A New Source of Capital for Solving the Needs of Society and the Environment

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Abstract

Addressing the needs of society and the environment will require adequate funding. Over the last decade, there have been increases in the amount of capital flowing towards social and environmental challenges as well as in the variety and types of capital. A large portion of this funding has flowed from governments and public institutions, but capital from corporations and private investors play an increasingly important role and have the potential to do more while adding value to their businesses. While corporate investing and giving toward social and environmental benefit has grown over the last decades, adequate funding remains well short of what appears to be required. Novel sources of capital appear to be necessary including from companies.

This paper is structured into three sections. In the first section we present estimates of the need for capital from the private sector to address social and environmental impacts. These estimates are derived from calculations of the current sources of capital as wedges in order to estimate the remaining gap. We measure these wedges against the needs identified by the Sustainable Development Goals and find that there remains a significant shortfall between capital addressing social and environmental need and the current and projected value of these wedges.

The second section presents a novel model to source funds from companies that can benefit both social and environmental impact as well as create value for business. Specifically, the model identifies pools of capital, such as those used for client acquisition, that have low efficiency and return and where additional value can be created for the pool of capital by linking it to social and environmental impact. This model, formulated by Paul Polizzotto, has significant potential to make meaningful strides toward closing the gap identified in Section 1 while also creating significant new value for companies.

The third section looks at the case study of the company Givewith, founded by Polizzotto, that has operationalized this model. In order to test whether Givewith has met the conditions required for such a model to provide financial value to the parties involved, we have formulated three hypotheses and then reviewed survey data that supported each:

- Hypothesis 1: Client companies of Givewith can realize positive monetary value when using the Givewith platform to invest in social and environmental Non-Profit Organizations (NPOs).
- Hypothesis 2: Recipients (e.g. communities) of funds and services through Givewith can accrue positive social and environmental impact.
- Hypothesis 3: There is a relationship between these two values. Specifically, that social and environmental investments through the Givewith platform can create additional value to recipients and clients as a unique result of using the Social Value Economic Model.

We review the data that demonstrates the positive value creation for business, environment and society stemming from the Givewith business. Finally, we suggest ways that other businesses might follow a similar model of value creation.

Background

The world today is faced with enormous social and environmental challenges. From poverty and equality to climate change and food security, social and environmental challenges comprise existential risks to people, the environment and business. Failing to resolve these issues will result in significant costs from climate change-induced disruptions to the collapse of ecosystems and the services they provide, to social and political unrest from poverty, inequality, hunger and mass migration.

The scale of these challenges was effectively framed in 2015 by the release of the Sustainable Development Goals (SDGs). The SDGs are a set of 17 goals for society and the environment such as "No Poverty" and "Zero Hunger" adopted by the United Nations and supported by a detailed set of targets and indicators. The SDGs were adopted through extensive consultation with governments, companies, civil society and non-governmental organizations and were established with the intent of achieving these goals by 2030[1].

However, while the SDGs provide clarity on a necessary destination, they are inherently aspirational and come without a roadmap for what corporations, investors, governments and other actors should do. As a result, action to achieve the SDGs has been wide-ranging, but overall inadequate. Five years after release, it is clear that society is lagging in its progress for this 2030 target date[2], particularly in emerging economies where efforts and funding have lagged behind developed economies[3]. The most recent Progress Report on the SDGs (2019)[4] concluded that while progress has been made in some areas, "the shift in development pathways to generate the transformation required to meet the Sustainable Development Goals by 2030 is not yet advancing at the speed or scale required."

While the SDGs do not represent all social and environmental challenges, they serve as a useful proxy and timeline to assess the scale of social and environmental need. They also serve as a landmark for governments and companies to identify targets for social and environmental giving and investment5. As result, we can better track funding for social and environmental need based on whether funds are earmarked toward one or more SDGs. Even as social and environmental need will inherently continue after 2030, we use the SDGs as a present day benchmark to assess current global funding and funding shortfalls.

[1] For more information on the Sustainable Development Goals, see: https://sustainabledevelopment.un.org/sdgs
[2] https://www.bertelsmann-stiftung.de/en/topics/latest-news/2019/june/long-in-words-but-short-on-action-un- sustainability-goals-are-threatened-to-fail
[3] https://www.brookings.edu/blog/future-development/2019/07/29/how-much-does-the-world-spend-on-the- sustainable-development-goals/
[4] https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf
[5] Here we distinguish between "giving" and "investment". "Giving" refers to making capital available with no expectation of return. "Investment" refers to making capital available with some expectation of return, either of the original capital or capital plus interest. Capital may come in the form of financial, manufactured, human, intellectual, social or natural capital.

Governments represent the largest source of finance targeted at the SDGs, but they have been challenged to create sufficient capital as they balance the variety of obligations against limited funding available from taxation. This is particularly true in emerging economies and lower income countries[6]. The limitations on governments' ability to fund the SDGs leaves an apparent gap in available capital. Since the SDGs were first agreed, it has been clear that this gap must be filled by individuals, private industry and corporations. While ranges vary, financing for the social and environmental challenges encompassed by the SDGs on a global level is estimated to require $5-7 trillion per year, of which $1.4 Trillion is currently in place implying a gap of $2-3 Trillion per year[7]. This financing gap is not evenly distributed and the majority of this new investment will need to be targeted at developing countries[8].

It will be challenging to rely on any one source of capital or revenue to fully resolving the social and environmental challenges we face today. Rather, a number of different funding sources, or wedges, must be brought to bear. In Section 1, we have reviewed academic and practitioner literature in order to better understand these wedges of investment, and the relative contribution they make towards addressing social and environmental challenges. Our analysis of these wedges shows a clear remaining need for funding from the private sector.

In Section 2, we discuss a model by which transactions can be used to underwrite social and environmental benefit proposed by Paul Polizotto[9]. This model identifies pools of capital, such as those used for client acquisition, that have low efficiency and return and where additional value can be created by linking it to social and environmental impact. We identify that this model has significant potential to address the remaining wedge of needed capital.

In the final section, we conduct a deeper analysis of the company Givewith, founded by Polizzotto, and the data that demonstrates the value of this model in practice. Specifically, we look at data that assesses the potential value to both buyers and sellers involved in transactions that are used to underwrite social and environmental benefit. We then present a set of criteria for other companies that may seek to create similar value in their business model.

[6] Kharas, H. and McArthur, J. (2019) Building the SDG Economy: Needs, Spending, and Fancing for Universal Achievement of the Sustainable Development Goals, Brookings Institute Global Economy and Development Working Paper131, https://www.brookings.edu/wp-content/uploads/2019/10/Building-the-SDG-economy.pdf; United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf

[7] United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf

[8] Kharas, H. and McArthur, J. (2019) Building the SDG Economy: Needs, Spending, and Financing for Universal Achievement of the Sustainable Development Goals, Brookings Institute Global Economy and Development Working Paper131, https://www.brookings.edu/wp-content/uploads/2019/10/Building-the-SDG-economy.pdf ;

[9] https://medium.com/authority-magazine/social-impact-heroes-how-givewith-ceo-paul-polizzotto-is-enabling- more-businesses-to-create-compe-c529462d2456

Wedges of Current Funding for Social and Environmental Impact

Determining the funding need for social and environmental benefit is a complicated undertaking. In this section, we explore the salient literature in an effort to identify; 1) a reasonable estimate of the global need for investment to meet the SDGs (as a proxy for broader social and environment needs), 2) the current types of funding in place and their relative magnitudes and 3) the remaining gap in funding that must be filled.

The Global Need for Funding the SDGs

The most commonly cited value for the global need for funding, published in 2014 by UNCTAD[10], is that the world requires approximately $5-7 Trillion per year to be invested to achieve the SDGs. The UNCTAD Report looks at sectors of the economy that will be key to meeting the SDGs such as food and agriculture, infrastructure, health, etc. For each economic sector, the UNCTAD Report conducts a meta-analytic literature review to determine consensus values[11]. The UNCTAD Report identifies that of this $5-7 Trillion, over half ($3.3 - 4.5 Trillion per year) is needed in economically developing countries as a result of lagging infrastructure in key areas such as health, agriculture and other social functions. Other studies looking specifically at the need in developing countries have arrived at similar values[12].

A more recent calculation of the global need by Kharas and McArthur of the Brookings Institute (2019)[13] used data from a somewhat broader suite of economic sectors. Most of this data was reported for low income or emerging market countries and the authors extrapolated this data to include high income countries based on income per capita ratios. The average global per capita need on SDGs is calculated at $1,350 per person per year across the globe (or $10.5 Trillion per year assuming a population of 7.8 Billion people). However, the distribution of this per capita spending need is not evenly distributed and so this value may be driven higher as a result of higher costs of living in higher income countries where there may be a lower gap between spending need and available funds. We discuss this below when considering the gap in social and environmental funding against the need.

[10] United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf
[11] United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf, pp142-144.
[12] Schmidt-Traub (2015) estimated $1.4 Trillion per year for lower income countries (Schmidt-Traub, G. (2015). Investment needs to achieve the Sustainable Development Goals: understanding the billions and trillions. Sustainable Development Solutions Network.). Scmidt-Traub and Sachs looked at lower income and emerging economies and estimated $2-3 Trillion per year (Schmidt-Traub, G., & Sachs, J. D. (2015). Financing sustainable development: Implementing the SDGs through effective investment strategies and partnerships. Sustainable Development Solution Network Working Paper.)
[13] Kharas, H. and McArthur, J. (2019) Building the SDG Economy: Needs, Spending, and Financing for Universal Achievement of the Sustainable Development Goals, Brookings Institute Global Economy and Development Working Paper131, https://www.brookings.edu/wp-content/uploads/2019/10/Building-the-SDG-economy.pdf

Our conclusion is that the UNCTAD Report value of $5-7 Trillion per year in needed spending on the SDGs is a reasonable estimate. We also conclude that it is likely that roughly half ($3 Trillion per year) of this spending need is in low income and emerging economies. Because we have used the SDGs as a proxy for broader environmental and social needs, it is likely that the actual spending need is somewhat higher. This $5-7 trillion represents slightly less than 10% of Gross World Product and about 3% of global asset value[14]. While 3% of asset value may seem an achievable percentage, a large majority of these assets are not available for addressing social and environmental benefit either because the asset is fixed (e.g. property) or policies and return expectations limit the flexibility of the asset manager to shift funds. This begs the question then of what sources of capital are currently being used to fund social and environmental benefit.

The Current Wedges of Funding

There are currently a wide variety of capital sources used to fund environmental and social benefit. The literature is wide ranging with regard to the methods of categorizing sources of capital, the data sources used to identify the magnitude of each source of capital and even the definition of what investments "count" as being applied toward environmental or social benefit. As a result, the level of current spending has a wide range of estimates. The UNCTAD (2014) Report and the Brookings Institute Report (2019) for example estimate $1.4 Trillion and $21.3 Trillion in current spending on the SDGs respectively using different methods and scope of data – over an order of magnitude difference.

A further complication is that average values of funds globally are not particularly useful as there appears to be significantly higher availability of funds in high income countries compared to lower income countries. Therefore, global averages will paint a falsely optimistic picture of the available funds as much of these funds are not available where the need is greatest.

Much of the extant literature groups available funds based on the economic sector. This is because much of the data on government spending, the predominant source of funds, is categorized in this way. For example, both the 2014 UNCTAD Report and the 2019 Brookings Institute Report described earlier look across and group available funds using economic sectors such as power, water, agriculture, health and education. While this is useful in terms of data collection, it does not speak to the investment vehicle or type of funding mechanism (e.g. corporate or government bond, individual or foundation philanthropy, blended or traditional loan, etc.).

We have therefore collected data to better understand the types of capital pools available for funding (wedges) currently being applied to support environmental and social impact as well as estimate their relative magnitude. We summarize our estimates for global aggregate values in Table 1 and discuss the Private Sector wedges in more detail below.

[14] Gross World Product was reported as $80 Trillion in 2017 by The UN Secretary General Roadmap for Financing the 2030 Agenda for Sustainable Development 2019-2012, https://www.un.org/sustainabledevelopment/wp- content/uploads/2019/07/UN-SG-Roadmap-Financing-the-SDGs-July-2019.pdf, pp1. Global asset Value was reported as $200 Trillion in 2019 by the Allianz Global Wealth Report, https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/economic- research/publications/specials/en/2019/AGWR_2019.pdf

Table 1: Aggregate Global Magnitude of Funding Sources (Wedges) for Social and Environmental Impact

Sector	Mechanism (Wedge)	Approximate Value (per year)	Examples
Government[15]	Domestic Resource[16]	$600 Billion[17]	Government Revenue spent on relevant economic sectors
	Foreign Aid[18]	$150 Billion[19]	Foreign grants, Development Aid
Private Sector[20]	Fixed Income Investing	$350 Billion[21]	Green, Climate, Sustainability and Social Impact Bonds
	Real Assets	$350 Billion[22]	Renewable Energy Investment
		$300 Billion[23]	Green Real Estate and Green Infrastructure
	New Finance Models	$70 billion[24]	Impact Investing and blended finance[25]
		$50 Billion[26]	Conservation Finance
		$1,400 Billion[27]	ESG Equity Investing
	Philantrhopy	$450 Billion[28]	Giving (with no expectation of return) from individuals, estates, Foundations and companies.
Total		$3,720 Billion	

[15] The "Government" sector here refers to sources of funding from governments that do not access capital markets. For example, government bonds issued to address SDGs would be captured under the Private Sector/Fixed Income row.

[16] Domestic Resource is defined as all government revenue excluding foreign grants, foreign aid and capital markets lending.

[17] We calculated domestic resource using values in Table IV.2 from the UNTAD 2014 Report (page 142). We assumed a 50/50 split of the Estimated Current Investment (column 3) between Developed and Developing Countries. This assumption was based on the total spending need for Developing Countries ($3 Trillion) compared to the global total ($5-7 Trillion), or ~50%. We then calculated the relative proportion of current spending by the private sector using percentages reported in Columns 6 and 7 and assumed the remainder was attributable to domestic resource. We recognize that this allows for potentially significant overlap with other wedges in Table 1. United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf,

[18] Foreign Aid includes grants from foreign governments and official development assistance.

[19] Kharas, H. and McArthur, J. (2019) Building the SDG Economy: Needs, Spending, and Financing for Universal Achievement of the Sustainable Development Goals, Brookings Institute Global Economy and Development Working Paper131, https://www.brookings.edu/wp-content/uploads/2019/10/Building-the-SDG-economy.pdf, page 19.

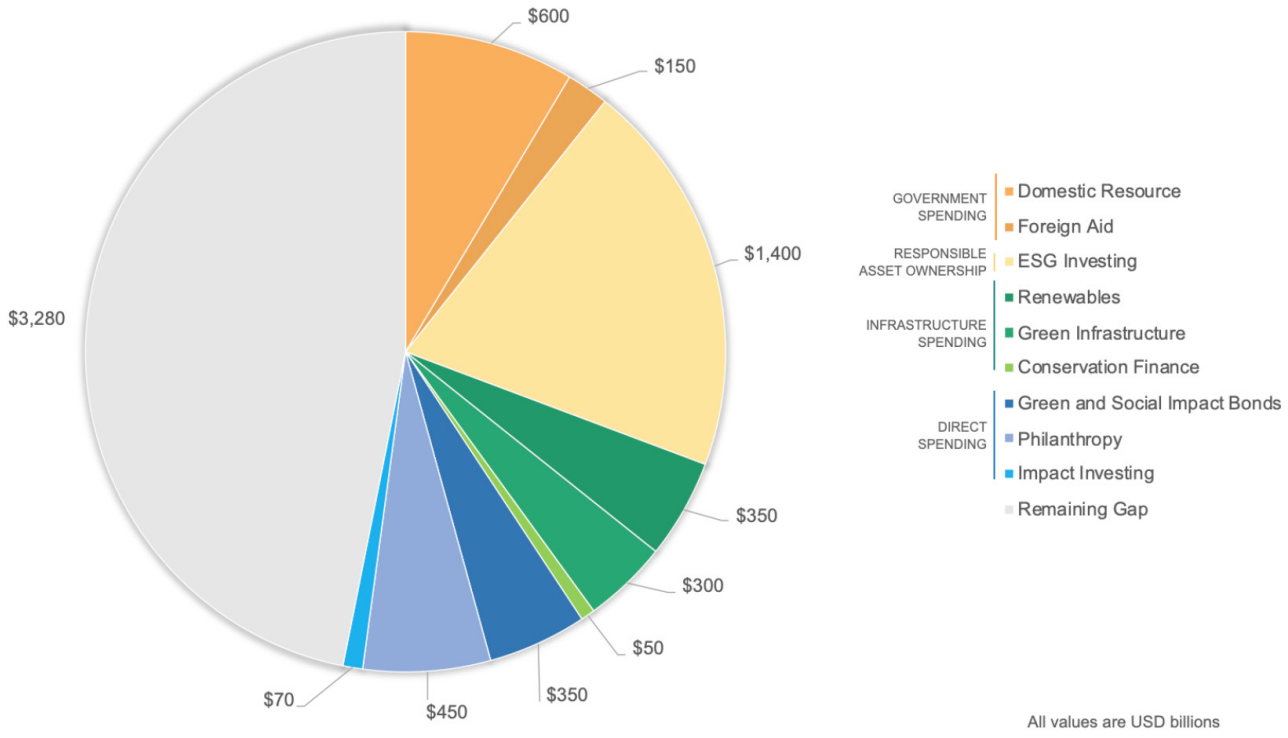
[20] Private Sector refers to capital market investment products and private sector actors (development banks, companies, asset owners and managers, foundations and individuals). So, for example, bonds includes both corporate bonds and government bonds. Philanthropy includes giving from corporations, foundations and individuals). Note that we have not included "Corporate Sustainability" as a category as this is dominated by publicly traded companies and will therefore be captured by ESG Equity Finance categories captured under "New Finance Models"

[21] https://www.environmental-finance.com/content/the-green-bond-hub/the-2020s-the-decade-of-sustainable- bonds.html

[22] https://about.bnef.com/new-energy-outlook/

[23] Calculated as the private sector allocation of Transport, Telecommunications, Water and Climate Change Adaptation rows from Table IV.2 of the UNCTAD 2014 Report and then rounded. United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf,

Figure 1: Estimated Wedge Values (in $ Billions) in Comparison to $7 Trillion Estimated Need



[24] Impact investing and blended finance value was calculated based on the current global value of Assets under management ($500 Billion) multiplied by the 2019 growth rate (14%) to estimate $70 Billion per year.
[25] While Impact Investing and Blended Finance can include both debt and equity financing, we have not been able to distinguish the relative proportion of either. We have included these instruments under the New Finance Models under the assumption that equity instruments will be more common than debt instruments.
[26] https://www.mckinsey.com/business-functions/sustainability/our-insights/taking-conservation-finance-to- scale#
[27] United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf,
[28] We have used data from giving in the USA (including individuals, foundations and companies: (https://givingusa.org/giving-usa-2020-charitable-giving-showed-solid-growth-climbing-to-449-64-billion-in-2019- one-of-the-highest-years-for-giving-on-record/). This should therefore represent a very conservative estimate of global giving.

Based on our research and calculations, we estimate the current total global funds available for social and environmental impact to be around $3.7 Trillion per year. It is critical to note that this value does not reflect funds available in different countries. In fact, the authors of the papers that we have relied on to calculate these values have consistently focused on the unequal distribution of these funds. Kharas and McArthur (2019) for example calculated that approximately three- quarters of government spending toward the SDGs was in high income countries (an average of $12,500 per capita spent by governments in High Income countries compared to $2,200 in Upper Middle Income, $267 per capita in Lower-Middle Income and only $115 per capita in Low Income). Moreover, spending also varies by economic sector with the majority spent in the social sector and relatively little spent on conservation[29].

Fixed Income Investing

Fixed income investing for social and environmental impact have been led by bond issuances. Green bonds in particular have been seen as the 'tip of the iceberg' for investments in more sustainable assets and initiatives. This is in part due to historic growth of green bonds over the last five years as well as progress by international organizations to better standardize and codify what bonds would qualify as more sustainable. As of May 31, 2020, green bond issuance sat at $66.5 billion for 2020[30]. Marcus Pratsch of DZ Bank projected recently that green bonds would grow 45% in 2020 to over $350 billion, up from approximately $250 billion in 2019[31] although these estimates were issued prior to the onset of the global COVID-19 pandemic. These values include corporate, national, sub-national and super-national (e.g. development bank) issuances. However, despite this growth, green bonds and other sustainability-oriented bonds still represent a small proportion of overall fixed income assets. Total issuance to date of green bonds represents less than 1% of the $100 trillion currently present in fixed income, the largest asset class in the world.[32] Even less robust has been uptake on social impact bonds aimed at solving challenges such as recidivism and unemployment. Sustainability bonds have been issued by corporations as well, but these latter two categories only account for a little over $30 billion in total most recently[33]. Sustainable fixed income is clearly an important area, but also clearly just one wedge for solving social and environmental challenges at necessary scale.

Real Assets

Real assets targeted at social and environmental impact can include green infrastructure (such as certified green buildings), climate adaptation (such as seawalls and resilient city investments), green energy development (both energy efficiency investments as well as renewable energy development) and even telecommunications (such as investments in mobile technology infrastructure that can improve access of marginalized communities to finance and economic opportunity). We calculated the total value of real assets targeted at environmental and social benefit based on two categories: green energy and infrastructure.

[29] Kharas, H. and McArthur, J. (2019) Building the SDG Economy: Needs, Spending, and Financing for Universal Achievement of the Sustainable Development Goals, Brookings Institute Global Economy and Development Working Paper131, https://www.brookings.edu/wp-content/uploads/2019/10/Building-the-SDG-economy.pdf, page 9.
[30] https://www.climatebonds.net/ accessed May 31, 2020
[31] https://www.environmental-finance.com/content/the-green-bond-hub/the-2020s-the-decade-of-sustainable- bonds.html
[32] https://blogs.worldbank.org/climatechange/cracking-open-green-bond-market-what-s-next
[33] https://www.environmental-finance.com/assets/files/SUS%20BONDS%20INSIGHT%20FINAL-final.pdf

The first category in Real Assets is green energy. There has been $300-400 billion invested annually in renewable energy, mainly through project finance over the past few years[34], but this is typically seen as less than a third of what is required for the pace of the overall energy transition[35]. Of the ~$363 billion invested globally in clean energy, private equity and venture capital committed $10.5 billion in 2019, up 6% from 2018, the highest amount since 2010, leaving a great deal of room for further action.[36] While growth in renewables will continue, key challenges such as identifying projects of sufficient scale, site location and regulations to support Power Purchasing Agreements continue to slow that growth.

The second category in Real Assets is infrastructure. Infrastructure is traditionally thought of as real assets, and typically includes projects with 35 to 100 year timelines such as highways, railways, ports, water, airports, and telecommunications infrastructure. Of the $10 trillion globally allocated to real assets, it is hard to cite which is invested in sustainable strategies[37]. To estimate the value, we used Private Sector allocations for the Transport, Telecommunications, Water and Climate Change Adaptation categories listed by UNCTAD[38]. Our calculation of infrastructure funds for social and environmental benefit is $300 Billion per year, roughly 20% of the global annual infrastructure investment of $1.2 - 2 Trillion per year[39].

Investment in infrastructure will play a key role in addressing social and environmental needs. Infrastructure is critical to the daily functioning of a successful modern society, and the stock of global infrastructure is in sore need of revitalization. Infrastructure can help resolve social inequality and achieve poverty alleviation by increasing access to hard to reach regions and helping kick start local economies through employment and business activities. Infrastructure also requires massive additional investment. Hundreds of bridges in Italy are at risk of collapse and power plants in Europe are suffering from inefficiencies as they continue to age. The New York City subway has been declared to be in a state of emergency. In 2017, the US scored a D+ on its Infrastructure Report Card, as was released by the American Society of Civil Engineers[40]. Developing economies continue to struggle to fund transportation networks within major cities and across rural areas.

[34] https://about.bnef.com/new-energy-outlook/
[35] https://energy.stanford.edu/sites/g/files/sbiybj9971/f/changingtheclimateofcapital_hellerseiger_sept2018.pdf
[36] Bloomberg New Energy Finance, Clean Energy Investment Trends, 2019. (2020, January 16). Retrieved from https://data.bloomberglp.com/professional/sites/24/BloombergNEF-Clean-Energy-Investment-Trends-2019.pdf
[37] Krosinsky, C. (2015) "The Value of Everything," The Value of Everything (United Nations Environmental Programme)
[38] United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf, Table IV.2, page 142.
[39] United Nations Conference on Trade and Development (UNCTAD) World Investment Report 2014, Investing in the SDGs: An Action Plan, https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf, Table IV.2, page 142.
[40] Ironcore. (2020, March 20). ASCE's 2017 American Infrastructure Report Card: GPA: D . Retrieved from https://www.infrastructurereportcard.org/

Infrastructure presents investors with a particular challenge in that project development can often be complicated by the involvement of many stakeholders and time-intensive due InfInstructure presents investors with a particular challenge in that project development can often be complicated by the involvement of many stakeholders and time-intensive due diligence. As a result of such complexities, infrastructure projects often require different types of financing at various stages of a project's life cycle, and it is common for investors to implement public private partnerships to scale infrastructure projects. Challenges remain in ramping up investments from investors who might not traditionally invest in infrastructure, and in the provision of clear infrastructure investment frameworks, processes, incentives and knowledge to help mobilize capital more quickly, efficiently and effectively. As a result of all this, the existing infrastructure investment gap remains another major challenge with significant environmental and social implications.

New Finance Models

The category of New Financial Models includes a wide variety of equity investment strategies from public equity portfolios to private equity and venture capital. Within each of these categories, there are a variety of different investment strategies that could count towards social and environmental benefit. These include negative screening, positive screening, ESG data integration, minimum standards and shareholder advocacy, all of which can help ensure better societal outcomes, but these improvements can be difficult to measure and report on. We have categorized new finance models into three areas: 1) Impact Investing and Blended Finance; 2) Conservation Finance and 3) ESG Investing, recognizing that these categories have some overlap.

Impact Investing and Blended Finance: Of the $500 billion estimated to be allocated to impact investment strategies as of 2018, foundations account for about 2%[41]. Impact investing saw 14% growth in 2019 giving a current investment rate of approximately $70 Billion per year. Although a small wedge, the ambition of those involved in efforts such as impact investing and blended finance, which includes allowing asset owners such as pension funds to participate at higher levels of expected risk/return, and tapping into pools of assets otherwise inaccessible has significant potential to raise awareness and mainstream social and environmental investments. However, the true ongoing maximum size of the impact investing wedge remains a serious concern. As Impact Investing is inherently built at least in part on capital with lower return expectations (either because the investor is willing to accept below market returns to identify impact or a portion of the capital has a higher risk/return tolerance as a point of leverage), the possible scale of this wedge appears limited.

Conservation Finance: Rainforests, mangroves, biodiversity and the health of the oceans are all areas that need increased focus as the world reaches critical tipping points on climate change which once exceeded are expected to mark "points of no return" placing society and health at risk, as well as economic health. Overall, conservation finance is currently estimated to be worth $50 Billion per year[42]. Yet attempts to address conservation requirements fail to reach necessary scale, for many reasons. Instruments that might work financially in say Costa Rica aren't readily transferable. Award winning projects which allow for the

[41] https://thegiin.org/assets/Sizing%20the%20Impact%20Investing%20Market_webfile.pdf, pp. 5
[42] https://www.mckinsey.com/business-functions/sustainability/our-insights/taking-conservation-finance-to- scale#

preservation of forests are often very complex[43], with the likes of Blue Forest Conservation taking years to create and realize a single successful working project. All of this is to say that Conservation Finance and investment as a solution category for solving social and environmental challenges may have a ceiling. Barriers to investment such as a lack of public and private cooperation, shortcomings associated with binding policy mandates, and a lack of clarity on problems to be solved on a per country basis hinder the growth of sustainable investing tools.

ESG Investing: Sustainable Investing also includes categories which go beyond impact investing, investment in renewable energy and fixed income, each of which have been described above. Aspects such as negative screening, positive/best-in-class, ESG data integration, shareholder advocacy and the establishment of minimum standards are also included as strategies investors can take to contribute to social and environmental needs. The Global Sustainable Investment Alliance (GSIA) has estimated the total Assets Under Management associated with ESG investing strategies to be $30 Trillion[44] with an annual rate of new ESG investing across strategies estimated at $1.4 trillion per year[45]. While ESG investing represents a significant wedge, the impact of these investments can be difficult to judge as ESG investing covers such a wide range of strategies. As a simple example, different ESG funds can treat oil and gas holdings in a variety of ways, from divestment, to low-carbon weighting practices to increased investment to allow for shareholder activism.

Philanthropy

Philanthropic giving increased to $450 Billion in the United States in 2019.[46] The vast majority of this giving comes from individuals and foundations with only about 5%, or $27 Billion, coming from corporations.[47] While corporate giving has continued to rise since 2018 at between 3-5% per year, the relative contribution of total giving by companies has decreased as foundation giving has accelerated at a pace of over 5% per year. Compared to corporate profits this level of giving represents approximately 1% of corporate profits (between $1.6 and 1.8 Trillion per year for U.S. companies alone since the 2008 financial crisis) [48][49]. Corporate giving comes in a variety of forms including direct cash donations, matching programs with employees, in-kind donations of products and services and donation of employee time. Each of these forms has limitations in terms of impact, regionality and flexibility to target the greatest social and environmental needs.

Increasingly, we have seen philanthropic dollars being used to leverage larger pools of private capital to maximize impact. However, despite this growth, giving for social and environmental impact, across all types remains small compared to the need.

[43] Krosinsky, C., & Cort, T. (Eds.). (2018). Sustainable Innovation and Impact. Routledge.
[44] GSIA (2019) 2018 Global Sustainable Investment Review, http://www.gsi-alliance.org/wp- content/uploads/2019/03/GSIR_Review2018.3.28.pdf
[45] UNCTAD. WORLD INVESTMENT REPORT: Investing in the SDGs—An Action Plan. In Proceedings of the United Nations Conference on Trade and Development, 24 June 2014; Available online: https: //unctad.org/en/PublicationChapters/wir2014ch4_en.pdf
[46] https://givingusa.org/giving-usa-2020-charitable-giving-showed-solid-growth-climbing-to-449-64-billion-in- 2019-one-of-the-highest-years-for-giving-on-record/
[47] McClimon, T. (2020) Corporate Giving by the Numbers, Forbes Magazine, https://www.forbes.com/sites/timothyjmcclimon/2020/01/16/corporate-giving-by-the-numbers/#42dc2b1b6c51
[48] Data accessed from the St. Louis Federal Reserve Bank from 2008 through 2019); https://fred.stlouisfed.org/series/CP
[49] To calculate the percent of corporate profits provided to philanthropy we used U.S. data as a proxy for global numbers. US profits for publicly listed companies in the United States have averaged between $1.6 and $1.8 Trillion per year from 2008 to 2018 (after tax). US Corporate giving in 2018 was listed as $20 Billion in 2018 (https://www.nptrust.org/philanthropic-resources/charitable-giving-statistics/), or 1.1%.

The Remaining Gap

Based on this analysis, there is a gap between the need ($5-7 Trillion per year) and the current pool of capital from the various wedges (approximately $3.7 Trillion per year). As discussed, this gap is not evenly distributed. The current wedges are predominantly available in high income countries. Therefore, while the total funding gap appears to be between $1.3 – 3.3 Trillion per year, a larger proportion of this gap is being felt by low income countries and emerging economies. This is important as the different pools of capital represented by the wedges have varying levels of flexibility to move into those regions of the world with the greatest need. ESG Investing, for example, is concentrated in developed markets because of the preponderance of publicly traded companies in those markets. In identifying mechanisms to address this gap, it is therefore important that we not just look at the magnitude of the pool of capital, but also how efficiently and fluidly the capital can be deployed into these economies. Determining the most important wedges, in terms of the value they will bring to social and environmental impacts, depends on several factors:

1. The size of the pool of capital. Larger pools of capital will have greater impact more generally than smaller pools.
2. High Risk/Return Tolerance. Wedges that have lower requirements on return and risk tolerance will be more available in emerging economies overall.
3. Flexibility in distribution. Pools of capital that can be moved between social and environmental needs more fluidly will tend to have greater impact.
4. Fluidity. Pools of capital that are tied up in fixed assets or long-term investment vehicles and contracts will be less available to move toward social and environmental needs.

A New Wedge: Harnessing Transactions for Social and Environmental Benefit

Considering the SDGs as a useful proxy, relatively few pools of capital are sufficiently large to address a gap of $1.3 – 3.3 Trillion per year per year, let alone pools of capital that are sufficiently flexible and fluid to be deployed quickly into emerging markets. However, global business transactions hold enormous potential in this regard.

We estimate global transactions to be on the order of $96 Trillion per year.[50] While this calculation should be considered a very rough estimate, it suggests that transactions as the pool of capital for a potential wedge holds great promise, in terms of size, to address social and environmental need. Moreover, business transactions meet the other criteria for effectiveness as well in that they are highly fluid, highly flexible and have a range of risk/reward tolerance. The key challenge then is to develop a model to orient a portion of business transactions to underwrite investments in social and environmental benefit.

[50] Global Business Transactions are calculated as the sum of Business to Business (B2B) Output and Government to Business (G2B) output.

Such a model has been developed by Paul Polizzotto[51]. Termed Social Value Economics, or the "Abundance Model", it describes a mechanism for companies to underwrite environmental and social impacts as part of the buyer – seller transaction, particularly in business to business transactions. The model argues that there is more abundant capital available to companies at the level of the transaction (pre-distribution of costs) that can be made available for social and environmental benefit compared to capital available from profit (post-distribution of costs). Therefore, a more effective mechanism of moving capital toward social and environmental impact is one that links those benefits to the transaction. In order to realize this model, it is necessary that both the buyer and seller benefit by linking social and environmental benefit to the transaction, i.e. that the value of the transaction increase to both buyer and seller because of the link to social and environmental impact. The Social Value Economic Model is distinctly different from philanthropy as the pool of capital tied is to top-line revenues, not to net flows from other line items.

The model is best described by looking at two forms of transaction (Figure 2). The first is the traditional model in which a buyer and seller exchange a good or service at a given value. The second is the Social Value Economic Model in which the buyer and seller underwrite social and environmental benefit linked to the transaction and each receive additional value, as either cost savings, additional revenue or intangible value as a result of this linkage.

When a transaction between a buyer and seller occurs, funds, as a percentage of the transaction value, would be committed to social and environmental programs. The value of the funds flowing towards social impacts would be determined as a percentage of the gross transaction value. For example, a given sale of equipment with an associated percentage committed to social impact would contribute a portion to a social or environmental nonprofit organization (NPO) and the remainder to the third party that organizes, vets and produces content and experiences to create value for buyer and seller. It is important that the third party facilitate the additional value in the transaction – i.e. maximizing the reputation/intangible value for both buyer and seller through vetting and demonstrating the social and environmental impact as well as making client acquisition or other costs more efficient.

- GDP is $90 Trillion per year (https://www.thebalance.com/components-of-gdp-explanation-formula-and- chart-3306015)
- B2B Intermediate Transactions are estimated as $38 Trillion per year (https://www.billtrust.com/resources/blog/on-the-lookout-b2b-payments-trends-in-2019-part- 3/#:~:text=The%20global%20B2B%20payments%20market,in%20reach%20than%20ever%20before.)
- Global Gross Output is the sum of GDP and B2B Intermediate Transactions = $128 Trillion per year
- Government spending is approximately 40% of GDP, or $36 Trillion per year. Subtracting that from the Global Gross Output gives a total B2B Output of $92 Trillion per year.
- G2B Is estimated at approximately 11% of government spending based on recent government contracts as a percentage of US Federal budget (https://tenderspage.com/how-much-money-does-the-u-s-give-out-in-government-contracts/; https://www.usaspending.gov/#/).
- G2B is therefore $36 Trillion per year (based on percent of GDP above) * 11% = $4 Trillion per year.
- Global Business Transactions are therefore calculated as $92 Trillion + $4 Trillion = $96 Trillion per year

[51] Mr. Polizzotto has described his model in a variety of interviews and media: https://impactpodcast.com/episode/2013/10/helping-nonprofits-tackle-social-issues-cbs-ecomedia-paul- polizzotto/; https://www.linkedin.com/pulse/what-world-needs-now-social-impact-economics-paul- polizzotto/?articleId=6651097556564742144

Figure 2: Example of Traditional vs Social Value Economic Model of Transactions

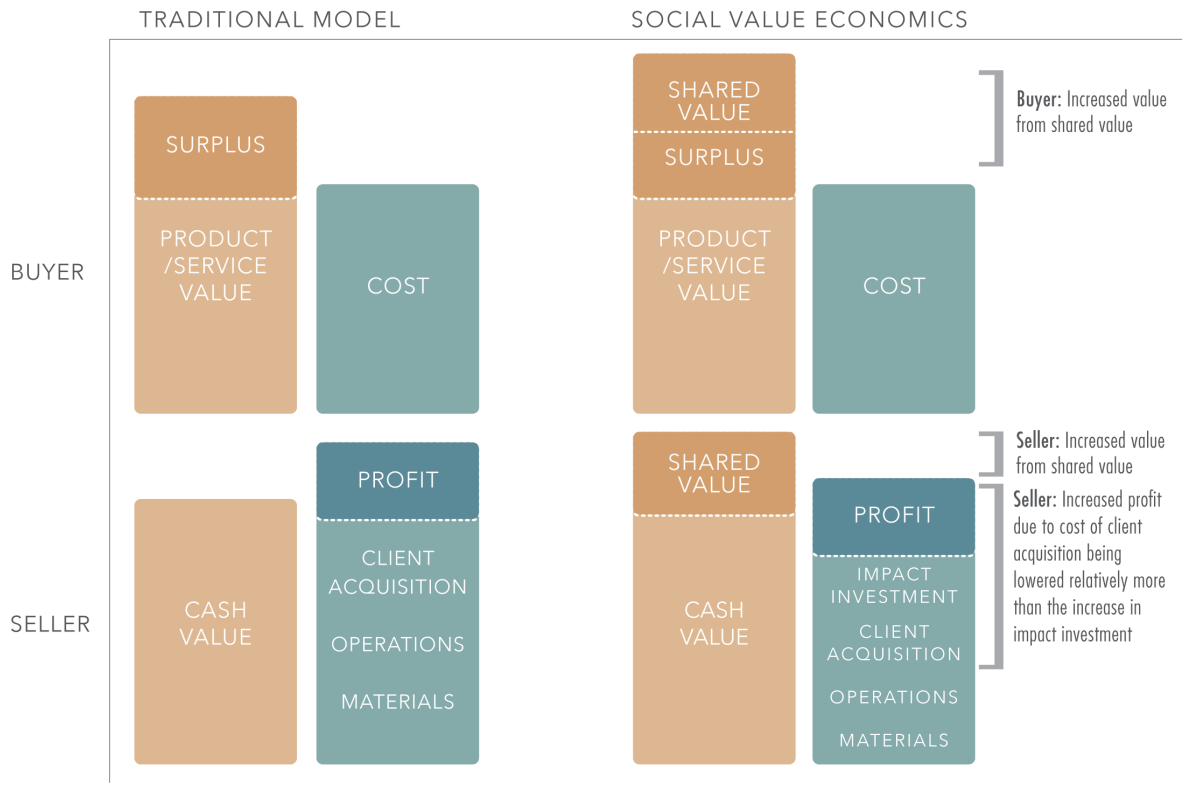


Figure 2 [52] demonstrates three differences between the traditional and Social Value Economic Model transactions. First, an intangible or reputation benefit accrues to both Buyer and Seller when the transaction is linked to social and environmental benefit. This is a critical benefit as intangible has grown steadily over the last 50 years and now makes up over 80% of enterprise value today.[53] Second, the Client Acquisition Cost for the Seller is smaller because the environmental/social impact contributes to customer acquisition. Third, there is an additional cost of the environmental/social contribution and associated transaction fee, whose value is less than the amount of reduction in Client Acquisition Cost. The model in which social and environmental benefit is underwritten by buyer-seller transactions requires several factors to be true:

1. Additional financial value needs to be generated because of the presence of the environmental and social benefit. This increase in value must be inherently the result of the social and environmental impact.
2. Both buyer and seller must benefit from this increase in transaction value. This value can be tangible, intangible, direct, indirect or a combination, but it must be positive for both the buyer and seller.
3. The benefit to society and the environment must be demonstrable.

[52] This model draws on the concept of pre-distribution, rather than redistribution; tapping into money at the top of the funnel rather than waiting to address social inequities via taxes and philanthropy. The local multiplier effect, often used to describe the impact of local spending on regional economic growth, applies here; social impact spending will have a spillover effect, creating additional value for both private and the social sector. This model is an example of a pareto efficient construct, one in which all parties are better off.

[53] https://www.visualcapitalist.com/intangible-assets-driver-company-value/

Additional Value Created by the Social Value Economic Model Transaction

As described above, for the Model to work, both the buyer and seller must realize additional value because of the linkage to environmental and social impact. In the following section, we review the evidence that a model for underwriting social and environmental benefits linked to transaction value meets our three prerequisite factors: buy-side value; sell-side value; and demonstrable impact. We also describe the possible limitations of this model and under what circumstances and transactions this model may not create additional value.

Buy-side value drivers

A literature review provides compelling evidence that social impact investments that result in demonstrable social and environmental impact create value for buyers of goods and services. Buyers benefit from intangible and reputation-based impacts such as greater customer loyalty, more effective employee recruitment, increased employee productivity and improved innovation. There is also compelling evidence for greater social license to operate and reduced cost of capital. We summarize these value pathways and representative literature in Table 2.

Table 2: Buyer Value Mechanisms

Potential Buyer Value[54]		State of the Literature[55]	Citations
Business Strategy	Strategic Clarity	Mixed	Malnight et al (2019), Chang et al (2018), Hull & Rothenberg (2008), Salzmann et al (2005), Eccles et al (2014), Eccles and Sarafeim (2013).
	Reputation Management	Mixed	Eisenegger & Schranz (2011), Gardberg et al (2019), Schneitz & Epstein (2005)
	Growth	Compelling	Kurapatskie & Darnall (2013), Lev et al (2010), Fry et al (1992), Porter & Kramer (2006)
Employee	Recruitment and Pay	Compelling	Albinger & Freeman (2000), Fisman et al (2006), Tonin & Vlassopoulos (2014), Vitaliano (2010), Ferreira & Real de Oliveira (2014)
	Retention	Compelling	Albinger & Freeman (2000), Fisman et al (2006), Tonin & Vlassopoulos (2014), Vitaliano (2010), Ferreira & Real de Oliveira (2014)
	Productivity	Compelling	Albinger & Freeman (2000), Fisman et al (2006), Tonin & Vlassopoulos (2014), Vitaliano (2010), Hasan et al (2018)
Investors and Operations	Cost of Capital	Mixed	Gartenberg et al (2019)
	Social License to Operate	Mixed	Albuquerque et al (2018), Attig et al (2013), Bramer and Millington (2006), El Ghoul et al (2011), Liang & Renneboog (2016), Shahzad & Sharfman (2015), Clark et al (2015)[56]
		Compelling	Cahan et al (2015), Du et al (2007), Fombrun & Shanley (1990), Fry et al (1992), Porter & Kramer (2006), Porter & Kramer (2002) Porter et al (2011), Wang et al (2008)

Sell-side value drivers

Many of the values of social and environmental contributions that are present for the buyer are also present for the seller: improved reputation with future and existing customers, greater ability to recruit and retain top employees, higher levels of productivity and innovation, etc. The literature suggests some additional benefits for sellers in addition to those listed in Table 3.

[54] Potential client value categories are organized based on the 2 part article of Afdhel Aziz (2020): https://www.forbes.com/sites/afdhelaziz/2020/03/07/the-power-of-purpose-the-business-case-for-purpose-all- the-data-you-were-looking-for-pt-1/#121bb72c30ba; https://www.forbes.com/sites/afdhelaziz/2020/03/07/the- power-of-purpose-the-business-case-for-purpose-all-the-data-you-were-looking-for-pt-2/#29fc4b333cf7.

[55] We have provided a qualitative assessment of either "compelling" or "mixed" based on the evidence we reviewed in the literature.

[56] Clark et al (2015) report that firms which make very high or very low charitable donations report better financial performance than other firms especially over the long-term

Table 3: Seller Value Mechanisms

Potential Seller Value[57]		State of the Literature[58]	Citations
Sales	New Product Trial	Mixed	Chang et al (2018), Hull & Rothenberg (2008), Vogel (2005), Godfrey et al (2009)
	Product Loyalty	Compelling	Kurapatskie & Darnall (2013), Lev et al (2010), Fry et al (1992), Porter & Kramer (2006), Torres et al (2012)
	Product Advocacy	Mixed	Chang et al (2018), Hull & Rothenberg (2008), Vogel (2005), Godfrey et al (2009)[59], Torres et al (2012)
	Price Premium	Compelling	Kurapatskie & Darnall (2013), Lev et al (2010), Fry et al (1992), Porter & Kramer (2006)

The Mechanisms of Value Creation in the Social Value Economic Model

The literature suggests that value is created for both buyer and seller when a business, or transaction, is associated with demonstrable social and environmental benefit. We have described three potential sources of this increase in value below.

The first is the creation of sell-side efficiency as a result of linking the transaction to social and environmental benefit. Prior to most transactions, the seller must incur significant client acquisition costs up to the point of the sale. These include advertising and marketing costs, search costs, costs to maintain customer loyalty etc. In fact, sales is typically a highly inefficient process[60]. It is no wonder that sellers focus extensively on tools to reduce the cost of sales. As noted above, there is compelling evidence that association with demonstrable social and environmental benefit creates customer loyalty, and product advocacy for sellers – both of which represent significant sell side cost efficiencies. These sell-side cost efficiencies represent a significant portion of the new value created when social and environmental impact are linked to the transaction.

[57] Potential client value categories are organized based on the 2 part article of Afdhel Aziz (2020): https://www.forbes.com/sites/afdhelaziz/2020/03/07/the-power-of-purpose-the-business-case-for-purpose-all- the-data-you-were-looking-for-pt-1/#121bb72c30ba; https://www.forbes.com/sites/afdhelaziz/2020/03/07/the- power-of-purpose-the-business-case-for-purpose-all-the-data-you-were-looking-for-pt-2/#29fc4b333cf7.

[58] We have provided a qualitative assessment of either "compelling" or "mixed" based on the evidence we reviewed in the literature.

[59] Godfrey et al (2009) report a contrarian finding that sustainability and CSR activities do NOT necessarily help firms overcome competition in their markets

[60] Graff, R., & Webb, J. (1997); Sheth, J. N., & Sisodia, R. S. (2002).

The second source of value is that the presence of the third party (that organizes and vets the list of nonprofits and then creates communication and marketing materials on the back of the giving) creates additional value when compared to giving directly by the buyer or seller themselves. The third party can provide economies of scale by creating processes and materials applicable across multiple transactions and using specialists in targeting marketing materials fit for purpose. That improved ROI can be re-monetized as value to the seller and buyer.

The final potential source of value derives from external stakeholders. Looking exclusively at the transaction, where a portion of the value is given to social or environmental impact, the balance sheet shows that portion as a cost (Figure 1) – because it is 'externalized' to communities and the environment, and therefore lost to the buyer and seller. However, social and environmental impacts are not purely external factors. Climate change, water stress, poverty, inequality, poor education, human rights abuses, etc. have all been shown to impact companies directly and the economy more broadly – both in the short and long term. Short-term benefits are described in the value mechanisms above and long-term benefits range from direct to indirect, but in aggregate could explain some of the value creation for the buyer and seller.

A couple of examples can illustrate the point. If a portion of all transactions between the buyer and seller was given to address job creation and economic inequality with demonstrable benefit, we would expect to see a marginal increase in economic productivity and personal buying power[61]. The result would be a general rise in demand for products from both buyer and seller reflected in revenue and profitability, assuming fixed costs.

Similarly, climate change from greenhouse gas emissions will likely result in costs across all economic sectors as a result or more severe weather and associated immigration and social strife[62]. Reducing greenhouse gas emissions will slow the rate of climate change and therefore the discounted value of these business risks for both buyer and seller.

Whereas other client acquisition costs tend to be zero-sum – where one party pays and another party experiences value – benefits arising from social impact are by nature uniquely shared value. When a social impact occurs, both parties can experience the short-term and long-term benefits without diminishing the value experienced by the counterparty.

These distributed benefits from internalized externalities are diffuse by nature. However, when calculated across a large number of transactions throughout the economy, these benefits could become significant and account for much of the observed benefit to the value of the transactions themselves. This theory of change is summarized in multi-capital theory in which the creation of social, human, intellectual and environmental capital can create, and indeed are the foundation of, financial capital over time[63]. In a pre-distribution construct such as the Social Value Economic Model, multi-capital theory could therefore explain why the pool of capital available is larger and the issues needing resolution are minimized.

[61] Empirical results have increasingly supported the arguments for impaired economic growth in the face of rising inequality. Benabou's meta-analytic review in 1996 found that 12 of 13 studies reviewed pointed to a negative impact of inequality on growth . Ten of these studies were deemed consistent and statistically significant. Only one paper found no relationship between inequality and growth. The main criticism of these papers was based on the fact that most of them grouped developing and developed markets together.

[62] Reuveny, R. (2007). Climate change-induced migration and violent conflict. Political geography, 26(6), 656-673.

[63] Cort, T. (2018). Incentivizing the direction of multi-capital toward inclusive capitalism. Finance & Investment, 8

Potential Model Limitations

The Model for transactions is scalable under the conditions we have described across different sectors and different forms of transaction (business to business and business to consumer). However, there are a number of factors that can limit the upside value compared to a transaction conducted under the traditional model.

1. In cases of small transactions, the Return on Investment (ROI) may be insignificant when compared to the cost needed to find and vet appropriate non-profit organizations. Large transactions are necessary to create economies of scale. Bundling of smaller transactions can help overcome this limitation.
2. Sellers that have near-zero client acquisition costs may realize less benefit from the Social Value Economic Model as one of the key benefits of the model is to reduce client acquisition costs. This could be the case, for example, where the seller has a captive market.
3. Some business transactions are contractualized over longer periods making them less flexible to address social and environmental benefits through this model without adjustments being made to standing agreements.

In such cases, the potential value associated with the Model may be reduced. As a result, there may be a limit to what percentage of global business-to-business transactions would benefit from the model.

The Potential Size of the Social Value Economic Model Wedge

It is difficult to estimate how much of the $96 Trillion in global business transactions might be available for applying to the Social Value Economic Model Wedge. The limitations described above ensure that some portion of business transactions would not be feasible under the Model. The potential pool of capital that could be used to underwrite social and environmental impact using this model (the wedge) will depend on how prevalent these limitations, perceptions from businesses and governments regarding the ROI of transactions undertaken using the model, and the frictional costs of transitioning to such a model.

There are some market indicators that may provide insight into the potential appetite for underwriting social and environmental impact. As discussed above, between a quarter and a third of global assets under management are estimated to include some ESG factors in the investment strategy and this value has climbed steadily over the last decade.[64] Taking the global business transaction value of $96 Trillion per year and using the low-end estimate of the current state of global assets under management that include ESG factors (25%) provides a conservative estimate of the potential pool of capital of $24 Trillion per year for the Social Economic Value Model wedge. Even if only a small portion of those transactions was pre-distributed to social and environmental impacts, this scale has the potential to meet the majority of the remaining estimated need.

[64] GSIA (2019) 2018 Global Sustainable Investment Review, http://www.gsi-alliance.org/wp- content/uploads/2019/03/GSIR_Review2018.3.28.pdf

Case Study: Givewith

Givewith[65] is a business-to-business platform founded by Paul Polizzotto where companies automatically direct a percentage of each transaction to a social program aligned with the company's business objectives. For example, two companies are carrying out a procurement transaction where the seller, in combination with other incentives, offers to direct two percent of the transaction's revenue to a thoroughly vetted, high-performing, high-impact social impact organization. The buyer agrees to let the seller finance this effective social project because of the potential to recoup greater financial value. In addition to facilitating the transaction, Givewith creates external and internal marketing and branding materials based on the social and environmental impact.

The team from Givewith have actualized the Social Value Economic Model as described above through four business principles[66]:

- Funds flow directly from economic transactions as a percent of the gross transaction amount to support social programs, creating additional value for both entities.
- Businesses advance their economic goals (e.g., increased sales, new customers) while generating social impact to benefit society.
- Funding is directed to rigorously vetted social programs able to generate, measure and report positive social outcomes.
- Business performance is a key driver; businesses must achieve business goals to be incentivized to utilize the Model.

We tested the Givewith model to assess whether its application does, indeed, create value for recipients of environmental and social impact funding, clients (buyers and sellers) using the model for transactions and that these values are inherently linked:

- Hypothesis 1: Client companies of Givewith can realize positive monetary value when using the Givewith platform to invest in social and environmental Non-Profit Organizations (NPOs).
- Hypothesis 2: Recipients (e.g. communities) of funds and services through Givewith can accrue positive social and environmental impact.
- Hypothesis 3: There is a relationship between these two values. Specifically, that social and environmental investments through the Givewith platform can create additional value to recipients and clients as a unique result of using the Model

[65] https://givewith.com
[66] These principles have been paraphrased from Givewith's website for Enterprises

In order to test these three hypotheses, we conducted a variety of tasks:

1. A literature review of the value of social and environmental investments to clients (defined as donors or investors of funds to the Givewith platform for purposes of distribution to NPOs).

   While this literature is relatively un-established, we did find empirical data assessing the link between social and environmental impact investment and associated marketing (including the investments of time, money and expertise) and financial value to companies that provide these resources.

2. A review of three independent valuation studies conducted by Boston Consulting Group on behalf of Givewith

   We reviewed assumptions, data, calculations and conclusions from two independent surveys as well as key interviews conducted to better frame the survey questions and tests and a final aggregate value assessment on the total Return on Investment (ROI).

3. A literature review of the value of social and environmental impact metrics to the recipients of initiatives

   This review focused on evidence in the literature that demonstrates benefit to the recipients (including broader society) of social and environmental efforts. Our review also included the impact metrics and performance tracking systems of Givewith, which we compared against best practice.

Hypothesis 1: Value for Recipients

There appears to be consensus in academic and practitioner literature that social and environmental impact funding creates positive social, environmental and economic benefits to communities and people except under extenuating circumstances such as corruption.[67] The literature also points to the importance of metrics and due diligence of NPOs to maximize and verify beneficial impact.

We therefore compared best metrics practices defined in the literature with those tracked by Givewith the demonstrate social and environmental impact and found strong alignment. Moreover, the Givewith impact metrics present a series of clear social and environmental benefits accrued by the funds brokered through the platform. We have listed best practice metrics from the literature and their relationship to Givewith metrics in Table 4.

[67] Agrawal et al (2015); Viviani & Morel (2019); Clarkin & Cangioni (2016); Alijani & Karyotis (2019); Epstein & Yuthas (2017); Reisman & Olazabal (2016), Lee et al (2018), Höchstädter & Scheck (2015).

Table 4: Comparison of Best Practice Impact Metrics from the Literature with Givewith

Best Practice Metric	Metric Description	Relationship with Givewith Metric
Social Return on Investment (SROI)[68]	SROI is described as present value of impact normalized to the value of inputs. This is akin to anticipatory metrics from cost-benefit analysis such as the economic Rate of Return. Sitting behind the single number (SROI) there is frequently a social science analysis (e.g cost-benefit analysis) based on public or social data which can rarely be represented by a single number.	Givewith metrics present value of delivered social benefits after accounting for the incurred costs.
Bespoke Metrics	Best practice bespoke impact metrics attempt to apply a financial underwriting lens to impact measurement. This thesis is outcome focused – seeking quantification of Social Return on Investment by measuring metrics meaningful to clients or beneficiaries. Bespoke metrics entail high costs associated with assessment and estimation tools. Bespoke metrics are illustrated by the Impact Multiple of Money[69] applied in the TPG RISE Fund.	Givewith metrics provide granular details of the specific outcomes due to initial investments through their Impact Multiple assessment.
Standardized Metrics	Standardized impact metrics aligns with many of the predominant standards in the impact investing space (GIIN/IRIS, PRISM, B-Impact Assessment). The premise is to compile a set of impact metrics that are comparable within regions and sectors. This approach is generally applied to portfolio or fund-level assessment and involves lower costs and greater aggregation and comparison of impact. This thesis of impact metrics can be applied to certification schemes as demonstrated by the B-Impact Assessment.	This is the model most closely matched to the Givewith approach of data collection and categorization. Givewith provides control trials that aim to illustrate insights on the outcomes generated from the "impact intervention" from the funding.
Mission- Aligned Metrics	Mission aligned metrics are typically compiled as individual scorecards for each investment. Metrics are bespoke and specific to the mission of the organization and/or investor/client, but scoring is standardized and aggregated to produce a top level 'score'[70].	Givewith uses standardized metrics that account for/allow mission alignment by creating categories of impact.

[68] Banke-Thomas, A. O., Madaj, B., Charles, A., & van den Broek, N. (2015). Social Return on Investment (SROI) methodology to account for value for money of public health interventions: a systematic review. BMC Public Health, 15(1), 582.
[69] Addy, C., Chorengel, M., Collins, M. & Etzel, M. (2019) Calculating the Value of Impact Investing; Harvard Business Review Jan-Feb.
[70] A recent example includes application of impacts into balanced scorecard approaches (https://www.hbs.edu/socialenterprise/Documents/MeasuringImpact.pdf). These scorecards are being used by mainstream investors to populate buy/sell dashboards for fund managers.

Hypothesis 2: Value to Buyer and Seller

Givewith has conducted a number of studies to quantify the buy-side and sell-side value associated with the Model which the authors have reviewed. We summarize these studies and associated findings in Table 5.

Table 5. Givewith Client Value Studies

Study	Method	Applicability	Results
ESG Interviews	Series of interviews with key market players to better understand critical benefits and KPIs.[71] Interviews were used as inputs to survey methodology.	Buy-Side Sell-Side	• Positive perceptions of rating agencies on impact metrics • Improved understanding of the context of how Givewith KPIs may be perceived by ratings agencies • More efficient input into survey methodologies
Conjoint Survey	Survey of client representatives to assign value to Givewith service packages	Buy-Side	• Average valuation of the Givewith service package by survey respondents: $101k - $142k
Value of Outcomes Survey	Survey of client companies to assess relevant value pathways and the potential financial value associated with each pathway	Buy-Side Sell-Side	Average value to client company based on seller survey respondents: • 1.6% increase in sales • 30-50% increase in market growth • 18 percentage point increase in stock performance • 27% lower wage • 70% reduction in employee job searching
ROI	Calculation of aggregate value to clients as a measure of ROI from both surveys plus conversion factors in the literature	Buy-Side Sell-Side	Per 1% increase in giving linked to transactions up to 5%: • 0.04% increase sales • 0.07 increase Tobin Q[72] • 0.6% increase ROA[73]

The first was a set of interviews of market participants (buyers and sellers) regarding KPIs, metrics and the potential value of Givewith impact metrics. The second was a bespoke conjoint survey of potential buyers to assess the value that they associate with different service packages[74] measured in terms of time and resources needed to reproduce these packages. The third was a survey measuring the perceived value of outcomes to buyer and seller companies such as sales lift, customer loyalty scores, employee recruitment benefits, etc. The last was a calculation of aggregate benefit measured as Return on Investment (ROI) to buyer and seller companies based on monetization factors found in the literature.

[71] Key Performance Indicator (KPI)
[72] The Tobin Q ratio is equal to the market value of a company divided by its assets' replacement cost. Higher Tobin Q suggest companies with higher intangible value.
[73] Return on Asset (ROA). Indicates the effectiveness of the organization to generate profitability per unit of asset value.
[74] A service package refers to packages of marketing materials and impact data, for example video productions showing the environmental and social impacts of projects identified and funded by Givewith.

Much of the literature that places monetized value on social and environmental practice is associated with improved financial performance – particularly higher investment rating, improved stock performance and improved cost efficiency. However, these empirical studies assess the impact of internal corporate environmental and social management practices as opposed to external social impact investments. The data from the Givewith surveys is therefore a critical bridge to understanding the potential improvements in financial performance resulting from external social impact investments. In our opinion, the range of financial benefits from the Givewith data are more applicable than monetization factors reported in the literature even though the survey ranges are based on perceived value rather than empirical performance. We also note that financial performance calculations based on literature values are generic to region, sector, business model, product, etc., while the underlying data is derived from a variety of sectors (Liang & Renneboog (2016); Lev et al (2010), Seifert et al (2004)). There is no indication that these calculations would be indicative, or even relevant to Givewith clients. The survey data, on the other hand is directly collected from potential client companies making the ranges more indicative.

While the survey data is inherently based on perception of buyer and seller companies, the results are statistically significant and provide substantial evidence that social and environmental impact funding creates direct and indirect economic value to the buyer and seller in the Givewith model transaction. The final estimated value ranges are derived from a combination of multiple data sets – each with a distinct (but overlapping) range. The underlying assumptions and preconditions are similar for each data set, but there is no reason to believe that one dataset is more accurate than another. For example, sales uplift is based on four different data sets with overall calculated value of 0-12.5% and the selected 'normal' range of 0-7% is not a statistically significant range. The true range of value (e.g. sales uplift) will depend on the company and individual sales/procurement manager. In our opinion, the data supports the quoted ranges. However, these ranges should be considered 'typical' within the assumptions of the underlying data set and the actual value will vary based on a number of factors.

We also compared the ranges of values from the survey data for each benefit to buyers and sellers (sales, lift, employee recruitment, customer loyalty) with estimates in literature and found the ranges reported by the Givewith to be in line with literature results. We note that the surveys have tested specific values for different corporate functions within buyer and seller companies such as the financial benefits of lower employee turnover rate resulting from the reputation of the company as a responsible actor. There may be additional values that have not been explicitly tested that could increase the potential value to buyer or seller companies beyond the ranges found in the surveys.

While the data from the surveys provide a range of potential financial values, the magnitude of the potential value and the actual accrued value are highly path-dependent and variable between sectors, market segments, region and type of social investment. Therefore, it will be incumbent on buyers and sellers using the Model to work to maximize the benefits they accrue from social and environmental impact investment.

Conclusion

Our current efforts to fund social and environmental impact are falling short, Based on an assessment of the wedges of funding currently available, we estimate that an additional $1.3 – 3.3 Trillion is needed per year to meet the ambitions set out by the Sustainable Development Goals. It is particularly critical that this funding be targeted at developing and emerging economies where the gap between available funds and needed environmental and social need is the greatest.

There are barriers to the current wedges of funding to fill this remaining gap: 1) it has been difficult to identify sufficiently large pools of capital that can be directed toward social and environmental impact, 2) much of the current invested capital is tied up in long-term contracts and fixed assets, and 3) it can be difficult for funding sources to move fluidly to meet the most pressing environmental and social needs. In addition, emerging markets present a particular challenge as investments in these markets can have relatively higher risk/reward ratios which can inhibit large pools of capital.

Business transactions, as a pool of capital addresses all of these barriers and therefore represents an appealing source of funding for environmental and social benefit. Using the Social Value Economic Model, developed by Paul Polizzotto and enacted by Givewith has tapped into the potential of business transactions to create social and environmental benefit by using pools of pre-distributed capital. Empirical data from the existing literature and from surveys conducted to measure the Givewith process demonstrate the value that might be accrued by businesses that underwrite environmental and social impact through their transactions. The result is a potentially scalable model that could be an effective contribution to address the remaining need.

To reach the scale of the remaining gap, however, will require scaling of the Givewith business model as well as new entrants to the market that can adopt a similar model of linking transactions to social and environmental impact. Based on our analysis, there are a number of factors that new business models should uphold:

1. The environmental and social impact must be demonstrable.
2. The environmental and social impact must create net positive value to the buyer and seller. We have outlined a wide variety of potential values from intangible reputation benefits to operational efficiencies.
3. A pool of capital that is either inefficient or ineffective must be identified and linked. Givewith has identified a mechanism to reduce client acquisition costs (a large pool of capital undelying transactions) by underwriting social and environmental benefit.

There have been a number of recent models for how businesses can better align financial performance with social and environmental benefits. Frameworks such as “Shared Value” (Porter & Kramer, 2006), Total Societal Impact (BCG, 2018) and the IIRC Integrated Reporting Framework based on multi-capital valuations

all point to these alignments. Although each is unique, all of these frameworks point to common characteristics of aligned or integrated companies: that the 'top lines' of profit, shareholder value and sales are derived from and dependent on benefits to society and the environment as opposed to donations or philanthropy to create social and environmental benefit which is not aligned to the core business.

However, the Model and the application of this model by Givewith is one of the first demonstrable and quantified examples in which the funding of social and environmental impacts is underwritten by traditional economic activity. Givewith, and by extension the Social Value Economic construct, represents a potential breakthrough in creating business models that create social and environmental benefit by integrating social and environmental impact as a component of transactions. As such, we believe that the model represents an enormous potential to harness the economic scale of business for positive social impact.

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