, our case study transactions demonstrate that blended finance is developing a track record of mobilizing private sector capital through the enhancement of risk-adjusted returns. Across Convergence's four blending archetypes (concessional debt / equity, guarantees / risk insurance, TA, design-stage grants), we have captured the most observations (20, equity and debt) for transactions featuring concessional debt or equity.

This archetype is markedly the most frequently deployed within the wider blended finance market, featuring in over 70% of deals. Such transactions in our case study portfolio have a fairly even distribution of observations across the commercial returns categories, with 7 observations falling between 1-5% IRR, 5 between 6-10% IRR, and 6 between 11-15% IRR. Two-thirds (4 of 6 observations) of transactions utilizing TA grant funding have yielded returns over 15% IRR. We have captured comparatively smaller returns datasets relating to deals featuring design-stage grants or guarantees / risk insurance, with the one transaction featuring design-stage funding reporting returns of 11-15% IRR and two deals featuring guarantee instruments having returns of 6-10% IRR and 21%+ IRR.

It is worth noting that the type of blending archetype used will not necessarily equate to higher or lower expected returns. As has been outlined already, various factors such as: sector, vehicle type, geography, impact mandate, investor composition, and instrument use, among other things, also influence risk-adjusted returns expectations. Often, blending archetypes are used in conjunction with one another, further preventing any direct attribution of archetype to returns.



Figures 7 and 8: Commercial returns by deal size and blending archetype, number of survey observations

Part 3 Financial Performance of Concessional Capital

Based on survey results, Convergence has captured 23 total concessional return observations, comprising 8 concessional equity instruments and 15 concessional debt instruments. Here, concessional capital refers to investments, typically provided by donors (development agencies either governmental or multilateral), philanthropic organizations (private foundations), and impact investors, priced below the market rate for a comparable investment (e.g., lower interest rate, capped return on capital appreciation). While concessional capital in blended finance transactions can also come in the form of TA, design-funding grants, or guarantees / risk insurance with subsidized or below market-rate fees, the following observations only pertain to concessional debt and equity investments into the capital structure of the transaction. As mentioned in the methodology section, the rates of return are aggregated across all concessional participations within a transaction. As such, while development agencies do occasionally directly commit grant funding to a transaction in a risk-bearing position (i.e., taking the form of first-loss equity or first-loss debt) they are prohibited from realizing a return on those investments under ODA rules, meaning effective return is between 0% and -100% IRR. Unless grants from donor governments are directed via an intermediary, such as a DFI or MDB, that have the capacity to extend concessional equity and / or debt instruments, these grant instruments are not considered in this analysis.

Of the 8 concessional equity observations, 75% (6 observations) had returns under 5% IRR, while 12 of 15 concessional debt instruments yielded returns under 5%.

All concessional equity observations refer to first-loss or "risk-bearing" positions in levered or unlevered private equity funds. One concessional debt position in a mixed strategy fund notched a yield of 11-15%.

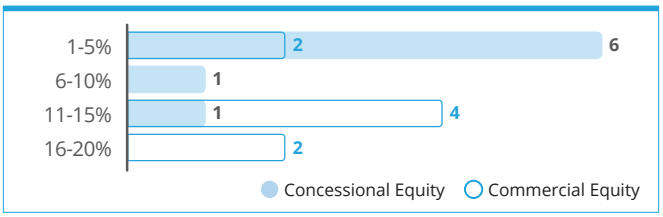


Figure 9: Comparing concessional and commercial equity returns, number of survey observations

Concessional debt positions in blended bonds / notes have similarly yielded between 1-5%. This includes participations in first-loss debt positions used to attract commercial investors by providing downside coverage, as well as concessional commitments in subordinated positions that are priced below other junior investors in order to reduce borrower cost of capital, reduce counterparty risk, and improve transaction bankability.

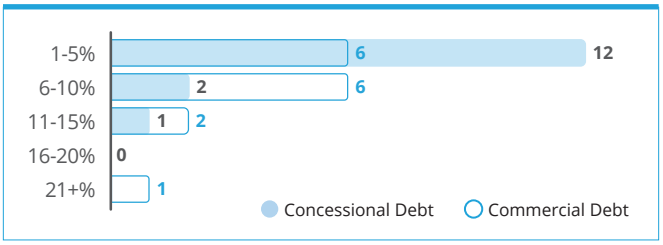


Figure 10: Comparing concessional debt and commercial debt returns, number of survey observations

Concessional Capital & Leverage

Leverage ratios are an important determinant of the effectiveness and efficiency of concessional capital in blended finance transactions. Rather than measure the economic benefit to private sector investment resulting from concessional investment, leverage looks at the volume of private sector capital crowded-in by concessional dollars. Leverage is defined here as the amount of commercially priced capital provided to a transaction, for every $1 of concessional or below-market price capital.

Convergence captured 12 leverage ratio observations from survey respondents. About 60% of transactions had a leverage ratio between 1-3X, 15% between 4-6X, 15% between 7-9X and one transaction of over 10X. These figures are generally aligned with recent findings produced by Convergence, that saw the median leverage ratio for the overall blended finance market to be about 4.1X.

Fund transactions in our case study portfolio typically have lower leverage ratios, with 4 of 5 observations registering between 1-3X. Conversely, projects have generated higher levels of leverage, with two-thirds being above 7X. These observations again closely map onto the overall market patterns witnessed in our recent report. The bonds / notes in our case study portfolio provide the widest variability in leverage ratio distribution ranging from 1-3X to 7-9X. This is a slight departure from the overall market which shows bonds / notes as the most efficient vehicle type for private sector mobilization, notching a median leverage ratio of 5.7X.

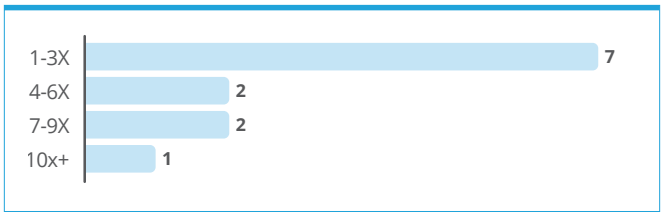


Figure 11: Leverage ratios, number of survey observations

Part 4 Downstream Financial Performance

Convergence also sought to provide a scope into the performance of the downstream lending activities of the relevant transactions in our case study portfolio. Closely tied to overall financial performance, the performance / status of the underlying loans comprising investment portfolios provides further insight into the credit quality, financial health, and growth trajectory of both the types of investees targeted by blended finance transactions and the domestic economies where investments are made.

The survey captured 9 observations pertaining to the non-performing loan (NPL) rate of the blended finance deals that invest through debt. This included 4 private debt funds, 3 bonds / notes, and 2 projects / programmes. A loan is considered non-performing when payment has not been made 90 days or more after it is due. NPL percentages are calculated as the total value of non-performing loans to the total value of the loan portfolio. Typically, NPL rates are applied to commercial banks and are indicative of the financial health of lending institutions, with higher rates associated with a higher risk of a debt write down. Moreover, in most markets, banks are the fundamental suppliers of credit. Thus, high NPL rates are also a signpost for the economic health of sovereigns.

About 67% of respondents reported an NPL rate of 0-3%, while about 20% stated an NPL rate of 4-6%. One observation was between 7-10%. According to the World Bank, the median NPL rates of commercial banks in low- and middle-income countries in 2020 and 2021 were 5.4% and 5.3% respectively. The Global Emerging Markets Risk Database (GEMs) identified that the default rate on standard debt contracts originated by 11 MDBs and DFIs to emerging market private sector counterparties averaged 3.7% between 2001-2019. Additional data found that the average commercial bank NPL rate in 2021 across low- and lower-middle income countries was 9.7%. Disaggregated, low-income countries had an NPL rate of 11.6% and lower-middle income countries 7.8%. The lending performance of the transactions in our case study portfolio was roughly in line with overall market trends, even slightly outperforming commercial bank lending. This illustrates the financial strength and stable credit standing of underlying investees accessed by blended finance deals and reinforces the above observations on the stable risk-adjusted returns achieved by case study deals to date.

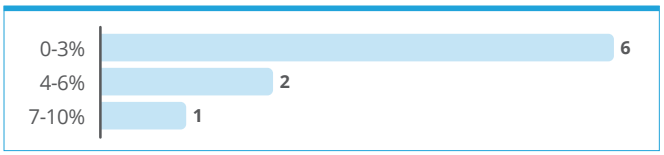


Figure 12: NPL rate, number of survey observations

Part 5 Case Study 2.0

INTRODUCTION

Convergence revisited five past case studies to provide greater context and insight into the financial performance, development impact generation and progression of ongoing blended finance transactions – a process we term "Case Study 2.0".

This sub-set of case studies was selected to best represent the diversity of our case study portfolio across a number of key criteria:

- transaction vehicle type;
- sector focus;
- geographic remit;
- deal sponsor type (public, private, philanthropic);
- impact focus; and
- transaction launch date.

The following section provides updated snapshots of:

i. CrossBoundary Energy I (original publish date: 2016);
ii. the Seychelles debt-for-nature swap (2017);
iii. the IIX Women's Livelihood Bond I (2018);
iv. the Forest Resilience Bond (2020); and
v. Sistema.bio (2021).

Here, we cover each transaction's financial performance to date, including underlying lending and investing activities where applicable, and performance against initial impact targets. We also highlight changes to the transaction structure, shifts in the investor composition due to new capital raises, and amendments to impact frameworks that may have occurred since our initial engagement, exploring what fueled those shifts and what informed the response. Finally, we showcase follow-on blended finance transactions launched by our case study partners and examine how their past experiences in the market have guided and influenced those successive transactions.

While these five examples cover a breadth of sectors, impact themes and deploy blended capital through unique transaction structures, our engagement with our case study partners yielded some key common findings:

i. Risk-adjusted returns of the transactions have met initial expectations.
ii. Blended finance transactions can feasibly provide affordable downstream financing to beneficiaries while encountering limited credit risk.
iii. The creation and implementation of impact frameworks can be complex and onerous for deal sponsors, but concessional investment can be critical to reduce the associated financial pressures.
iv. Blended finance transactions generate real development impact, both directly and indirectly.
v. Pioneering or first-time structures provide key learnings that are valuable to streamlining follow-on transactions, leading to replication and scale.

CASE STUDY 2.0

Crossboundary Energy 1

Overview & Deal Architecture

CrossBoundary Group, an advisory and investment management firm dedicated to creating investment across sectors in emerging and frontier markets, established CrossBoundary Energy I (CBE1), Africa's first fund delivering financing for industrial and commercial solar PV development. The $8.8 million dual-tiered blended finance equity fund invested in solar PV and battery systems that provided power under contract to corporate customers, such as Unilever, across an array of industrial activities, like hospitality and light industrials.

CrossBoundary began structuring CBE1 in 2013. The firm received $2.25 million in design-stage grants from the Shell Foundation and the US Clean Enterprise Facility to cover establishment and legal costs associated with the Fund's launch. Additionally, this early-stage funding freed-up budgetary constraints, enabling CBE1 to enter new geographies beyond East Africa.

The Fund was set up with two tranches;

i. a $1.3 million first-loss tranche, funded by USAID (Power Africa) through a repayable grant; and

ii. a $7.5 million senior equity tranche, owned by a breadth of private sector investors, including BlueHaven Initiative and Ceniarth. CBE1 achieved final close in 2015.

The first-loss tranche functioned as subordinated equity, taking a return after the private sector capital and was therefore more exposed to potential underperformance or loss. USAID's commitment was contingent on CBE1 raising enough senior equity to achieve a leverage ratio of at least 5:1 (5.77:1 final leverage ratio) and could only be deployed directly to recipient projects. For CrossBoundary, a first-time fund manager, with no energy investment track record, securing concessional capital was very impactful. Not only did it improve expected risk-adjusted returns for investors, but concessional capital was also used to cover legal costs (provided by US DFC) and management costs (provided by Shell Foundation) to facilitate scale. In addition to these costs, the presence of well-known concessional funders signalled to the market the economic and impact potential of the Fund.

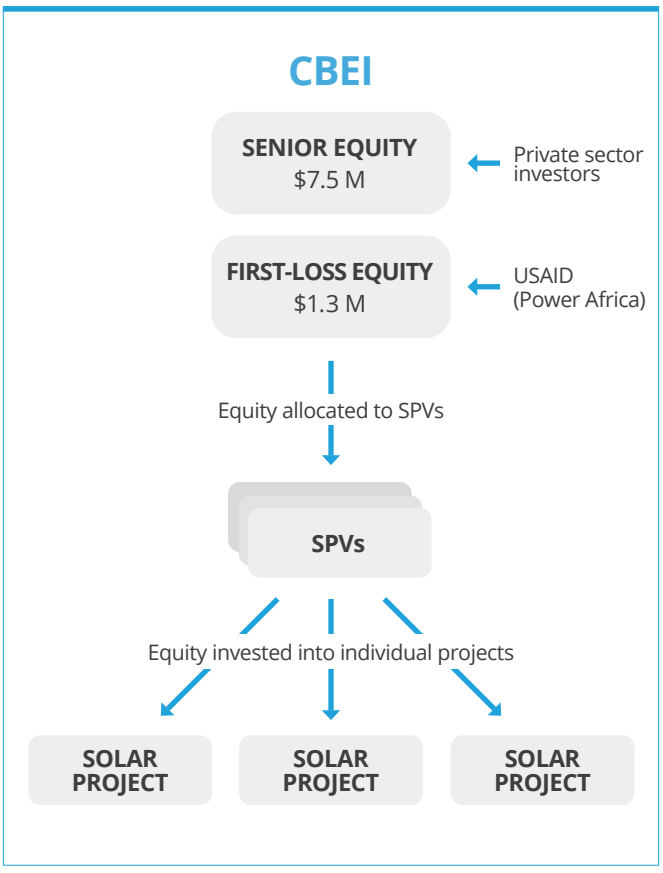


Figure 13: CBE1 transaction architecture

Financial Performance

In 2020, CBE1 secured an exit for all investors, including USAID, through a buyout investment from ARCH Emerging Markets Partners, a private equity advisory firm focused on infrastructure, private credit, and natural resources in developing countries. The buyout, valued at $40 million and transacted through ARCH's Africa Renewable Power Fund (ARPF), provided capital to continue building out the portfolio and also acquired the existing assets at a net 15% IRR to investors, delivering returns within CBEI's expected target range of 15-18%. In exiting its subordinated position, USAID hit its returns cap of 5%, exceeding its profit expectations. Moreover, the buyout increased USAID's leverage multiple to over 30X.

At exit, CBE1 had almost completely deployed all committed equity. ARCH ARPF's valuation of CBE1 factored in the operating value of completed projects, the value of projects under construction and the value of CBE1's project pipeline. The buyout demonstrated the success of using blended finance, first, to attract private sector investment to an unproven and unfamiliar asset class and, second, to prove out the asset class and transition it to a wholly commercial model.

In the summer of 2022, Norfund and KLP, Norway's largest pension fund, invested an additional $40 million in equity through joint company KLP Norfund Investments.

Impact Performance

CrossBoundary tracks impact across three lenses: enterprise level, environment level, and ecosystem level. At the enterprise level, core metrics focus on increased access to finance and access to affordable electricity. The environment level primarily tracks GHG emission abatement, while the ecosystem level pertains to the commercial impact motivated by the Fund, including increased investment into the solar PV space in Africa and validating the sector as commercially viable and market-based. As the company has grown, CrossBoundary has found that tracking impact has become less onerous and meeting the more rigid reporting standards of donors like USAID has become operationally easier. However, certain reporting practices typically required by donors are still a challenge, particularly the attribution of second-order impacts to Fund investments (i.e., number of jobs created by improved access to energy). Below is a progression of CBE1's impact generation.

Following the additional $40 million equity injection from KLP Norfund Investments, CBE1 aims to grow its operational portfolio up to $300 million AUM within 5 years.

Key Metrics	At time of exit	At time of KLP Norfund Investments Fundraise
Assets under development	$57 million	$188 million
Clients	20	30
Geographic reach	8 countries	20 countries
Installed solar PV capacity	40MW	150MW
Battery storage project size	10MWh	50MWh
Installed wind capacity	-	12MW

Table 1: CBE1 impact achieved

Follow-on Structure

Encouraged by the successes experienced employing a blended finance approach to the distributed solar PV market, CrossBoundary created CrossBoundary Energy Access (CBEA), a blended project finance facility for mini-grids in Africa. A core component of CBEA is the focus it places on project origination. Noting the lack of a sufficient pipeline of bankable, investment-ready projects for CBE1's capital, CrossBoundary is seeking to become more active in project development with CBEA and facilitate capital absorption, rather than act as a passive financier.

CBEA targets beneficiaries who will have access to electricity for the first time, aiming to connect 200K households and 1 million people, primarily in rural and remote settings, to power from mini-grids. While not a direct follow-on from CBE1, CBEA has a similar structured finance design, using a concessional tier of capital to mobilize private sector dollars to an unproven and unfamiliar asset class. While the need for subsidization in industrial solar PV deals has diminished since CBE1 began operations, there remains a considerable need for concessional capital in the more innovative mini-grid space. The facility was launched in 2019 with support of Rockefeller Foundation, DOEN Foundation, Shell Foundation, Ceniarth, and UK Aid. The targeted $50 million facility raised $25 million in concessional financing from Bank of America, ARCH, and the Microsoft Climate Innovation Fund in 2022, and will mobilize an additional $25 million in commercial capital. Expected net IRR ranges between 10-15%.

CASE STUDY 2.0

Seychelles Debt-for-Nature Swap

Overview & Deal Architecture

In 2015 The Nature Conservancy (TNC) and the Government of Seychelles closed a debt-for-nature swap, a pioneering transaction that enabled the Seychelles government to buy back a portion of its outstanding sovereign debt on favourable terms while increasing its funding towards marine conservation and climate change adaptation efforts.

TNC provided a 10-year $15.2 million concessional loan repayable at 3% and arranged a further $5 million in private grants from philanthropic foundations to refinance outstanding bilateral public debt owed to select Paris Club creditors[4] (Belgium, France, Italy, UK). Through the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT), a local entity established with the support of TNC, the total $20.2 million was on-lent to the Seychelles government for the repurchase of $21.6 million from Paris Club creditors at a discount of 93.5 cents on the dollar. Two promissory notes were then issued to SeyCCAT by the Seychelles government; a 3% annual-pay $15.2 million note for the repayment of the TNC concessional loan over 10 years, and a 3% annual-pay $6.4 million note over 20 years to fund marine conservation interventions and capitalize a perpetual endowment trust fund for the financing of future conservation initiatives.

The Seychelles debt-for-nature swap marked the first time that Paris Club creditors engaged in a debt refinancing transaction for climate and conservation finance. Since financial close, there have been no credit events on either the note payments to SeyCCAT nor on the debt service on the TNC loan.

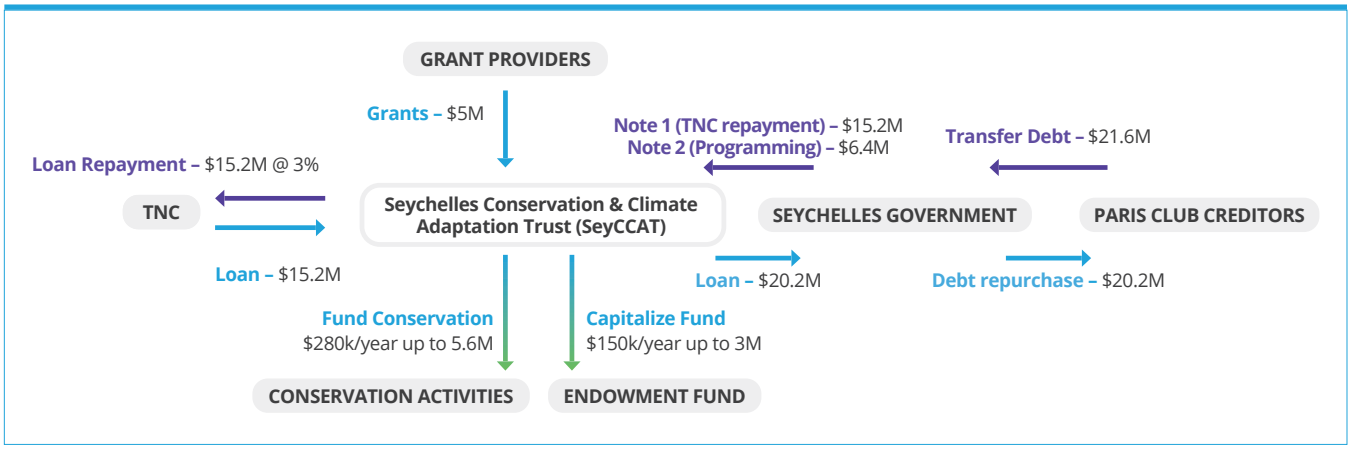


Figure 14: Transaction structure of the debt-for-nature swap

Since the 2015 debt-for-nature swap, additional financing mechanisms have been deployed to generate complementary funding. In 2018, the Seychelles government, with a guarantee from the World Bank, issued the world's first commercially financed sovereign Blue Bond. Proceeds of the $15 million, 10-year 6.5% private placement were directed towards SeyCCAT. SeyCCAT has also been able to attract grant funding from several donor institutions including $4.7 million for the years 2022-2024 to support the completion, from zoning to implementation, of the Seychelles Marine Spatial Plan (SMSP), governance arrangements to support SMSP implementation, management plans for marine protection areas, long-term financing options, and a documentary film for Seychelles to tell the story of the debt swap and the outcomes it has delivered.

4 Formed in 1956, the Paris Club is an informal group of official sovereign creditors whose goal is to find sustainable solutions to repayment challenges experienced by debtor countries.

Impact Performance

The debt-for-nature swap aimed to generate two main outcomes for marine conservation:

i. increase the area under protection (Marine Protection Areas, MPA) from less than 1% to 30% of Seychelles' 1.35 million square kilometer ocean; and

ii. create a permanent funding stream for climate adaptation and marine conservation.

Combined, these outcomes target key areas under pressure from marine biodiversity loss and climate change such as coral reefs, that contribute more than $51 million annually to the national economy, and mangroves which contribute more than 156 million metric tons in blue carbon. These outcomes also support conservation and management actions for the long-term health of the marine ecosystem that supports Seychelles' blue economy. Shocks or changes to each factor would have significant ramifications for the livelihoods of many Seychelles citizens and the country's overall economic sustainability.

SeyCCAT began disbursing funds in 2015 using a competitive grants programme, the Blue Grants Fund (BGF), to allocate funding to local NGOs, businesses, parastatal organizations, government departments and agencies, and Seychellois citizens. Between 2015-2022, the BGF disbursed $2.36 million in grants across 56 eligible projects. Below (Figure 2) is SeyCCAT's impact framework guiding BGF's grant operations.

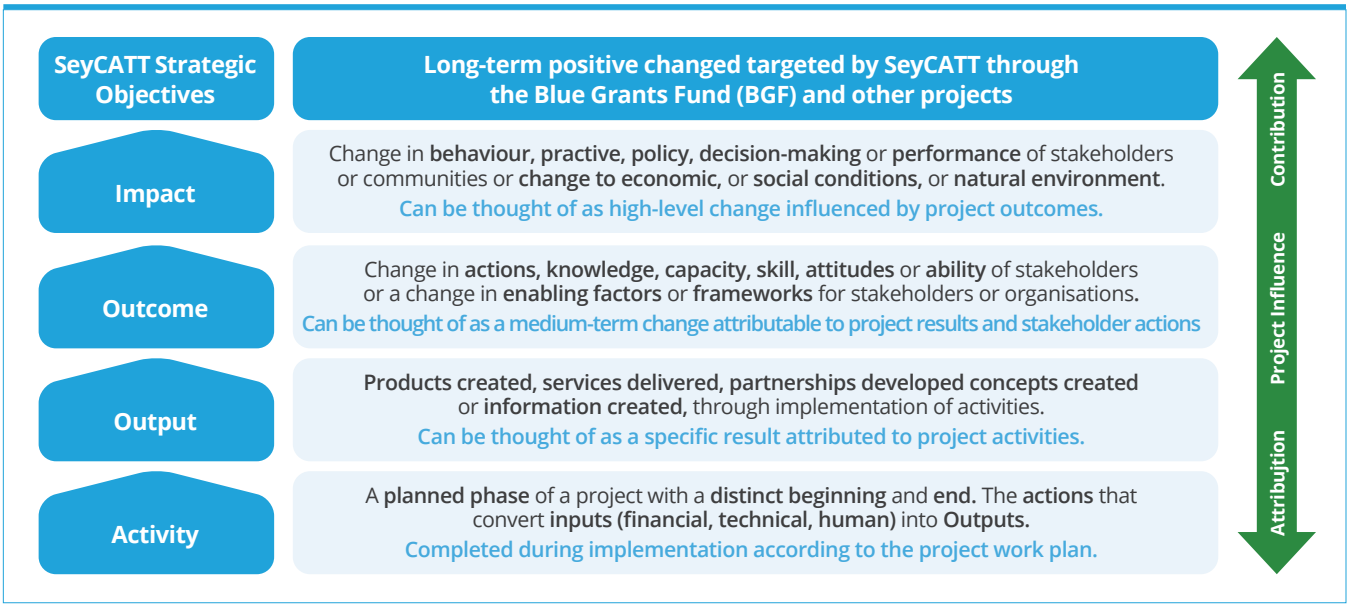


Figure 15: SeyCCAT's impact framework (Source: TNC)

In March 2020, five years after the close of the debt-for-nature swap, Seychelles reached its goal of placing 30% of its ocean under legal protection (more than 410,000 sq. km of ocean). The total area under protection consists of five high biodiversity areas, designated as Marine National Parks, where extraction and seabed alterations are not allowed except for essential services. These areas are home to endangered species, economically vital fish stocks, and thermal refugia for coral systems. Eight Sustainable Use areas protect natural ecosystems while allowing sustainable uses including fishing, tourism, and renewable energy development. The design of marine protections is one aspect of the Seychelles Marine Spatial Plan, which outlines the country's trajectory for sustainable development in the context of climate change and global biodiversity frameworks. The Marine Spatial Plan includes the remaining 70% of Seychelles' ocean in Multiple Use zones where improved management will occur for all uses and activities. The Marine Spatial Plan is expected to be finished in 2023 and begin implementation in early 2024; the pandemic has resulted in a two-year delay in completing the Plan. The Marine Spatial Plan will be signed into law and legally enforceable with an existing Act and a new regulation. Multiple delegated authorities have jurisdiction to enforce allowable activities in the Marine Protection Areas.

Follow-on Transactions

The first Seychelles transaction developed a proof-of-concept for sovereign debt refinancing and provided a model for how proceeds could significantly boost ocean conservation efforts. When exploring replication and scalability, and with the support of a design-stage grant provided by Convergence, TNC considered issuing a Blue Bond to support multiple country debt conversions and to target the refinancing of commercial debt instead of bilateral sovereign debt.

The proposed structure involved setting up a special purpose vehicle that would issue a multi-country Blue Bond with a 2% coupon and 15-year cover. The Blue Bond would also separately involve a buyout of the TNC loan for Seychelles.

Ultimately however, the proposed multi-country structure was found to be too challenging to deploy due to;

i. challenges in aligning timelines with multiple sovereign entities;

ii. the balancing of variable geographic mandates of investors and guarantors;

iii. potential issues arising from cross-defaults and the subsequent recourse impacts on other sovereign loans;

iv. a coupon rate that was lower than expected risk-adjusted returns for commercial investors.

These challenges influenced a change in strategy and TNC pivoted towards working with sovereigns and other partners to structure and execute commercially viable single country transactions. Since then, TNC has announced Belize's Blue Bond in 2021 and a Blue Bond in Barbados in 2022. Details of each bond are outlined below in Table 1. The Seychelles debt-for-nature swap served as an important template for the impact frameworks of the Belize and Barbados Blue Bonds. Each country has committed to protect 30% of its ocean and is developing a Marine Spatial Plan with stakeholders to achieve these commitments alongside the implementation of other measures to support the sustainability of its blue economy. Local endowment funds were created to maintain the flow of capital to conservation projects in the future.

Transaction	Size	Year	Description	Impacts
Belize Blue Bond	$364M	2021	• World's largest ocean conservation financing • $553M commercial "Superbond" refinancing at 55 cents on the dollar • A TNC subsidiary provided the Blue Loan to finance the repurchase of the Superbond • Credit Suisse financed the TNC subsidiary Blue Loan through the placement of highly rated Blue Bonds with investors • DFC provided Political Risk Insurance wrap on Blue Loan • $200M in debt service savings	• 30% of ocean in protection and a national marine spatial plan – Belize Sustainable Ocean Plan (BSOP) • Local conservation trust fund created (Belize Fund for a Sustainable Future) • Generates $4.2M on average annually for conservation funding • $23.4M endowment capitalized at financial close ($92M est. end value in 2041)
Barbados Blue Bond	$150M	2022	• Dual currency loan facility Blue Loan of $150M to the government of Barbados to refinance existing debt • Blue Loan (USD 73.5M loan and 73.5M Barbados Dollar loan) arranged by Credit Suisse and placed with investors and CIBC First Caribbean • TNC provided $50 million guarantee and the Inter-American Development Bank (IDB) a $100 million guarantee on the Blue Loan • Combined, buyback outstanding USD 6.5% bonds (92.25 cents on the dollar) and 8% local notes (near par) • $22M in debt service savings	• 30% of ocean under protection and a national Marine Spatial Plan • Local conservation trust fund created (Barbados Environmental Sustainability Fund) • Generates $1.5M on average annually for conservation funding • Capitalize an endowment with $17M over the term of the transaction ($27M estimated end value by 2037)

Table 2: TNC supported Blue Bonds

CASE STUDY 2.0

IIX Women's Livelihood Bond™ I

Overview & Deal Architecture

In 2017, Impact Investment Exchange (IIX), a global impact investing firm committed to improving gender equity in financial systems, listed the Women's Livelihood BondTM 1 (WLB1), a $8.5 million, 4-year 5.65% semi- annual coupon bond, on the Singapore Exchange (SGX). The issuance was one of the world's first publicly listed bonds with an impact mandate and marked the first fixed-income listing exclusively dedicated to gender-lens investing.

WLB1 received design-stage grant funding from the Rockefeller Foundation and the Japan Research Institute to support the issuance's design, structuring, and fundraising processes. WLB1 featured a $500K first-loss subordinate debt tranche funded by IIX. IIX also used a portion of the proceeds raised (~$250K) to capitalize a debt service reserve account (DSRA) and secured a 50% partial pari-passu guarantee from USAID DCA on all downstream lending with guarantee fees subsidized by the Australian Department of Foreign Affairs and Trade (DFAT).

To maintain timely debt service in the event of borrower default, the three risk-mitigation instruments would be triggered in the following sequence:

i. draw down available funds in the DSRA;

ii. call the guarantee to cover up to 50% of losses; and

iii. draw down the first-loss tranche for losses exceeding 50%.

Combined, the instruments provided the requisite downside coverage to attract the interest of accredited investors. Placement agents ANZ and DBS Bank privately placed the bond with a diversity of private investor classes, 60% of whom were domiciled in the Asia region. Listing the bond on SGX increased the transparency surrounding the bond's investment structure, further enhancing its appeal for new investors to the impact investing space.

WLB1 reached maturity in 2021, repaying all investors in full, with no credit events and without calling the guarantee.

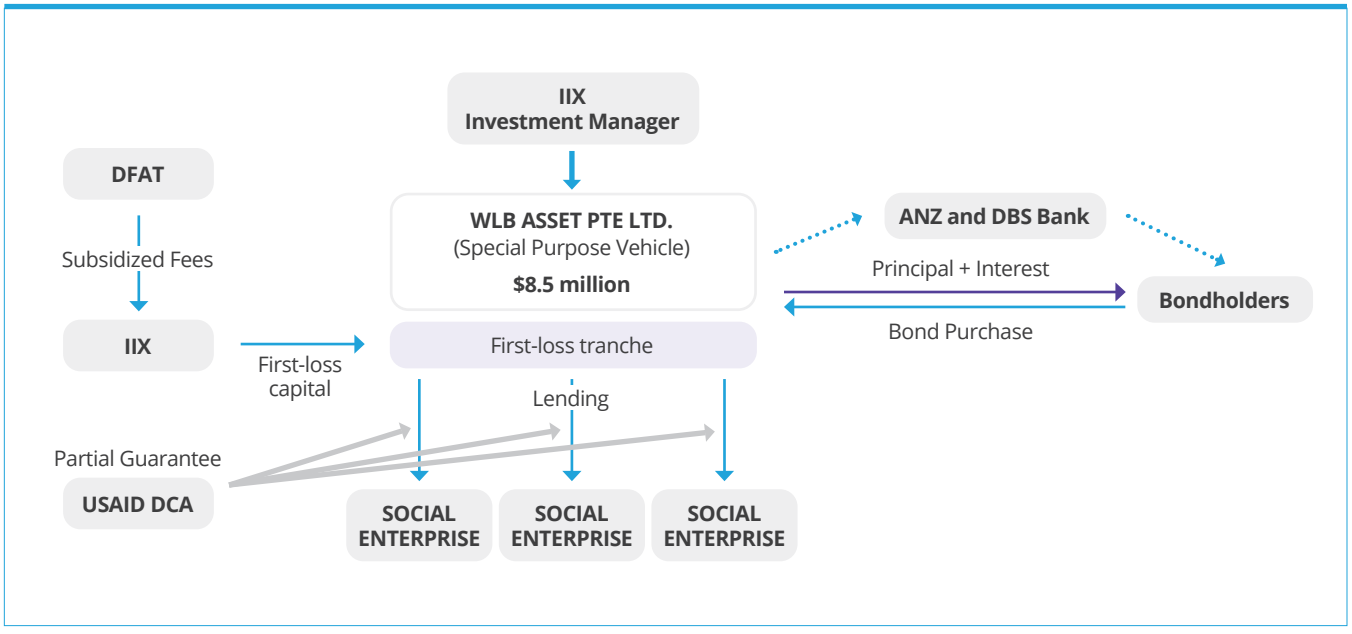


Figure 16: WLB1 deal structure

Impact Performance

All bond proceeds were invested in three social enterprises operating in the sustainable agriculture and financial inclusion sectors across Cambodia, the Philippines, and Vietnam.

IIX selected the recipients based on:

i. their proven ability to economically empower women in line with their gender-lens impact criteria and their projected ability to expand the number of women they are able to serve using bond proceeds; and

ii. their ability to effectively manage and repay the loan funds.

IIX monitored the impact generated by the underlying lending activities of the social enterprises across two primary impact metrics;

i. generate $2.40 in socio-economic value for every $1.00 invested; and

ii. provide 385,000 women with (improved) access to credit, essential goods and services and basic technology.

Both targets were met within the first 2.5 years of the bond's life.

Over the tenor of the bond, WLB1 realized a weighted average of $3.10 Social Return on Investment (SROI) for every $1.00 of bond proceeds invested. SROI was a unique impact measure devised by Social Value UK and used by IIX to quantify the transaction's ultimate impact. Similar to conventional financial return on investment analyses, SROI applies a cost-benefit calculation based on invested inputs and outputs and outcomes with assigned economic value (e.g., change in borrower incomes, change in financial savings, changes in consumption). WLB1 also exceeded the target number of women beneficiaries impacted, reaching 453,000 women borrowers.

IIX also achieved additional impact targets, including the creation of more than $13 million in improved financial resilience through increased savings and income and the realization of $20 of private sector investment for every $1 of grant funding provided to the structure. Moreover, 80% of women borrowers served by the three social enterprises reported easier loan access and improved affordability of financing, and 90% of women acknowledged an improved quality of life due to better capital access.

Recipient enterprise	**Summary of activities**	**Amount of bond proceeds received** *(USD, millions)*
1	Microfinance institution serving the poor through both group & individual loans	3.2
2	Foundation providing "Grameen-type" (zero collateral) loans to entrepreneurs	1
3	Operates a digital retail platform helping toimprove access to essential goods & services	3.7

Table 3: Summary of WLB1 investees

Follow-on Transactions

WLB1 was the first installment of IIX's current $128 million gender-focused listed-bond program, and since its issuance, IIX has launched four additional bonds supported by blended finance. Each issuance, including its performance to date, is outlined below in Table 2. At progressively larger ticket sizes, each successive bond reinforced the growing private sector appetite and increased comfort investing in debt securities with an explicit impact mandate and exclusively operating in emerging markets. The larger issuances have also shifted the investor base from primarily accredited investors (high net-worth individuals and family offices) to institutional investors. It is important to note that the first-loss tranches were proportionally larger in the successive bonds, signalling the continued need for sufficient risk-mitigation mechanisms to attract institutional investors. The program also underscores the viability of debt capital markets to deliver private sector financing to financial inclusion and gender equality initiatives, including the intersection of gender equality and climate action, which was specifically targeted in WLB4. Subsequent issuances also have not experienced any defaults or calls on the guarantee. Finally, IIX's most recent issuance, WLB5 in 2022, marked the world's first Orange Bond, a new asset class led by a Steering Committee made up of a diverse range of ecosystem actors including IIX, U.S. DFC, Australian DFAT, ANZ, Nuveen, Shearman & Sterling, and Water.org. Over 100 ecosystem actors from across the public, private, and civil society sectors also engaged in the creation of the Orange Bond Principles, a set of standards to guide issuers, arrangers, and investors in the design of gender-lens debt securities.

Issuance	Size *(USD, millions)*	Blending components	Summary	Impact to-date
WLB2 Issued – 2020 Maturity – 2024	**12** 4%, semi-annual pay coupon	$1.5 million subordinated first-loss tranche USAID 50% partial guarantee	Promote gender equal financial inclusion through six social enterprises in Cambodia, Sri Lanka, the Philippines, and Indonesia. Sectors include: sustainable agriculture and financial inclusion.	• Current SROI of $3.42 • Current women beneficiaries reached: 88,750
WLB3 Issued – 2020 Maturity – 2024	**27.7** 3.95% coupon	$3 million subordinated first-loss tranche	Promote gender equal financial inclusion in the wake of the COVID-19 pandemic in Cambodia, India, the Philippines, and Indonesia. Sectors include: sustainable agriculture and financial inclusion.	• Current SROI of $4.18 • Current women beneficiaries reached: 51,853
WLB4 Climate Issued – 2021 Maturity – 2025	**30** 3.9% semi-annual pay coupon	$3 million subordinated first-loss tranche	First WLB™ to incorporate primary climate impact alongside gender equal financial inclusion. Targets Cambodia, India, the Philippines and Indonesia. Sectors include: sustainable agriculture, clean energy, mobility lending, and financial inclusion.	• Current SROI of $4.05 • Current women beneficiaries reached: 46,210
WLB5 Issued – 2022 Maturity – 2026	**50** 6.5% semi-annual pay coupon	US DFC / Sida 50% partial guarantee	World's first Orange Bond promoting gender equal financial inclusion complying with Orange Bond Principles in Cambodia, India, Indonesia, Philippines and Kenya. Sectors include: sustainable agriculture, clean energy, water and sanitation, affordable housing, and financial inclusion	

Table 4: WLB™ Series to-date

CASE STUDY 2.0

Forest Resilience Bond (FRB)

Overview & Deal Architecture

The Yuba I Forest Resilience Bond (FRB), developed by Blue Forest, a conservation finance-focused non-profit, is a pilot project that was launched in 2018 on the Tahoe National Forest in Northern California. The pilot FRB was designed to address the funding gap in forest restoration work by bringing in private sector financing sources to forest management. While public sources are traditionally responsible for funding restoration activities, fiscal budget constraints have prevented forest restoration work from being done at the speed or scale necessary. The FRB model addresses this issue by using upfront investment from private and philanthropic investors to fund restoration activities (referred to as the "investors"). Investors are then reimbursed with returns by outcome funders such as the U.S. Forest Service (USFS) and Yuba Water Agency based on the completion of work (referred to as the "beneficiaries").

Yuba I represents the first restoration "bond" of its kind. While referred to as a bond, the FRB is a fixed-income vehicle backed by contracted cash flows that draws inspiration from two types of financing structures:

i. impact bonds, and
ii. infrastructure financing.

The aim of Yuba 1 was to demonstrate a commercial track record for forest management that could be replicated at scale.

Yuba I drew on multiple types of blended finance. Firstly, the pilot project benefitted from design-stage grant funding provided by the Rockefeller Foundation via its Zero Gap Portfolio to build out its financial structure. The FRB leverages upfront capital from concessional and commercial investors to fund project costs (investors). Here, Yuba I attracted $2 million in 1% loans from the Rockefeller Foundation and the Gordon and Betty Moore Foundation deployed through Program-Related Investment (PRI) instruments. This enabled Yuba I to attract an additional $2 million from commercial investors CSAA Insurance and Calvert Impact Capital at 4.0%. All lenders ranked pari passu. The presence of concessional capital enhanced returns for commercial investors while ensuring more funding could be used for project costs.

Blue Forest identified four organizations to participate as project outcome funders (beneficiaries), who share in the cost of reimbursing investors over time, including local utilities and the USFS. Given the pioneering nature of this model, contracting timelines with beneficiaries took longer than anticipated, particularly to find an agreement that would work for the USFS, a U.S. federal agency. Ultimately, the USFS entered into a stewardship agreement with the National Forest Foundation (NFF), which enabled NFF serve as the implementation agency on behalf of the USFS. The FRB ultimately secured $4.3 million in outcome funding from: Yuba Water Agency, California Fire, Sierra Nevada Conservancy, and the Forest Service. All financial agreements with beneficiaries were negotiated individually.

Financial Performance

The Yuba FRB has performed in line with target financial expectations; all loan payments have been made on time. Yuba I is now fully drawn and nearly fully repaid. The timeline for restoration work was delayed slightly due to fire activity in 2021, which made some of the scheduled work impossible.

This increased the amount of loan outstanding, which caused some lenders unease, particularly in a rising interest rate environment. As such, Blue Forest's follow-on FRB, Yuba II, will use a revolving loan facility (more details below).

Impact Performance

The anticipated impact of the FRB was multi-fold. In addition to yielding environmental benefits including fire risk reduction and protecting water quality, the FRB aimed to accelerate the pace of restoration work, create a highly replicable financial model, and build relationships between diverse stakeholders to support land management.

The implementation period for the FRB is on track to end in December 2023, in line with the target 4-year implementation period anticipated at project outset. This timeline is significantly accelerated compared to conventional Forest Service restoration efforts (~10 years).

To date, the project has achieved the following metrics: 1,711 acres (1 acre = 0.4 hectares) of ecosystems restored and 5,132 acres of ecosystems protected. The FRB aims to protect 15,000 acres total.

Following the Yuba I pilot, nine organizations, including Yuba Water, partnered to form the North Yuba Forest Partnership, to scale, finance, and implement forest restoration across 275,000 acres of watershed. In 2021, Blue Forest, in coordination with the North Yuba Forest Partnership, scaled the efforts of Yuba I to launch the Yuba II FRB, a significantly larger FRB that finances $25 million of restoration to protect 48,000 acres of forest (more details below).

FOREST RESILIENCE BOND IMPACTS

SDG Target	Project Outcome	Unit	2022 Impact	2019-2022 Cumulative Impact
6	**CLEAN WATER & SANITATION**			
	Water Supply Increased	Acre-feet	3,990	19,830
7	**AFFORDABLE & CLEAN ENERGY**			
	Biomass Utilization	Tons	9,780	60,940
	Renewable Energy Generated by Biomass	MWh	2,930	18,160
	Hydropower Protected	MWh	5,530	27,490
8	**DECENT WORK & ECONOMIC GROWTH**			
	Direct & Indirect Jobs Created	#	51	92
	Total Funds Deployed for Ecosystem Restoration	$	2,569,000	4,674,000
11	**SUSTAINABLE CITIES & COMMUNITIES**			
	Fire Control Lines	Miles	4.5	29.5
	Communities Involved in Resilience Bonds	#	4	8
13	**CLIMATE ACTION**			
	Avoided Wildfire Carbon Emissions	MTCO2e	3,945	19,600
	Biopower Carbon Benefits	MTCO2e	1,960	12,190
15	**LIFE ON LAND**			
	Animal Species Protected	Species	1	9
	Plant Species Protected	Species	7	14
	Fuels Reduction	Acres	415	1,493
	Prescribed Pile Burning	Acres	244	745
	Aspen Regeneration	Acres	45	251
	Meadow Restoration	Acres	28	190
	Invasive Plant Treatments	Acres	84	173
	Terrestrial Ecosystems Restored	Acres	572	2,107
	Terrestrial Ecosystems Protected	Acres	1,160	5,765
17	**PARTNERSHIPS FOR THE GOALS**			
	Formal Blue Forest FRB Partners	#	6	24

Figure 17: Yuba I Impact 2019-2022 (Source: Blue Forest)

Follow-on Structure

Delivering on its vision to scale the FRB, Blue Forest launched Yuba II in 2022.

As with the Yuba I FRB, Yuba II incorporates blended finance, drawing on both concessional (PRI) investors and commercial investors. Compared to the pilot project, Yuba II uses significantly less concessional capital than Yuba I (12% of Yuba II's capital stack is concessional, vs. 50% in Yuba I).

Concessional capital was valuable as it achieved two goals:

i. it kept the cost of capital down to optimize impact, and

ii. the presence of well-known concessional capital providers such as the Moore Foundation brought confidence to new investors in the FRB.

Yuba II will have four market-rate investors, raising a total of $8 million. Market-rate investors will include repeat investor CSAA Insurance, as well as Hall Capital, ImpactAssets, and RSF Social Finance. Yuba II has PRI lenders participating in the $3 million concessional tranche, including lead investor the Gordon and Betty Moore Foundation, as well as the Inherent Foundation.

Beneficiaries in Yuba II include repeat funders Yuba Water Agency, Forest Service, and California State Government, as well as new state agencies such as California Wildfire Conservation Board. The pool of beneficiaries in Yuba II also expanded to include corporates, notably Silk, a Danone brand, in partnership with Bonneville Environmental Foundation (BEF). Garnering corporate support to leverage utility and state funding was a primary goal for Yuba II. Beneficiaries have committed over $30 million funding, to reimburse investors based on the completion of work.

Compared to Yuba I, investors in Yuba II have slightly lower return requirements; commercial investors are entitled to a 3.5% return, while concessional lenders are entitled to a 0.5% return. This pricing was determined in a lower interest rate environment compared to Yuba I. Yuba I1 has drawn on both PRI and commercial loans, and has made two quarterly payments including a small return on principal.

Contracting the FRB with lenders and beneficiaries was significantly faster compared to the pilot project (the entire process took eight months, compared to more than three years in Yuba I). The accelerated timeline validates the replicability of the pilot project, which established the underlying template contracts and implementation partners necessary for scale. Moreover, the level of understanding of the capacity of beneficiaries such as the USFS and Yuba Water Agency Service was significantly higher in Yuba II, reducing institutional barriers and increasing the amount of funding available for the project. For example, Yuba Water Agency committed $6 million to Yuba II, compared to $1 million to Yuba 1.

Although the contracting process with beneficiaries was the same, the loan agreements were amended in the second bond. While in Yuba I all lenders committed total funding upfront, with commitments drawn down over the course of the loan, in structuring Yuba II there was some concern among lenders about committed but uninvested capital especially in a rising interest rate environment. As a result, the market-rate debt and concessional debt were split into two separate loans, with market-rate lenders using a revolving credit facility. Commercial lenders will commit a maximum loan of $8 million. Meanwhile PRI lenders will commit the total of $3 million loan up front. Like with Yuba I, commercial lenders and PRI lenders will be on *pari passu* and *pro rata* terms, as stipulated in an inter-creditor agreement between all lenders. Moreover, to ensure that no loans are outstanding in case of a delayed work schedule, as witnessed in Yuba I, Blue Forest has created an implementation agreement with the NFF that ensures all invoicing for restoration work occurs prior to disbursement of loans, to provide additional confidence to investors. This was an important consideration when fundraising with institutional investors for Yuba II and beyond.

	Indicator	Impact to date
Size	$4 million	$25 million
Investors	Commercial: CSAA Insurance, Calvert Impact Capital PRI (concessional): Rockefeller Foundation, Moore Foundation	Commercial: CSAA Insurance, Hall Capital, ImpactAssets, and RSF Social Finance PRI (concessional): Moore Foundation, Inherent
Beneficiaries	California State Government, Yuba Water Agency, U.S. Forest Service	California State, CA Wildlife Conservation Board, Danone North America (in partnership with Bonneville Environmental Foundation), U.S. Forest Service, Yuba Water Agency
Capital Structure	$2 million commercial debt, $2 million concessional debt Beneficiary funding: ~$4.3 million	$8 million in commercial debt (recycled), $3 million in concessional debt (PRIs) Beneficiary funding: >$30 million
Target Returns	4%, 1%	3.5%, 0.5%
Expected Impact	Reduce project timeline from 10 to 4 years. Protect 15,000 acres around Tahoe National Forest from wildfire risk.	Protect 48,000 acres around Tahoe National Forest from wildfire risk over five years.

Table 5: Summaries of Yuba I and II

Other Initiatives

Beyond Yuba II, Blue Forest is developing additional financial mechanisms to scale the FRBs and mobilize more investment into forest restoration work. Blue Forest is currently working on launching The FRB Catalyst Facility, a $10 million facility that will raise high-impact PRI funding to finance new pilot FRBs. The Catalyst Facility is aiming to finance 10+ pilot FRBs with an average size of $5 million with 12 national forests across five states in the Pacific Coast and Mountain West.

In addition, Blue Forest is fundraising for its first investment fund, the California Wildfire Innovation Fund I. The Fund is targeting a $50 million final close from institutional investors in Q3 of 2023. The Fund is anchored by CSAA Insurance and is aiming to deliver a target net IRR of 6-8% for investors.

CASE STUDY 2.0

Sistema.bio

Overview & Deal Architecture

Sistema.bio is a social enterprise focused on bridging the energy access gap for rural smallholder farmers. Founded in Mexico in 2010, the company manufactures, sells and distributes small-scale biogas digester units and biogas-linked appliances. The biogas digesters convert livestock waste into biogas, a cleaner and more renewable energy source than thermal alternatives such as charcoal and wood fuel or liquified petroleum gas, leaving behind a biofertilizer which can be used in crop production. To ensure affordability of the units for its clients, Sistema.bio also offers a vendor financing program, where monthly savings produced by the biodigesters (displaced energy expenses from alternative sources, fertilizer savings) exceed monthly debt service payments.

In its more than 10 years of existence, Sistem.bio has raised and utilized a breadth of different types of blended capital for different purposes, demonstrating both the flexibility and precision of blended finance approaches. After being seeded by a series of angel investors, like Satila Impact Investment, as well as founder equity to develop the digester technology and build a local market in Mexico, Sistema.bio secured venture capital from Factor[E] in 2017 to begin to scale its operations, along with a series of non- and repayable grants from the Shell Foundation.

These grants were specifically earmarked to:

i. expand geographically;
ii. grow its product base; and
iii. to scale its business model to reduce costs.

Since 2017, the Shell Foundation has provided about $5 million in grant and repayable grant capital over five funding rounds. In 2019, Sistema.bio closed a $12 million Series A funding round, securing equity, preferred equity, and senior debt capital from venture capital firms, investment managers, and banks. The round included a EUR1.5 million loan (8%) from crowd-funding platform Lendahand to help Sistema.bio cover its high early-stage working capital demands resulting from its asset financing program. A $4.5 million convertible note bridge round was launched in 2020, to address the unique working capital needs and other financial challenges presented by the COVID-19 pandemic. The notes were purchased by existing and new investors, including the Dutch development bank FMO, who participated on below-market terms (6.5%).

TA funding has also been a core component of Sistema.bio's business model and has been employed for various uses. For example, TA funding was critical to education efforts for potential and existing clients about the workings and value of the biodigester systems to help ensure long-term buy-in. The company also received TA grants from the Clean Cooking Alliance for the creation of a special purpose vehicle that would enable Sistema.bio to take its lending operations off its own balance sheet to expand its asset financing program.

Finally, AlphaMundi and the USAID Powering Agriculture Investment Initiative provided targeted TA in 2020 to:

i. enhance and improve Sistema.bio's supply chain; and
ii. to increase its application of gender-specific interventions, specifically in sales.

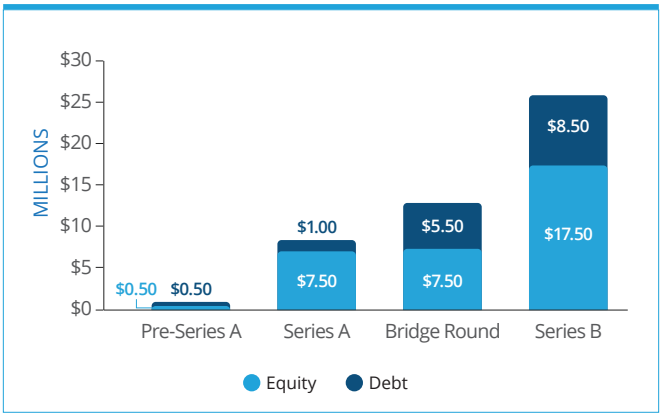


Figure 18: Summary of cumulative financing of Sistema.bio

Financial Performance

At the end of 2021, Sistema.bio closed a $15.6 million Series B round. Again, the fundraise featured several capital types including, $10 million in equity, $1 million in senior debt, $3.6 million in debt converted from the bridge round, and an additional $900 thousand from Shell Foundation, to support company growth, specifically into new geographies. The size of and timing of the fundraise aligned with expectations of Sistema.bio noted in our 2021 case study. The round was led by KawiSafi Ventures and AXA IM Alts, and featured investments from Chroma Impact, EU ElectriFI Fund, and a top-up from Triodos Bank. In 2022, the company achieved revenues of $11.4 million and the budget for 2023 is upwards of $20 million (also in-line with Sistema.bio's projected revenue from our 2021 case study) – more than the equivalent of cumulative revenue earned for the company between 2010-2020 ($17 million). The growth is underpinned by a greater volume of installed units due to growing operations globally, but especially in India.

Over the course of the multiple fundraising rounds, Sistema.bio discovered that the expected risk-adjusted returns threshold for impact investors was around 15% (IRR) with a cost of debt of 6% to 10%. Sistema.bio's latest funding round (Series B) featured downside protection to ensure a returns floor of 15% IRR. Unrealized IRR for pre-Series A seed funders is approximately 55%.

As Sistema.bio has continued to scale its business model, the company is better positioned to be intentional and strategic with its concessional capital instruments, specifically to improve "softer" areas of operations, like improving personnel capacity and research and development. Likewise, concessional capital providers altered their investment strategies as the company became more commercially viable For example, the Shell Foundation's financing tranches have begun to progressively absorb less risk as Sistema.bio has graduated to a commercially feasible enterprise – from a $900 thousand grant to $2.15 million repayable at 2% - highlighting the use and value of blended finance as an on-ramp to sustainable economic viability. The cost-benefit analysis for specific TA tenders also showed that seeking these funds had become inefficient. With more stable revenues, Sistema.bio could simply direct operating capital to fund these needs rather than allocate time and human capital to the TA application processes of smaller funds.

Impact Performance

Sistema.bio has tracked impact through six key performance indicators:

i. tCo2eq reduced by biodigester use;
ii. # of units sold;
iii. amount of waste treated (m^3);
iv. # of people benefitting from biodigester units
v. amount of biogas produced (m^3/year); and
vi. area fertilized with bioslurry (ha/year).

Table 1 provides current impact achieved across these indicators.

The company recently launched a carbon credit issuance program. Sistema.bio had initially planned to factor in the carbon credit model at the business' inception, but the depressed price of carbon during the early 2010s (0.6 cents / ton) meant the model was not commercially feasible. With the continued rebound in the price of carbon over the last decade, Sistema.bio has introduced the pre-purchase of carbon associated with the reductions generated by the biodigesters as a new type of financing source.

Sistema.bio continues to offer an asset financing plan for its customers. The use of pre-purchase contracts linked to the biodigester systems has allowed Sistema.bio to improve the affordability of its asset financing program, with upfront costs of system purchase and installation covered by carbon financing rather than the clients themselves. The company has already secured $32 million in pre-purchase contracts from investors, and developed a pipeline of $10-12 million in non-prepurchase carbon deals. With revenues expected to exceed carbon contract value by 40%, the carbon credit model has also expanded Sistema.bio's lending capacity as well as reduced its working capital pressures significantly.

Indicator	Impact to-date*
Tons of CO_2e mitigated	557,000 +
Number of units sold	53,200 +
Total amount of waste treated	26.7 million m^3
Number of people benefitting from biodigesters	319,000+
Amount of biogas produced	53 million m^3/year
Area fertilized with bioslurry	345,000 ha/year

*Table 6: Sistema.bio's primary impact areas * figures at the end Q4-2022*

Follow-on Activity & Next Steps

Looking ahead, Sistema.bio will continue to grow its climate change mitigation programs, employing larger amounts of working capital, off-balance sheet, and specialty climate funding streams. The company will also begin generating gender and health-linked credits associated with the use of the biodigester technology. These credits will be certified and issued by the Gold Standard just like carbon credits, but each will be equal to one averted disability adjusted life-year (ADALY), a common public health term, or with documented time savings by women on the farm. This is in addition to five SDGs that are measured and tracked as co-benefits to emissions reductions, designed to ensure Sistema.bio's credits are considered high quality and impactful. The company will also continue to follow the growth trajectory that has prioritized geographic expansion over product diversification. Sistema.bio expects to enter a new market per quarter, with Senegal, Malawi, Uganda, Guatemala, Honduras, Ethiopia, Rwanda, and Nepal as the primary targets for 2023-2024. Market expansion will be facilitated through a B2B model, whereby Sistema.bio will engage with farmer cooperatives and collectives rather than individual smallholder farmers to increase units sold and deliver more impact. While today the majority of biodigester units are installed by the Sistema.bio team, over the next two years the majority will likely be installed by partner organizations.

Part 6 Key Insights Revisited

As mentioned previously, the goal of these case studies is to provide greater transparency on the design, structuring, investment process, and outputs of blended finance vehicles in an effort to distill blended finance "best practices". As such, a critical component of our case studies is the key insights section. Here, we reflect upon the central learnings from each specific transaction and extrapolate their applicability to the wider blended finance market with the aim to better guide the market towards greater efficiency and scaled financing flows.

Overall, our 28 case studies have produced over 115 unique key insights. These can be largely categorized into four distinct thematic buckets;

i. transaction design / structuring insights;
ii. transaction fundraising insights;
iii. market / sector insights; and
iv. impact-specific insights.

Many of our key insights have focused on the design and structuring of blended finance transactions, particularly the earlier cases in our portfolio. Here, we delve into how deal sponsors can incorporate the four blended finance archetypes and what the implications would be for different aspects of the eventual structure such as: operational complexity, transaction size, and how the decision would inform which investors to target.

We also derived a number of insights on the fundraising process for blended finance transactions. We highlighted the value of blended finance champions within organizations to expedite the investment process, as well as the importance of securing the financial support of prominent anchor investors early in the fundraising process to demonstrate impact and market appeal to the private sector. We also examined the variability of investment appetites among different private sector investor classes in different contexts.

Insights dealing with the market (financial, geographic, asset class) or sector were more targeted to particular investment scenarios / ecosystems and intend to provide lessons to others operating in comparable situations. Broadly, they demonstrated that regardless of the investment context or structure, blended finance proponents must balance the impact potential of the transaction with private sector investor requirements. These insights also looked at the different impact outcomes of blended finance approaches, what needs to be done in certain markets to stimulate greater activity, and the range of behaviours and investment capabilities of private investor types, analyzing both domestic and cross-border financiers.

Finally, impact-specific insights provided scope into the impact additionality of blended finance transactions and the ways in which it can be maximized. This included ways to market blended finance through the promotion of its impact potential to secure donor agency and impact investor interest, and how the four archetypes can be utilized to enhance actual impact generated.

Below we distill each category of insights into the key themes that have routinely applied throughout our case study work, as well as those that have become less relevant or have yet to catch on as the blended finance market has developed. This is followed by a look forward into what we foresee will be the key considerations for blended finance in the years to come.

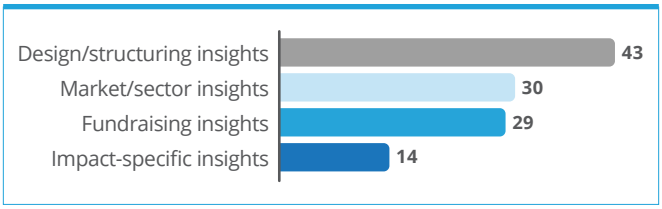


Figure 19: The four categories of case study insights, by number of insights

Portfolio-Wide Observations

DESIGN & STRUCTURING

The deployment of concessional debt and equity continues to be an art rather than a science.

There remains a need for greater transparency and data collection / sharing on how current providers of concessional capital are:

i. sizing their investments (i.e., ratio of concessional capital to commercial capital required in a transaction);
ii. pricing their investments (i.e., target IRR); and
iii. determining the function of their investment.

A lack of available benchmarks in the market means that deal sponsors often face challenges when structuring concessionality into their investment vehicles. Key questions include: should concessional capital be providing downside protection to private sector investors via a first-loss position, or providing credit enhancement to improve project bankability, or enhancing the risk-adjusted returns for private sector investors? Our case studies have also shown the value of matching the type of concessional capital to the needs of ultimate borrowers. For example, Climate Investor One's (CIO) Development Fund, a wholly donor-funded concessional capital pool, provides right-sized, highly risk-tolerant loans to energy developers. This reduces the need for developers to arrange a web of grants and TA funding for project preparation, more efficiently bringing projects to market. Greater scope into the sizing of fit-for-purpose concessional investment and its implementation across sectors is required.

Despite their high mobilization potential, concessional guarantee instruments are underutilized.

The benefits of guarantees have been well-documented. They include high rates of private sector mobilization, balance sheet efficiency for donors, and developing local capital markets. However, many concessional providers in the blended finance market, including donor agencies, still lack sufficient internal expertise to adopt these instruments.

Only three transactions in our case study portfolio featured concessional guarantee use. While intermediaries like GuarantCo offer an alternative to direct participation for government development agencies and are growing the provision rate of guarantees, changes in the guarantee ecosystem must be undertaken to move beyond stagnating levels of private sector mobilization. Rules that currently do not count guarantees as ODA eligible, unless they are called, need to be revisited. Additionally, current issuers of guarantees must better fill the data gap linking guarantee use to impact generation and those catalytic players who would like to add guarantees to their offerings, should adopt standard instruments already developed by their peers in order to accelerate implementation.

FUNDRAISING

Identifying transaction champions can be critical to a successful fundraise.

Whether they are particular individuals within a prospective investor organization (public or private sector) or a prominent anchor investor, blended finance champions can improve the efficiency of securing commitments and establish economic and impact confidence in the transaction to the wider market. In CrossBoundary's experience, the presence of blended finance champions within USAID was essential to closing out the donor's $1.3 million first-loss equity investment. As a first-time fund manager, with little track record investing in the renewable energy space and no track record in Africa, the investing process with USAID was exceedingly onerous, and required vast amounts of resources from both organizations. Having individuals on both sides who believed in the ultimate financial and impact potential of CBE1 was vital to ensuring the investment could be carried out. Similarly, SDS Capital and Vintage Realty, sponsors of the American South Real Estate Fund (ASREF), acknowledged the importance of anchor investor John D. and Catherine T. MacArthur Foundation's participation to the Fund reaching financial close. With ASREF struggling to attract sufficient appetite from commercial banks and private foundations, the MacArthur Foundation, a well-known philanthropic investor with relevant sector experience,

strong investment expertise, and rigorous investment procedures, signalled ASREF's market appeal with its investment. The Foundation also played a central role in restructuring the private equity fund using blended finance.

IMPACT-SPECIFIC

The strategic use of concessional capital can drive commercial capital towards higher impact opportunities, including in gender, health, education, and housing:

First-loss funding, TA and design-stage grants, and concessional guarantees have all been deployed to entice private sector investors to social sectors and high impact investments. The Medical Credit Fund utilized a first-loss debt tranche and TA grants to launch the first-ever commercial debt fund dedicated to financing health SMEs in Africa. Likewise, WWB Asset Management (WAM), investment manager of WWBCPII, employed a TA sidecar facility funded by the European Union (EU) and USAID to develop a systematic approach to gender lens investing and improve the lending performance of downstream investees through capacity development. As mentioned earlier, the TA grants secured by Sistema.bio enabled the company to strengthen specific aspects of its business model, including the incorporation of a gender lens into its operations. Doing so enhanced the economic and impact appeal of investing in the company, which operates in an innovative niche of the agriculture and energy sectors where few commercial investors had existing exposure. In the case of WaterCredit Investment Fund III, a $5 million partial guarantee provided by a series of foundations allowed fund manager WaterEquity to raise $50 million in private capital for water and sanitation outcomes in Asia. Finally, the tranching of ASREF to include concessional PRIs from private foundations not only enabled the fund managers to overcome fundraising challenges by tapping into a different investor class; given the impact generation standards required by law for PRIs, their inclusion also opened up an entirely new asset class of real estate projects targeting lower-income communities, that would have otherwise exceeded the risk thresholds of the fund's private sector investors.

Certain blended finance structures can also be attached to vanilla investment structures to enhance impact. For example, in the case of IDB Invest's efforts to develop the solar PV market in Uruguay, a results-based-financing model was applied to the construction stage activities of a group of five privately developed solar fields to boost the gender-specific outcomes of the projects. The interest rate on a concessional loan provided by the Canadian Climate Fund for the Private Sector in the Americas (C2F), deployed through IDB Invest, was reduced if women labour force participation targets were met. At project completion, the projects achieved an average women labour force participation rate of 17%, with an average of 69% of labour hours worked by women performed in high skilled positions. The rate on the C2F loan was reduced by 0.75%.

MARKET/SECTOR

Blended finance has pioneered approaches to attract private sector investors to new sectors, geographies, and asset classes.

The transactions in our case study portfolio have targeted ten overarching sectors[5], invested in emerging markets on every continent and allocated financing to a breadth of primary and alternative asset classes, ranging from fixed-income securities, to direct private equity and debt, to real estate and infrastructure. In many cases, these transactions have introduced pioneering approaches to delivering much-needed financing to certain beneficiary groups, that have been replicated, scaled, and secured investment from private sector investors given their ability to deliver market-rate risk-adjusted returns. For example, as the first-ever fixed-income listing exclusively dedicated to gender-lens investing, the structuring of IIX's WLB1 was costly and time and resource intensive. As with many small investments, transaction costs were significant as a proportion of deal value. However, IIX's focus for the initial issuances of its $150 + million Women's Livelihood Bond Series was building out a replicative transaction structure and establishing a returns track record. Successive bonds became larger and were faster to launch. Many commercial investors in the initial WLB1 participated in subsequent bonds, and eventually, IIX was able to tap into the institutional investor class as investment ticket sizes grew. Likewise, Climate Fund Managers trialed its first-of-its-kind whole-of-life project finance fund concept with (CIO) following years of design, development, and fundraising. CIO's financial and impact performance to date led to the launch of Climate Investor Two (CI2) in 2021, which applies the same investment

5 Convergence categorizes transactions into ten distinct sectors: Agriculture, Education, Energy, Financial Services, General, Health, Housing and Real Estate, Industry and Trade and Infrastructure (non-energy).

strategy as CIO to sectors even more significantly underserved by private sector capital, including waste management, sanitation, and ocean conservation. Despite the lack of exposure to these asset classes, especially among many institutional investors, CI2 has secured return investments from pension funds and large asset managers.

Undertapped Areas for Blended Finance

While the above themes have captured some of the prevailing trends across our case study portfolio, we have also noted some critical areas that have yet to develop / gain traction despite individual successes.

While there have been (minor) developments, blended finance has yet to mobilize significant amounts of private sector capital from domestic sources.

Capital flows through blended finance continue to be dominated by investors from developed countries in the global north, with few transactions wholly commercially financed by domestic investors. Certain mechanisms have proved successful in mobilizing locally-based, large private sector investors, such as the partial 75% concessional guarantee applied to Quantum Terminals' $10 million corporate issuance which secured domestic investment from Stanlib Ghana. However, such instances remain rare, with few examples mobilizing domestic private investment at scale. Growing the rate of participation of domestic investors, particularly institutional investors like domestic pension funds and insurance companies, will require enhanced coordination with developing country governments to:

i. adopt more systematic approaches to private sector mobilization using scarce public resources; and
ii. create / adapt regulatory frameworks to allow for greater involvement of key commercial investor classes in development focused investments.

Building a track record with key development agencies can expedite processes, but donors' idiosyncratic practices hamper the field.

In many cases, development agencies are the essential suppliers of below-market rate capital to blended finance transactions. However, their internal requirements with regard to impact generation and reporting, and investment limitations (instrument limitations, returns limitations, risk limitation), significantly reduce the frequency at which they invest and often put substantial onus on the borrower to ensure these standards are met. Overall, this means fewer blended finance transactions coming to market. For example, it took WAM two years to fundraise the $100 million for WWBCPII because they had to accommodate the specific needs of certain public sector investors. Securing commitment from the EU for EUR 7 million in first-loss funding, required WAM to form a new legal subsidiary that would only invest in Sub-Saharan African countries given the EU's geographic priorities. Similarly, to accommodate US DFC's restrictions on holding equity positions, WAM had to revise the fund structure to include an equity-participating debt tranche. Another example was USAID's first-loss equity participation into CrossBoundary's CBE1, which was an exceedingly complex and drawn-out process. Given the importance of concessional capital to mitigate risks for the senior shareholders, deal sponsors like CrossBoundary must adhere to donor requirements, even if operationally demanding. Negotiations with USAID have since gotten quicker for CrossBoundary through the development of template agreements and other documentation; however, meeting the impact reporting requirements remained challenging until the company reached operational scale. Moreover, we have witnessed little use of standardized approaches (document templates, structural uniformity, designated departments) between different transactions.

Blended bonds are a viable structure for emerging market corporates to raise capital, however they have yet to gain significant traction or scale.

Apart from impact bonds, blended bonds / notes are the structure least frequently used in blended finance, despite their prominence in conventional investing. As mentioned above, small ticket sizes prevent blended bonds from public listing and thus from attracting large institutional investors. Even in cases where blended bonds

have been listed on public exchanges (e.g., WLB™, Quantum Terminals Corporate Bond), trading on secondary markets has been minimal. Issuances are also challenged by the sovereign credit rating where the assets are held. Key target investors, such as pension funds and insurance companies, might be restricted to invest in highly speculative rated geographies even with the inclusion of risk-mitigating blended finance instruments[6]. Blended finance has shown promise as a potential early-stage tool for local capital market development. It has been used to establish proof-of-concept for the use of fixed-income instruments to finance infrastructure and energy development, with the aim to crowd-in domestic institutional investors. This was one of the long-term goals behind IDB Invest's investment programme supporting the Uruguayan solar PV sector. While capital market development is a longer-term objective of blended finance, the lack of blended bonds / notes in recent years suggests the evidence is still developing or that concessional parties have not yet bought into supporting public market issuances as part of their development mandate.

Emerging Considerations for Blended Finance

As Convergence continues to grow its case study portfolio, we expect certain insights and key elements to remain valuable tools for stakeholders, whether in transaction design, fundraising, or structuring blended finance transactions to address specific market or impact challenges. Likewise, we predict new considerations to arise as the market changes. Below are some leading insights that we believe will become / continue to be relevant in the blended finance market going forward:

It will take forethought to direct blended finance at building a pipeline of commercially bankable investment opportunities if the field is to reach scale.

This was a common challenge quoted in a number of our past case studies. As mentioned earlier, CrossBoundary's follow-on vehicle CBEA that targets the development of the mini-grid sector includes significant attention to project design and development to deal with the challenge of absorbing interested capital. Even in areas where blended finance is active, such as the climate mitigation space, a lack of project origination in target economies is an issue. One of the primary challenges Climate Investor One sought to address, and still continues to contend with, is accelerating the project development stage of energy asset creation. EAIF is also constrained by the lack of robust pipeline of scaled investment assets. While an increase in the number of financial intermediaries, such as pooled investment funds or domestic commercial banks, is important to improve linkages between cross-border investors and investment opportunities and enhance capital efficiency, limited capital absorption capacity in recipient geographies will still present a barrier. Greater implementation of early-stage blended finance can help reverse this trend and move projects forward more efficiently. Additionally, TA can be used to improve regulatory environments that impede projects going to market more quickly and building local developer / sponsor capacity.

Calls for MDB and DFI reform are growing louder and a greater diversity of stakeholders, including deal sponsors and private sector investors, have become vocal about the issue; changes to their existing investing mandates will improve how they use blended finance to mobilize private sector capital.

Critically, MDBs and DFIs are being asked to reassess their conservative risk modelling in order to better prioritize private sector capital mobilization through their investments. This will require consensus among the shareholders of these institutions to increase the frequency of participation in risk bearing positions in transactions, engage more efficiently with the private sector and expand the strategic use of concessional investment instruments beyond protection of their own risk exposure. Increasing the risk allowance in MDB and DFI

6 Prior to 2013, bond guarantees could "uplift" the issuance credit rating, even above the sovereign rating ceiling. Following regulatory changes in 2013, credit uplifts are only tenable through full (100%) bond guarantees, which given their potential distortionary market effects, are deployed infrequently.

portfolios will also free up the senior positions for institutional investors in blended finance transactions. Moreover, refined MDB and DFI mandates can help address the aforementioned issue of insufficient project origination in emerging markets. Increased capacity for concessional instrument provision could allow these actors to engage earlier in project development and self-populate their investment pipelines.

3. Incorporating climate outcomes into blended finance transactions, where appropriate, will draw in private sector investors.

Our State of Blended Finance Report 2022 – Climate Edition, found that over the last decade, 50% of blended finance transactions and over two-thirds of annual financing volume were linked to climate change. Climate finance as an investment theme continues to grow in prominence in the broader market as well, with capital flows to climate investments increasing year-on-year. This is proof of:

i. the general recognition among investors of the urgency of investing in climate interventions; and

ii. the capacity of blended finance deals in emerging markets to meet the investment requirements and expectations of private sector investors.

Our case study portfolio underscores these trends, showing that climate-linked opportunities generate noticeable appetite among commercial investors; 55% of case studies had an integrated climate focus, accounting for more than $3 billion in total deal value.

Conclusion

The purpose behind this report was to reflect on the real-world applications of blended finance transactions to better understand the actual financial and impact returns produced by the blended finance structuring approach. Overall, our case study portfolio has demonstrated that the mobilization of private sector capital to SDG-targeting transactions generates strong development impact while providing market-rate risk-adjusted returns to commercial investors. Moreover, in our follow-ups with our case study partners, we observed that the development impact achieved to-date by their respective transactions, met or exceeded initial expectations in every instance.

During the production of this report, Convergence also discovered some cogent insights on bringing scale to the blended finance market.

First, there needs to be increased intentionality and coordination in tracking and measuring development impact generated by transactions. Greater simplicity of metrics and comparability between similar transactions reduces structural complexity and will enhance investment appeal for newcomers to blended finance. Doing so also makes aggregating and benchmarking results easier, leading to a more robust evidence base of achieved impacts.

Second, significant strides need to be taken to improve the transparency around the expected and realized returns of blended finance transactions. One of the primary challenges (including in the production of this report) in advocating the economic argument for the use of blended finance is the limited availability of financial performance data, both for concessional and commercial instruments. More consistent and widespread disclosure will allow for better benchmarking to inform the structuring of future transactions, allow catalytic parties to allocate scarce concessional resources more efficiently and with greater confidence that they are applying minimum concessionality, and ultimately contribute to scaled investment instruments. Along similar lines, development agencies should prioritize the use of this data internally to ensure efficiency of concessional capital deployment and pricing. Establishing widely available capital pricing and returns data benchmarks can help in this respect.

Ultimately, blended finance transactions will need to attract repeat investments from private sector investors more systematically to achieve scale. The structural, fundraising, sectoral and impact insights put forward by our case study portfolio, as well as these transactions' impact and financial performance to date, provide important evidence and key steps to reach that goal.

CONVERGENCE
BLENDING GLOBAL FINANCE

CONVERGENCE is the global network for blended finance. We generate blended finance data, intelligence, and deal flow to increase private sector investment in developing countries.

BLENDED FINANCE uses catalytic capital from public or philanthropic sources to scale up private sector investment in emerging markets to realize the SDGs.

Our **GLOBAL MEMBERSHIP** includes public, private, and philanthropic investors as well as sponsors of transactions and funds. We offer this community a curated, online platform to connect with each other on blended finance transactions in progress, as well as exclusive access to original market intelligence and knowledge products such as case studies, reports, trainings, and webinars. To accelerate advances in the field, Convergence also provides grants for the design of vehicles that could attract private capital to global development at scale.