



Can social investment be for profit?

An analysis of the principles
of impact finance

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Abstract

What if pension funds, asset managers, and private investors in general, while doing their jobs, participated to protecting the planet, reducing poverty, or improving well-being? Over the past decade, impact investors have been responding to the demand for a responsible capital by developing an approach to make social and environmental change compatible with financial performance. At the core of the strategy is investors' commitment to measure their social or environmental impact and be held accountable for results. The paper explores how this approach works and differs from others, why it is able to reconcile the production of social goods with the generation of profit, and whether the track record of financial performance so far points to success. This paper hopes to plot a route through the jargon jungle to outsiders who may want to contribute. If a number of shortcomings of some of these forms of investments is resolved, the potential is large for this industry to attract private capital and amplify the role played by governments and the small charitable sector in advancing societal goals.

Current social and environmental concerns are affecting the economy and the financial industry.

The 2008 great financial crisis triggered a broad re-examination of the growth model dominating until then, characterised by the globalisation of trade and finance. The dislocation of production to cheaper parts of the world has led to an obsolescence of skills in large segments of Western societies and the economic crisis magnified the loss of income-generating capacity for many workers. Poverty did not rise everywhere but the gap between the have and the have-nots certainly did. Human migration flows into crisis-hit Western countries, from countries themselves trapped in poverty, accentuated fears of having to compete for public resources. At the same time, a heightened awareness of the deterioration of the planet's climate is resulting in a popular rejection of the production and consumption habits in place up to now.

Much is being written about how Millennials are at the core of the search for alternatives to the standard economic model. They reached adulthood at the intersection of an economic crisis and an environmental emergency and feel a sense of urgency to act in front of the fragility of the world. Millennials are often vocal about how money and politics ruin the environment or derail societies and they are resolved to take matters into their own hands. They want to make decisive changes to the way things are done through their own behaviours, be it through the professions they choose, the purchases they make, or the investments they favour. Most are still too young, however, to have

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meaningful savings of their own but when they will the financial industry has better be ready to respond credibly to this demand for an engaged, responsible capital.

Driven by client concerns, the financial sector is developing a market-based approach to tackle these issues. Banks and asset managers see a business case in proposing to intermediate a part of people's savings in line with their concerns, while continuing to offer a positive return. Pension funds are starting to get involved. They have a fiduciary duty to invest their large balance sheet for a return, helping clients grow their savings for retirement. Foundations under current US legislation can only allocate grants to not-for-profit social causes, while investing their endowment for profit to preserve or grow it. Not waiting for the legislation to evolve, recent philanthropies, like Ebay's Omidyar, Facebook's Chan Zuckerberg Initiative and Steve Job's Emerson Collective have been set up under a Limited Liabilities Company legal framework to be able to do it all with this new approach.

The stakes are high. The private financial sector is entering the traditional realm of the public sector, using financial innovation to offer for-profit social investments that protect the environment and support social needs. These Socially-Responsible investments (SRI) can attract a significant part of the private savings pool. Such mobilisation of private resources can help tackle the large spending needs in these areas, alleviating the pressure on governments to do it alone.

This paper aims to decipher the field and assess whether doing social good is compatible with profit-making. There are many players and definitions, and much competition in financial market propositions to generate a profit with purpose. Section I sets up a unifying framework that brings together and helps define the various segments of the industry of responsible investment. Section II focuses on the only strategy that holds itself accountable for impact. It examines an innovative instrument, the impact bond. Section III reviews the impact measurement methods supporting the accountability. With the nature of impact investment hopefully clarified, section IV looks at how it fits in the framework of economic theory. It may at first seem an anomaly that doing social good be compatible with the profit motive—it is not. Available data is used to assess the track record of financial performance so far. The conclusion draws p a check-list of what it might take to be successful at impact investing.

I. WHAT IS RESPONSIBLE INVESTING TODAY?

Socially Responsible Investment (SRI) is broadly defined by participants as a “value-driven approach” to investing. Profit continues to be sought but the capital is deployed with the intention to support a social or environmental value. It is also called conscious capitalism, ethical investing, fair capital, purposeful business, profit-with-purpose business. This can be perceived to imply that traditional investment is not driven by values. Those at the origin of the “socially-responsible” label probably wanted to appeal to those parts of society that associate making a profit with some type of abuse. The 2008 financial crisis did not help alleviate this perception. Notwithstanding the slightly populist naming, the point of SRI is to make a financial return while purposefully investing for the good of society and the planet.

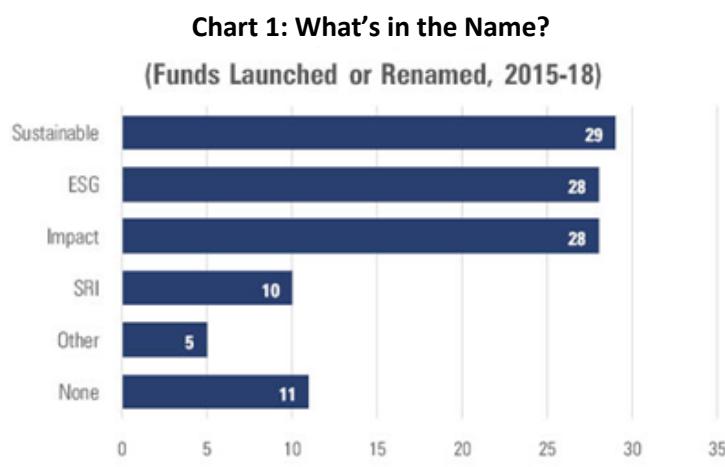
Three strategies fall under the umbrella of responsible investment.

- Picking investments that respect Environmental, Social and Governance (ESG) standards is the most famous. About two-thirds of ESG investors screen their usual investment universe and simply exclude those issuers that do not respect a set of chosen standards (J.P. Morgan, 2018). The remainder either prefer to engage firms to respect ESG standards from the inside and

become activist stakeholders, or rate ESG practices by each issuer and optimise ESG rating, risk and expected return to select investments.

- Investing for impact goes further and is less well-known. The term was coined in 2007 to describe those who invest to generate a specific, pre-defined social or environmental outcome, measure it ex post and report the outcome. They may even link the return earned to the success of their investment. In 2019, the World Bank's International Finance Corporation (IFC) [defined 9 principles](#) that an investment must obey to qualify as impact investment. They require to report explicitly how the investment contributes its impact, thus entrenching accountability.
- It is also possible to invest responsibly by subscribing to a sustainability bond, which proceeds are earmarked to finance projects in the social or environmental area. The best-known type is that of green bonds used to fund projects safeguarding the environment.

"Lack of a solid definition" is often mentioned as an impediment to further growth in this field (UK National Advisory Board, 2017a). Despite the fact that the above classification would seem clear enough to be usable, ESG and green bond investors often refer to themselves as impact investors but do not necessarily measure their impact or link their return to it. The words sustainable and SRI have also been used interchangeably, although SRI is the umbrella name that covers all 3 types of strategies. This makes it confusing for those trying to decipher the field to enter and invest ([Chart 1](#)).



Source: J. Hale, 2018 (data as of April 2018).

The various SRI strategies have in common the effort to make an explicit reference to the long-run social or environmental benefits of the investments. ESG investors stimulate listed companies to adopt good ESG practices by conditioning their investment on it. Good practices adopted by firms take years to benefit their own performance and translate into societal change. Impact investors target outcomes that also take many years to deliver. Investors' embrace of these strategies highlights their strong belief that the long-run investment horizon necessary to transform society is compatible with good financial performance (Section 4 will review the track record).

This leads to the question of who can define—and rank—what is good and bad. By global political consensus, the Sustainable Development Goals (SDG), to be achieved by 2030, define the nature of sustainable growth in a variety of areas ([Chart 2](#)). They present 17 very broad values that need action for the good of humanity and the planet. They are the version updated in 2015 of the 2000's Millennium Development Goals (MDG), which aimed to address global poverty issues, with a focus on education and health, and arresting the deterioration of the climate. The [UN Global Compact](#)

helps translate them into actions. It delineates 10 more or less concrete principles that firms can incorporate in their operations, for example “to uphold the effective abolition of child labour” (which implies to remove children from the workplace) or “to support a precautionary approach to environmental challenges” (with the meaning of “to support” left wide-open). ESG filters defined along their lines are considered to improve the sustainability of the firm applying them, its performance, and the planet. But how timeless and universal are these goals?



Source: United Nations.

Scientific results, economic outcomes, or changes in the dominating culture affect what society values. For example, parents in poor countries consider children an asset when making fertility choices. Child labour provides the necessary income for the survival of the family and we know it was the case also when developed economies were still developing. It can then be simplistic to exclude companies that hire children. There could be a nearby mine where children would be sent to work if excluded from the factory. An ESG investor would need to assess the impact on the family of banning child labour in the firms it invests in, at least to inform the cost of doing good. It could rather choose to improve the working conditions of these children or offer to them educational opportunities after work.

Assuming that the concerns underlying the SDG are shared, which is still not an obvious case around the planet, there remains daunting trade-offs to make when investing in a value-based investment. Banning investments in the weapons sector raises questions about what the scenario in mind is when a population is attacked, since the world is not any closer than before to establishing a global authority to enforce a weapons ban universally. As regards actions that protect the climate, is it green to issue a bond to finance a dam in the Amazon?

Notwithstanding the complex moral and social choices involved, almost a third of global assets managed professionally follow a SRI mandate today ([Table 1](#)). In the latest survey of the industry, SRI assets represent 53% of all managed asset in Europe and 22% in the US (GSIA, 2017). A fourth of assets are collected from retail investors, indicating that individuals identify the infamous world of finance as a tool for change. SRI attracts only 3% of managed assets in Asia, but growth reached almost 1,000% in recent years. China is the fastest growing market in the world, followed by India. At this stage, above 90% of the SRI mandate is implemented through ESG investments. Europe mostly implements a passive, exclusionary ESG strategy and the US engage the majority of assets in active strategies. The top investment category is energy; social and governance projects lag behind. In

comparison, a minuscule fraction of SRI assets are invested in the more challenging version of impact finance.

Table 1: Assets at stake (USD, latest figures for 2018 unless otherwise mentioned)

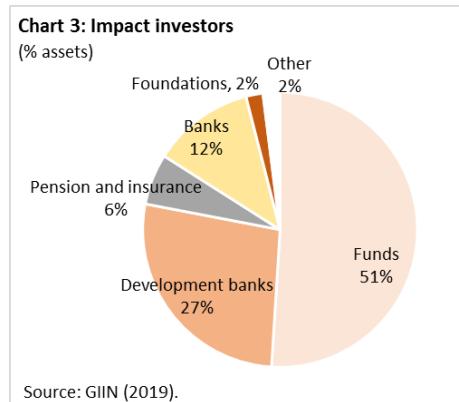
Global stock and bond markets	150 trillion 1/
Global assets under management	79 trillion 2/
Global Socially Responsible Investments ESG	23 trillion (2016) 3/ 21 trillion (2016) 3/
Negative ESG screening	15 trillion (2016) 3/
Shares held for activism	5 trillion (2016) 4/
Positive ESG screening	1 trillion (2016) 3/
Sustainability-themed bond market	1.2 trillion 5/
Green bond market	390 billion 5/
Impact investments	445 billion 6/
Impact bond market	400 million 7/
<i>For memo</i>	
Global assets of philanthropic foundations	1.5 trillion 8/

Sources: 1/ World Federation of Exchanges (2018); 2/ Boston Consulting Group (2018); 3/ GSIA (2017); 4/ J.P. Morgan (2018); 5/ Climate Bond Initiative (2018); 6/ GIIN (2019). The author takes impact assets net of double-counting (\$361 billion) and adds the GIIN's estimate of unreported impact assets (\$84 billion). 7/ Social finance (2018); 8/ Harvard University (2018).

II. WHAT IS IMPACT FINANCE?

1. Investing for impact in private markets

A majority of impact investment is done through impact funds (Chart 3). According to the latest data, there are 800 of them (GIIN, 2019). They are modelled on venture capital funds, which build a compensation structure remunerating success into the investment. Given the complexity of measuring impact and the time it takes to deliver it, innovative compensation structures have been designed to keep the incentive to succeed alive. For example, the bonus may rise as short-term targets are successively met, with an even larger bonus at the end. Funds may specify a minimum impact target to reach before the financial reward kicks, which is equivalent to setting a penalty for underperformance. GIIN (2011) describes this, and other interesting designs, in more detail.



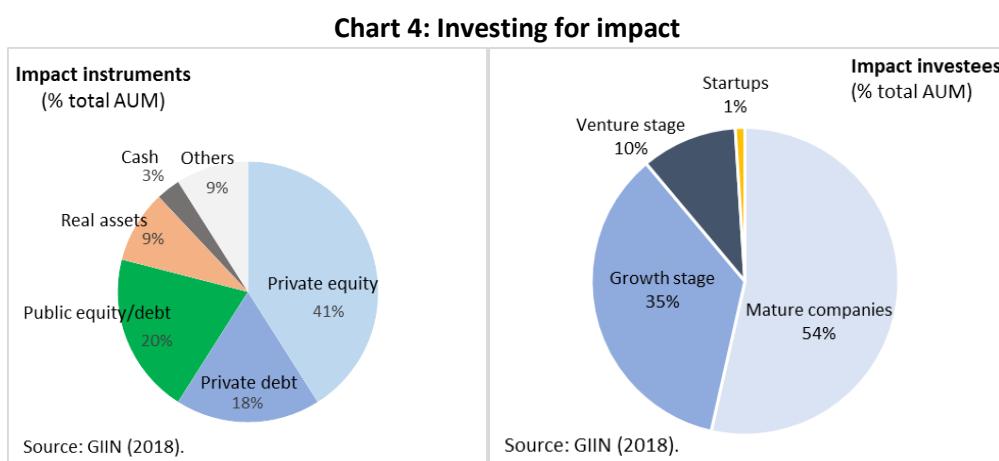
About a quarter of impact investors by asset size are development banks. This signals their desire to move away from concessional support and aid. Their market share here excludes development finance investments, which address broad development issues rather than specific social or environmental ones. Foundations for the moment are very small participants in this market.

A number of stylised facts point to an industry that remains the domain of small players, engaging in small, medium-term projects primarily in the developing and emerging world (GIIN 2018, 2019).

- The main investment sectors are financial services, energy, housing, food, infrastructure, health.

- The average deal size among reporting investors is small, at \$3.2 million.
- Project maturity is long but not that long either; it ranges from 3 to 8 years.
- A lot of the opportunity is in emerging markets (EM), where 56% of assets are invested. Latin America and Sub-Saharan Africa are the 2 main destinations.
- There is significant asset concentration, as a few investors manage very large portfolios. The average impact portfolio reaches \$452 million, while the median one has only \$29 million.
- Inflows into impact funds averaged \$19 billion in 2017 (the median was \$33 million).
- A third of impact investors mix impact with more traditional investments.

The financial instruments of choice are private equity and debt ([Chart 4](#)). This makes impact investing mostly a private market activity, where financial contracts are tailored to the specificity of the project. Publicly-listed equity and debt securities are used exclusively for investments made in advanced economies. Projects with a concrete impact are mostly undertaken by growth-stage and mature companies. The small share of assets invested in venture and seed-stage companies is partly due to the fact that these companies need smaller amounts of financing.



Innovations in financial engineering help address some of the challenges of impact investing. Quasi-equity is used to enhance returns to investors on lending at low interest rates. The toolbox has expanded also to include equity-related instruments, such as convertible debt, warrant, or debt with an equity kicker (the “others” category in Chart 3). Bonds with coupon step-up have been used to incentivise performance. To deploy investments in frontier markets, the not-yet emerging part of the developing world, payments tied to cash flows for early-stage businesses replace collateral for venture debt. The reward for success aligns incentives and improves the liquidity of the investment. Bannick and others (2015) review such innovations.

Lack of liquidity is a key risk for the success of the project when investors need to exit before completion. The open fund structure, where capital can be raised as-you-go, has been used to reduce time pressure on realising returns. The evergreen fund structure is also under consideration to address these concerns, as it lets investors redeem their stake every fixed number of years (Oxfam, 2017)—yet, valuation at each redemption date can be challenging; finding new capital mid-cycle as well.

Technological innovations are pointing to ways to facilitate risk sharing. Although it does not seem to have been experimented with for-profit impact investment, blockchain has been used with charities to track donations, keep them in a segregated account, and condition their release on the charity delivering the promised impact. The [Alice charity](#) applies blockchain technology this way. Projects that report success get allocated donations. Bringing transparency to social funding must be very attractive to donors. It can trigger the interest of committed, responsible investors who serve as upfront funders and get paid back by donors in case of success, with a reward remunerating the risk taken. A particular experiment in impact finance revolves around this principle, the impact bond.

2. An innovative instrument: the impact bond

This instrument, introduced first in the UK in 2010, bears a return indexed on the impact of the investment. It has 3 key features.

- The bond is issued by the private sector to finance a social investment project.
- Bondholders agree to be remunerated conditional on the investment reaching a number of pre-set social targets along the way. If the objectives are not achieved, investors may lose everything beyond any recovery value. They are also called “pay-for-success” bonds.
- The money to repay the bondholders is not generated by the investment; it comes from those who would have undertaken the investment in the absence of private sector interest—these are called “outcome funders”. They can be a government, public agency, development bank, or a combination of those—in which case the bond is called a Social Impact Bond (SIB). It can also be a philanthropy—for differentiation, these are called Development Impact Bond (DIB).

The design of impact bonds aims to align incentives in the achievement of impact. It relies on a delegation of responsibility from the ultimate funders, who want the project to be in place, to the private investors, financially rewarded for finding the most effective, potentially innovative, design to make the project successful. The contract incentivises the close monitoring of the investment during implementation, to help detect early any deviation from targets and make the needed adjustments. It motivates monitoring after completion since the payment rewards impact, not just output. This resolves a costly asymmetry of information because contractors may not reveal a fault in implementation if they know it will not be visible until long after the investment is completed.

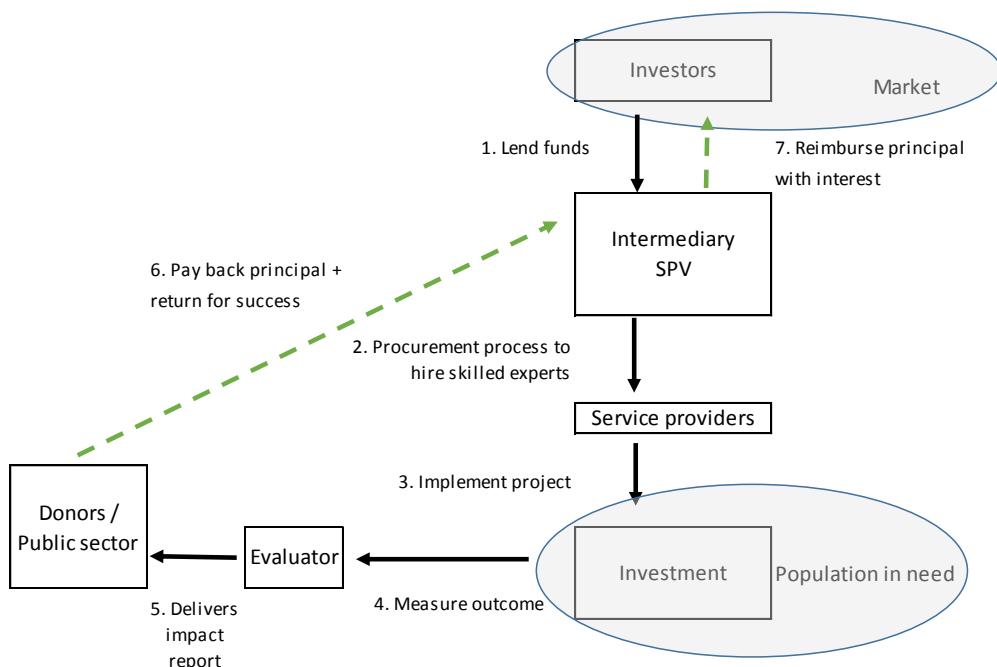
Impact bonds offer a way to share risks when investing in risky and expensive social projects. Both downside and upside risks are passed on the investors. If the investment fails to reach pre-agreed targets, funders in theory do not repay investors for the investment (in practice they may pay a portion, the section discusses this below). If the project succeeds, they add to the repayment a reward. It is taken out of the savings made by not having to support the long-run costs of not having an effective solution to a problem in place. The reward is set to make the risk-adjusted return on the investment attractive to investors compared to other potential investments. Box 1 below explains this in more detail. Investors may also pay service providers a bonus in case of success, besides the upfront payment. Governments cannot usually retain funding to their contractors until they know whether the investment reached its target. This is why the OECD (2016) sees in impact bonds a way to improve the effectiveness of public service delivery and aid spending.

The contractual relationship underlying the impact bond is complex ([Chart 5](#)). The initiative for the investment can come from any of the parties involved. Payment flows can be organised through a

Special Purpose Vehicle (SPV) created by the leading party (Box 1 gives more technical details on the structuring of the bond, including how returns are determined).

- Usually, an intermediary party issues the bond to raise capital needed to pre-finance the social project. A commercial bank, an impact fund, a development agency can take that role. It will use the funds to procure experts to implement the investment.
- Private investors subscribe the impact bond and thus provide upfront capital. They can be impact funds (through which investors reduce capital exposure and share risks across a number of investments), traditional financial institutions (including the intermediary), or anybody interested in such investment.
- Service providers implement the project, which often involves delivering social services (like health or education) to a population in need. They are experts in the sector, like NGOs working in the field, advisors, and technical assistance experts.
- When the project is successful, as assessed by an independent evaluator hired for this purpose, outcome funders send money to the intermediary to repay bondholders, with a return paid from the savings achieved by delegating the project to the private sector.

Chart 5: An impact bond



Impact bonds provide a new business model to finance social goods. They introduce the notion of profits for those who take charge of delivering social services. They present many advantages:

- They focus on outcome rather than on just delivering a service that may or not work.
- They improve the incentive to perform through greater ownership by those implementing the investment. They force to pay attention to data to verify the impact of the investment.
- This creates room for innovation, which can make social finance cheaper and of better quality.

- They allow a better division of labour by delegating tasks to relevant experts (investors structure the financing, intermediaries manage performance risk, the public sector manages political implementation), thus a better risk allocation.
- They allow governments to take a long-term focus but also to leverage their resources in times of tight budgets—the bonds are the equivalent of a private sector loan to the government.
- Service providers are paid upfront instead of accumulating arrears.

Box 1. The structuring of impact bonds

Principal – how much to borrow?

In theory, what outcome funders would agree to pay depends on the estimated value for society of addressing the social issue at hand. This value comes from the future savings on public expenditure if there was no investment to resolve the issue, plus the savings from delegating the investment to a more efficient private sector. In practice, without counterfactual, an estimate of historic costs are used (Bridges Ventures, 2014) and a margin is negotiated and applied over project delivery costs or from comparing bids through a procurement process involving service providers (Center for Global Development and Social Finance, 2013).

Return determination – what is the reward for success?

There is no benchmark impact curve to determine the market interest rate to set when issuing an impact bond. Outcome funders that want to finance an intervention by issuing an impact bond publish a “rate card” that outlines an array of desirable outcomes and how much they would be willing to pay for each of them. The rate cards are developed using historical data on the cost savings of reduced remedial assistance, such as unemployment benefits, from the project being implemented (Brookings, 2015). Service providers and investors bid for contracts at a discount to the rate card. They explain which outcome is feasible to achieve, based on the proposed funding. Ideally, the estimated cost of the intervention is lower than the estimated savings it achieves. A price per outcome is then set in between these 2 amounts. If the cost is too high, donors have been called to complement public funding.

Risk premium

The reward would need to be high enough to compensate the investor for taking a number of risks.

- Business model execution risk: all upfront capital can be lost if the pre-set outcome targets cannot be achieved, for whatever reason, including political obstacles. Tiered capital structures, where risk-return combinations differ, can help match risk appetites and returns.
- Country risk is an issue, in particular in developing countries but not only. Politics are key and projects must correspond to the government’s strategic and policy priorities as the investment tackles public good.
- Liquidity risk. The impact bond is a private contract without a secondary market, although some dream of a “social stock exchange” that facilitates pricing, provides liquidity, and supports the efficient allocation of resources (U.K. National Advisory Board on Impact Investing, 2017a). Since there is still no prototype investment model to fulfil education or health needs, exiting the project mid-way is difficult.
- Maturity risk. A term premium would also reward the investor for patience. In current designs, the interest gets paid long after completion of the investment since its outcome takes time to materialise.

Structuring

The profile of expected cash flows, the probability of principal payback, cash lock-up periods, and the correlation to standard markets are specific to each bond. An investment with a long lock-up period, potentially high upside (if executed well), and significant risk might be categorized as “impact private equity”.

Box 1 (continued)

An investment with more stable cash flow and limited upside but a high likelihood of principal repayment after a substantial lock-up period might best be viewed as an “impact private debt” investment. Should a government or a foundation be willing to guarantee the principal repayment, the instrument might be seen as a substitute for a traditional corporate bond (Social Impact Investment Taskforce, 2014).

The time it takes to develop an impact bond deal can be long. It has varied so far from 6 months to as much as 5 years. The process requires particular efforts and time in terms of learning and coordinating with multiple stakeholders. The outcome metrics and the payments schedule also take time to determine. Implementation can cover the span of multiple years. Five stages of structuring have been identified: feasibility study, structuring the deal, implementation, evaluation of outcomes and repayment.

Impact bonds bring to mind Public-Private Partnerships (PPP) but they are different instruments.

Like PPP, they aim to add private sector efficiency to running public investment projects and build on a contract between a public agency and a private investor, detailing the process for implementation and the return schedule. But PPP, used for physical infrastructure only, are *much longer* contracts (27-75 years) and do not transfer performance risk to the private investor. Their outcome is not subject to a rigorous evaluation and there is no pay-for-success, like in the design of impact bond. These are also some of the reasons PPP have not always been successful and fallen out of fashion. The new features have however made SIB look risky to private investors at this early stage of development of the industry. Thus, like PPP investors require guarantees in usage rates, market share, and toll increases, private investors in SIB (to date) have also required substantial loan guarantees or subordinated debt (Warner, 2013). Yet, for impact bonds, the guarantee can be provided by philanthropies rather than governments.³ It is also in this collaboration between the public, private, and philanthropic sectors that impact bonds distinguish themselves.

As many as 133 impact bonds have been launched since the first one in 2010, issued in 23 countries, and 69 more are in the design stage.⁴ As much as 90% of investments are in the advanced world (Table 2). The ultimate outcome funder is generally the government. Strong market-friendly economies like the UK, the US, Australia, and the Netherlands have strongly embraced the model, with 70% of SIBs launched since 2010 originating from these countries. Another 15% come from old Europe and Asia. As was reported in Table 1, impact bonds have permitted to raise about \$400 million in upfront capital.

Table 2: Outstanding impact bonds by type

Countries	SIB	DIB	Main investment areas	Total
Advanced	115	3	Social welfare, employment, health, education	118
EM/Developing	8	7	Education, health	15
Total	123	10		133

Source: Social Finance, 2019.

³ For example, the investor in the \$9.6 million SIB issued by the City of New York in 2013 to reduce juvenile recidivism received a guarantee on its investment from Bloomberg Philanthropies.

⁴ The headcount and specifics are kept up-to-date here: sibdatabase.socialfinance.org.uk

The track record on SIB provides a few stylised facts (Brookings, 2015, Arena and others, 2016, and the Social Finance database).

- Amounts have ranged from \$148,000 to \$24.5 million and averaged below \$5 million.
- Maturity has ranged from 20 months to 10 years, with a clear majority at about 4 years. The average projected delivery period of SIB has been just below 4 years (Bridges, 2014).
- In this context, only about 20% of the bonds have matured so far. Among those, more than 90% achieved their targets successfully and delivered payments in line with contracted terms.
- Among all issuances so far, bonds have had senior and junior tranches. Capital protection, when present, has ranged from 9% to 100% of principal, sometimes decreasing as the project approaches completion. Guarantees were triggered when the investment was not successful.
- Contracts have also included early termination clauses showing that investors' risk appetite and the return schedule could not match otherwise. These can be seen as a substitute for a secondary market. In fact, in 2 Australian bonds targeting social welfare, the clause allowed investors to sell back their bond holding to the outcome payers. Only 2 bonds were interrupted before maturity out of the total.
- Some metrics of success have focused on output rather than the much-praised impact, highlighting the need to develop measurement methods. Some have combined both.
- Rewards were paid at various intervals along the course of the project, conditional on evidence that the investment reached its contracted outcome for the target population. Like with private equity deals seen before, there was sometimes a minimum impact threshold to reach first. Some deals only included a final payment including the reward, but it was not the rule.
- Just below a third of the bonds specified a maximum annual return. It ranged between 3% and 15% for senior tranches, going up to 30% for junior tranches. The highest ceiling for both tranches was offered in Australia, the lowest in Germany. This example illustrates how the cultural background makes it more or less easy for a government to explain to the public that the production of social goods can be a profit-making activity for private investors. The notion that the cost of the social goods can be reduced through this design needs to be well explained.

As has become clear, impact bonds, despite their name, are not bonds but a mix of financial instruments. They are between a debt contract, with a fixed repayment and interest schedule, and an equity, as repayment and interest are dependent on outcome. They are venture capital, with a hands-on approach to project management. The interest rate on impact bonds can be capped, which then makes them look like a spread option contract. They are a multi-partite contract to achieve an outcome. There is no secondary market and are mostly held to maturity. The portfolio manager oversees every year the impact measurement to determine contract performance.

A rare review of a donor-sponsored DIB highlights challenges with the design from the lack of experience and usable records (Oroxom and others, 2018). The bond, launched in January 2018 to finance cataract operations in Cameroon, took 5 years of negotiations between private investors and charities. Political risks deterred many investors. The investment is only \$2 million. The maturity is 5 years and the interest rate 8% per year. The principal is 100% guaranteed and there is also a guaranteed 4% interest rate in case of failure.

The evidence suggests some necessary conditions for impact bonds to succeed (DFID, 2015 and OECD, 2015).

- The time horizon for achieving the outcome needs to match the patience of upfront investors. The trade-off is more easily resolved when a project has a tested business model.
- A credit rating for such bonds could help attract long-term investors, as well as a pricing convention.
- It must be possible to measure a specific outcome and isolate a causal relationship with the investment. There must be a reliable data flow to test intermediate targets.
- Project size must be large enough to afford the cost of setting up an impact bond. It must be at least \$20 million (Drew and Clist, 2015; other studies find a similar threshold). The cost of the needed oversight and verification process is high and the contract is complex.
- Politics are key, as Box 1 noted. It is important to ensure that a project fits with the priorities of the government in the recipient country, or the project can fail even if everything else is ready.

3. Investing for impact through public markets: project bonds

Investors with the broad intention to address a social or environmental concern can subscribe to bonds specifically issued to finance a set of projects in the area. The market for sustainability-themed bonds is large and growing fast, reaching \$1.3 trillion in 2018. It is a type of responsible investment that sits between impact and ESG investments. It goes deeper than ESG investments because the bond is earmarked to finance directly social and environment-friendly projects, similarly to impact investments. These bonds differ from impact to the extent that their outcome is not systematically measured, with only 50% of green bond issuers reporting impact (BAML, 2017), and returns are unrelated to the success of the investment. Also, their format is similar to that of standard bonds traded on public markets—differently from private market impact investment and an advantage for attracting investors.

There are several types of sustainability bonds, depending on the investment theme. Projects may be known when the bond is issued but not necessarily, in which case bids are called afterwards.

- Green bonds exclusively fund projects related to the preservation of the environment and must be aligned with the Green Bond Principles (GBP). The International Capital Market Association (ICMA), a private sector association of issuers, issued the GBP in 2014 and updates them annually. They classify bonds in 4 categories: climate change mitigation and adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control, with many sub-categories. About 75% of green projects relate to transport, energy, and water.
- Social bonds, as their name indicates, finance projects dealing with social issues. Areas include essential services, affordable housing, employment generation, infrastructure, and food security. Investments are guided by the Social Bond Principles issued by the ICMA in 2017.
- Those that finance both green and social projects are called sustainability bonds. The ICMA has also issued Sustainability Bond Guidelines to harmonise practices.
- There are other themes. For example, blue bonds finance the preservation of the marine ecosystem. Coordination on a set of harmonised guidelines, the Blue Finance Principles, is expected to support market development (European Commission, 2018).

Green bonds are regulated instruments. To qualify for the green label, issuers are required to fit a number of criteria, including to articulate the expected environmental impact of their bonds—and quantify it if possible, closer to what impact bond investors do. The use of quantitative performance measures to report the achieved impact is recommended. External auditors can be used to certify the alignment of the project with the GBP. This is an attempt at remedying greenwashing and the fact that green bonds “got a stamp from someone” makes them attractive to investors.

The public sector created the innovative green bond market in 2007 and the private financial sector is now the single largest issuer. Market size reaches \$325 billion. A supranational, the European Investment Bank (EIB), issued the first green bonds in 2007. The IFC later issued a forest bond that gets paid a return both in cash and carbon credits. The largest green bond was issued in 2017 by US Agency Fannie Mae, at \$24.9 billion, structured as a mortgage-backed security, followed by France’s \$10.7 billion. Commercial banks now dominate the market. They started issuing in 2013 and represent more than 50% of market capitalisation (BAML, 2017); green bond exposure is thus often a bank exposure. The corporate green bond market is still in its infancy and represents only 1% of total corporate debt. Market infrastructure is developed, with the participation of ratings agencies, the creation of benchmarks, the set ups of ETFs, and principles to harmonise standards.

However, the larger climate bond market totally escapes impact accountability. This market includes green projects that would not qualify for a green label and extends to investments that contribute to the transition to a low-carbon economy. Market capitalisation reaches beyond \$800 billion, about 3 times the size of the green bond market. China is the largest issuer on this market and accounts for just below half of outstanding bonds, with its many rail and hydropower bonds (Climate Bond Initiative, 2018). The rest is mostly issued by the US, the EU, and the UK.

III. HOW DO INVESTORS MEASURE THEIR IMPACT?

There is merit in intending to entrench accountability for social or environmental impact. This supports transparency and effectiveness of action and is what distinguishes the field of impact from other approaches to social investment. It relies on a measurement methodology for the outcome of the investment and data availability. Without measurement, social responsibility remains only an intentionality. The challenge is significant.

1. ESG investing and impact classification

As alluded to before, ESG investors do not measure the actual impact of their action on the environment or society. When investors choose a passive strategy that excludes industries out of line with selected ESG standards, the most frequent sources of exclusion are companies that work in the tobacco, weapons, or coal sector. The impact of such exclusion (on health, life, or pollution) is of course not measured. The rest of ESG investors who screen companies for the quality of their ESG practices ([Chart 6](#) provides examples of topics) pick one or two broad societal values related to this investment to communicate the bulk of their impact (say, the promotion of gender equality). They do not provide what would be a complex analysis of the actual impact on advancing that value.

Chart 6: ESG translated



Source: *Environmental, Social, Governance Factors, Principles for Responsible Investment (PRI)*, 2017.

Classifying impact is of course different from providing a measure of the impact. The [SDG Compass](#) then provides a methodology to firms for reporting their SDG contribution. A firm can assess which SDG are impacted positively or negatively by its activity along the value chain, pick one it wants to focus on (say, the SDG 12 of sustainable production), track performance over time (say, its recycling efforts), and report the outcome (here, the share of recycled products in its activity).

It is complicated for ESG investors to verify that companies actually meet the ESG goals they care about. There is no easy metrics of compliance. Most will rely on companies' self-reporting. Yet, data sources show a lack of details and frequency. For example, the annual ESG disclosure score, which totals 100 for perfect information, averages about 50 for Eurostoxx companies and below 40 for S&P500, Nikkei225 and MSCI EM firms (J.P. Morgan, 2018). The [World Benchmarking Alliance](#) (WBA) is in the process of launching benchmarks that rank companies on their sustainability performance and contribution towards achieving the SDGs. Rating companies are also emerging, although this raises the same conflict of interest faced by standard credit rating agencies—they are paid by the entity asking for a rating. Benchmark construction does not help. J.P. Morgan's new ESGQ benchmark index of ESG-scored stocks relies on the degree of a company's self-reported corporate responsibility and adverse news flow about it. Its ESG index for EM issuers simply screens out, again, issuers in the coal, tobacco, and weapons sectors.

Seeking a second party opinion has become common to help assess the green nature of investment projects for potential investors. The task can only be complex. A proposal by a nuclear energy producer to finance its projects with green bonds has been reviewed as in line with ESG criteria by a leading expert in the field (Vigeo, 2018). The idea to buy a green bond from a nuclear company remains disturbing, even though they may well be the most appropriate issuers of such bonds if it is to finance projects that offset their core activities. The GBP do not name which industry or technology is ineligible to the green label, reflecting the fact that the topic needs to remain open for debate.

Public authorities have become wary of abuses with the ESG label and have started to monitor its use. To limit social or green "washing", efforts are ongoing to agree on a common definition of what constitutes an ESG investment.

- The EU has put forward an action plan to develop information disclosure and analysis with the goal to increase transparency (European Commission, 2018). Requirements on corporate reporting of ESG practices, including ESG risks, are being put in place, with an effort to harmonise standards to facilitate cross-country comparisons and competition.

- The private sector has put forward the various Bond Principles as voluntary guidelines for issuing project bonds. Now, legislators want companies using an ESG label to prove their investments mitigate climate change or achieve other ESG goals.
- The European Parliament has proposed central supervision. It wants to extend the mandate of European Supervisory Agencies (including the European Banking Authority, European Insurance and Occupational Pensions Authority, and European Securities and Markets Authority) to include “checking portfolio alignment with the Paris Climate Agreement and to ensure consistency with the Taskforce on Climate-related Financial Disclosure recommendations”.

To adopt an optimistic stance, these dialectics between regulators and financial innovators can be interpreted as a sign of progress and sophistication of the industry. It has been taking place in mainstream finance for years and helped standardise complex innovations. Still, it is ironic that, in the particular industry that calls itself responsible and ethical, so many abuses have been exposed that regulators have had to step in. Collaboration between regulators from various parts of the world would help clarify agreeable and realistic criteria to qualify for green and ESG labels. Participants to this industry should not hesitate to establish a monitoring association dedicated to the surveillance of abuses. Self-regulation would strengthen the credibility of the asset class helping to mobilise even more resources.

2. Measurement as a transparency and accountability tool in impact investing

Measuring impact implies measuring the change that occurs as a result of the investment. For example, if the target is to reduce malaria in a country, counting the number of vaccinated persons is not as meaningful an impact indicator as measuring the fall in malaria incidence a few years later. Doing it requires an understanding of the process through which the investment works, or what the industry calls a “theory of change”. For this, the investment objective needs to be clearly defined, based on a good knowledge of the target population. A baseline scenario is built about how the desired output will be delivered and how, in turn, this output will result in the targeted outcome, or impact. This meticulous approach also relies on a deep understanding of the timeline of impact to anchor expectations and avoid that impatience lead to a failure to observe results.

To remedy the absence of a counterfactual to measure impact, impact participants often pursue one of the following pragmatic solutions.

- The counterfactual is simulated with randomized controlled trials (RCT), where participants are divided in 2 groups, one treated and the other not, and the difference between them tested econometrically. This is financially expensive and can be done on a small sample first. Harvard’s [Poverty Action Lab](#) is a leader in deepening and implementing these quantitative methods.
- A comparison group can be defined that mirrors the target group as much as possible.
- It can be possible to establish a historical baseline with which future outcomes from the investment can be compared to evaluate success (before/after measures). This is the most common approach for EM investments.

Another approach to tackle impact measurement is to track how the investment gradually changes the system in which it operates. Depending on the nature of the investment, Williams and Hummelbrunner (2010) propose to construct a type of input-output matrix, mapping the chain of inputs and outputs logically assumed to be needed to reach a desired outcome. Along the way, it

measures changes in the behaviours, relationships, or actions of people, groups or organizations the investment seeks to impact, which investors can use to make judgments about whether the intervention is performing as intended. If not, they can correct course early. The learning-by-doing element strengthens the end result. The dynamic system approach applies particularly to situations in which the direct output of an intervention is clear but the longer-term outcome is uncertain. It is however intensive in data requirements.

Ex post evaluation techniques provide another pragmatic approach. The [American Evaluation Association](#) provides simple quantitative techniques useful to assess the strength and weaknesses of programmes. They propose basic statistics, probabilities and econometric methods to size the relationship between observed variables and ascertain whether a set of factors has led to a set of results. Variance comparison is helpful to compare target and control populations. Regression tools serve to estimate correlations between a set of variables. Non-parametric methods can be used to infer whether correlations observed in a sample of data can be taken to represent actual relationships in the full population.

Data collection is key and needs to be budgeted for by the investor. A methodology to obtain the data used for measurement must be designed. National statistical offices collect some macro data (e.g., on social expenditure, employment, consumption, education, health). National tax authorities are another source (e.g., on income brackets and family composition) as well as central banks (e.g., on access to finance). In addition, real-time data collection at the microeconomic level is indispensable to measure impact. Government agencies or local actors can be trained to collect them as they can recycle them later or benefit from continued collection after the project is completed. For now, access to a long-term, stable pool of data is difficult given the youth of the industry and that NGOs usually did not have sufficient financial resources to collect the data.

Technology has been playing an interesting role in reducing survey costs. The Lean Data approach, devised by the Acumen Fund, relies on hiring interviewers to reach the target population with a mobile phone survey, with a set of questions that typically takes 7 minutes to administer (Reisman and Olazabal, 2016). In the future, technologies that allow the collection and use of big data could be important for some projects. It could add different data sources to the analysis and maybe track needs and assess impact by revealing behaviours. Mobile phone access is high in disadvantaged places as it is well understood to be a key tool for survival.

Chosen indicators to measure impact must avoid creating perverse incentives. The credibility of results requires that a third party be in charge of measurement or its verification. It may involve random spot checks or independent direct observations during the delivery of the project. The OECD (2016) lists these risks.

- Given that rewards are contingent on performance, investors may select beneficiaries that are more likely to achieve the expected outcomes and leave outside the cohort the most challenging cases (“cherry picking”).
- Similarly, the design may lead to “cream skimming”, where only the highest achievers are included in the group, while “parking” (i.e., excluding) the hardest to reach.
- Unintended risks may emerge from events that are outside the control of stakeholders and impact the outcome payment to the investor. The contract should include dedicated clauses regulating each of these possibilities.

- Defining degrees of progress in achieving the desired outcome helps set rewards to align incentives to succeed, but intermediate rewards must be limited not to delay completion.

Some argue that accounting for impact needs not be too quantitative and rather focus on articulating whether the situation would have been better or worse without the investment.

Leader in this school of thought, the Impact Management Project (2018) advocates making impact communication revolve around 5 topics: (1) nature of the expected outcome, (2) target population, (3) timeline of expected impact during a defined observation period, (4) estimated contribution of the investment in mitigating the target issue, and (5) risks to the impact materialising. Without RCT, the contribution remains an estimate; yet, this approach goes a long way in asserting an impact mandate for an investment (see Insper Metrics, 2018, for applications).

There remain voices against measurement altogether. These argue that measurement is so difficult to standardise that it is best to rely on individual-centric stories and adapt the outcome metrics to the situation. They see it as sufficient to highlight the financial innovation created and “connect to the big picture narrative” by framing the experience with normative concepts (Symbiotics, 2017). Some also argue numbers do not let it get visceral enough to motivate action. This approach is however different from that of impact investors, who want to focus on the activity rather than the individual to develop an industry that can provide goods and services of first necessity.

There is little doubt, though, that direct measurement is more convincing than story-telling to scale up. The most promising feature of impact finance is the daunting, yet extraordinary commitment by investors to be held accountable for impact. This requires transparency and objectivity, close to the way that profits and loss in mainstream finance reveal success or failure, if this asset class wants to take over. Challenges with measuring changes in such elusive concepts as equality, fairness, opportunity, or resilience to sickness and poverty are well-acknowledged. Yet, tools need to be developed further to report and compare impacts. Independent impact rating agencies, which do not exist for the moment, could emerge to help investors compare private market projects and assess performance.

At this stage, investors tend to converge on 3 non-exclusive approaches for impact measurement.

- Develop proprietary metrics fit to the cause they value. There are [many tools](#) for guidance.
- Apply standards. The Impact Reporting and Investment Standards ([IRIS](#)) is a web-based tool that provides an inventory of metrics in each field, built into bricks that investors can mix and match to create a tailor-made report.⁵ This helps create a common language to compare investments and communicate performance with the entire industry.
- Rely on structured story-telling in their reporting, complemented by a mix of available output data and qualitative indicators of impact. The objective is often to prove “additionality”, which

⁵ For example, the metrics that could apply to an investment aiming to train caregivers to reduce the incidence of yellow fever by 50% in 2 years (objective) in City C (target beneficiaries) by intervening in hospitals and dispensaries (sectors to influence) could include: (1) the *IRIS Health metrics*, which define as measurement indicators: number of caretaker trained, number of healthcare facilities, number of vaccines provided, number of doctors employed, number of nurses employed, number of vaccinations, number of health-related curative visits, patient conversion rate incidence of death by yellow fever; and (2) the *IRIS Knowledge Generation and Dissemination metrics*, with these indicators: knowledge dissemination event attendance, total training hours, number of clinics implementing the strategy.

implies to articulate a narrative about how the investment changed what was going to happen naturally (see DCED, 2014, for how it is done).

To summarise the measured impact into a unique indicator, similar to the U.S. dollar returns, scoring methods are used. They help aggregate impacts in different units of measure into one summary number. The score is a weighted average of a set of indicators (for example, the IRIS ones), where weights can vary. Indicators can be partly qualitative and partly quantitative. To tie in with the long time frame of an impact project, they can also present the percentage of targets met by the fund each year, which is sometimes called an *impact coefficient*. With scoring, one annual impact number can be reported alongside the financial return.

IV. IS IMPACT INVESTMENT PROFITABLE?

Many would like the question to be irrelevant. They argue that social impact is a form of return that satisfies investors. It is true that behavioural finance goes a long way in showing, through experiments, that investors get the emotional benefit of doing social good if it requires making some sacrifice. There is also evidence that employees are willing to, and do, sacrifice wages to work at companies that engage in social responsibility (Nilsson and Robinson, 2017, review these findings). The point, though, is that asset managers want—and have a fiduciary duty—to deliver positive returns. Whether these need to be exactly on par with market returns (which are not always positive anyway) is the only acceptable question.

Others circumvent the impact/return trade-off question by saying that impact investment fits the risk/return relationship of mainstream finance. They argue that it is for investors to analyse each impact project in terms of revenue potential and cost profile and set their risk-adjusted return expectations appropriately. They then pick the combination of impact and return that fits their mandate (Goldman and Booker, 2015). Some present a three-axis diagram as framework (Saltuk and El Idrissi, 2012). This would assume that social impact is a quantitative data point like risk and return, which it cannot be until database and measurement methods have been developed further.

Most acknowledge a trade-off. The industry itself points to the existence of an array of risk-return-impact combinations, each fitting a different type of investors. It illustrates this view with the famous “spectrum of investments” graph, which shows a negative relationship between “pure” impact and financial return (see it on page 11, UK NAB, 2017a). Surveys point to a third of impact investors deliberately targeting positive below-market returns, the rest target risk-adjusted market returns (GIIN, 2018).

The key angle to the trade-off question is whether impact investment can deliver returns that are compatible with what mainstream finance needs to become a participant. Workers that entrust their retirement savings to pension managers need a return. The same applies to savers in general. If there was just a small, not major, difference in returns, more savers could decide to make impact investments for the sake of societal change. Is doing social good compatible with profit-making?

1. The approach from economics

The alleged contradiction between profit seeking and doing society’s good does not exist in textbook economics. In the frictionless Arrow-Debreu general equilibrium framework, when each individual maximises her own satisfaction, society as a whole reaches its optimal welfare. Prices act

as signals to transmit information between consumers and producers, who adjust their demand and supply until they find a price at which they want to trade. In this context, decentralised decision-making results in the best outcome for everybody, that is, an optimal equilibrium for society.

A divergence arises when the correct information is not transmitted through prices. This happens for example when a good is non-exhaustible, that is, when its use by one individual does not reduce the quantity available for others. Public goods, like education or clean air, belong to this category. These goods are for collective consumption and the decision to produce them has to be taken collectively. If markets were left to operate, individuals choosing to produce one of them for their own use would neglect to take into account the benefits to others if more was produced, undershooting the production level that is optimal for society.⁶ The same happens in the presence of externalities. A firm planting trees behind its factory will not naturally take into account the positive impact its decision creates for others from, say, cleaning the air. There is no price signal it receives about it and it will plant less trees than would be optimal for society. The opposite is true if the externality is negative. More generally, with externalities and public goods, markets fail to allocate resources optimally. Profit-seeking decisions do not maximize the social good.

The government, acting as a social planner, has in its hands tools to remedy market failure. It can take over the cost of producing the adequate amount for collective consumption and spread the cost on the benefitting population, for example by levying taxes. No profit is maximised; in fact, consumption, since it appears free, is sometimes wasted, adding to costs. In practice, though, governments can also fail in this role because of lobbying, inefficiency, poor information, lack of cross-border sovereignty to coordinate actions on an adequate scale, high transaction costs, and high delivery costs.

Another solution, when distortions affect price formation, may at times be for the government to invest in mechanisms that reveal prices and complete the market. It can set up markets on which externalities can be traded, priced, and thus internalised in market-driven demand and supply behaviours. To that aim, the government can subsidise information collection to encourage the creation of information specific to a sector, both to reduce high entry costs to that sector and induce competition in the supply of information. Market-supporting infrastructure, including regulation, can help reduce transaction costs and the perceived riskiness of doing business, encouraging private sector presence. This may involve setting up disclosure requirements, record-keeping bureaus, standards, and platforms connecting supply and demand. Deeper markets can then generate reliable prices to feed private sector decisions, leading to efficiency gains. Governments can then create a framework for a decentralised solution to the externality. Pollution rights are a well-known example.

The impact investment industry has to go through the same process. Prices do not exist for reducing poverty or ending hunger. There are small, local projects that markets could handle if they could measure the costs and value the benefits. Key efforts are ongoing to create Information. In a way, both public and private impact participants are taking steps to create a market for social good.

- The public sector is proposing regulatory principles to harmonise the rules of play and set the boundaries of the impact market, as mentioned previously.

⁶ All the economic arguments in this section are formally demonstrated in Laffont (1988).

- Businesses with expertise in social issues and local conditions have entered to collect and process data to provide advice, for profit, to investors. This will help reduce high entry costs.⁷
- Advisors are creating prototype business plans for social projects, using the experience to date. This, too, will help reduce costs, match demand and supply, and deepen the market.
- The development of measurement methods, as presented in Section III, helps quantify ex ante the benefits of a social investment and account for them ex post. They help investors build their business plans, raise funding, and be transparent about their action.
- The impact bond deals with the asymmetry of information between the investor and the project manager (the agent who implements the investment). It embeds a reward for success that aligns interests between both parties and motivates innovation to reach efficiency gains. Not yet 10-year old, this instrument may eventually succeed in reducing social investment costs.
- Databases that centralise performance information on impact projects, in particular their realised returns, are not being set up quickly enough but those that exist help decision-making with respect to costs, perceived risks, and capital allocation.

It is to the credit of socially-responsible investors that profit and the production of social goods have stopped being just contradictory. The emergence of the impact market reveals at least the perception that social investment is compatible with profit-making and thus private sector involvement. Although it is difficult to predict innovation, more social sectors may become propitious to “privatisation”, even just partly by mixing public and private partners. The OECD (2015) defines a degree of “publicness” referring to the extent to which the delivery of social goods and services can be taken over by impact investors, for profit ([Table 3](#)).

Table 3: Degree of "publicness" of social areas

Culture	Typical philanthropy
Arts	
Community	
Ageing	
Disability	
Health	
Children and families	Core social impact investment areas
Public order and safety	
(Affordable) housing	
Unemployment	
Education and training	
Agriculture	Areas leaning toward mainstream
Environment and energy	
Water and sanitation	
Financial services (incl. microfinance)	
Source: OECD (2015)	

⁷ According to the UK National Advisory Board on Impact Investing (2017), transaction costs are very high. They quote 2 impact ventures saying investing £1 costs £1.4 to one and £2.8 to the other. According to this study, the average impact transaction cost is currently around £5,000 per deal.

2. The track record of performance

a. Impact funds

A taste for secrecy by impact investors hampers drawing the full picture. There are no extensive data on fund financial performance available besides industry surveys and estimates. Besides, the limited partnership legal structure impedes some funds to share data with third parties. Another challenge is benchmarking investment performance, particularly as assets are heterogeneous. Impact reports may mention “commercial” or “market” returns without establishing what corresponding market they refer to. The youth of the industry keeps the sample size small.

Yet, one can get an idea from available data. Two papers contribute useful figures. Cambridge (2015) covers impact funds launched during 1998-2010 and provides records up to mid-2014. The GIIN undertakes every 2 years an industry survey. The latest, dating 2018, covers all funds launched during 1997-2017 who accepted to report. It shows the following results ([Table 4](#)).

- Impact investing delivers returns that are way higher than concessionary levels.
- Small private equity impact funds beat non-impact funds in the same category.
- Impact investing in EM through private equity performs best. Absolute returns are high in advanced economies but investing requires accepting some sacrifice when compared with traditional investments.

Table 4: Fund performance (%)

		Impact private equity	Comparative universe	Impact private debt
<i>Cambridge (2015)</i>	<i>Number of funds</i>	51	706	
	<i>AUM</i>	\$6.4 billion	\$293 billion	
	Total return (%), net	6.9	10.1	
	EM	9.1	10.4	
	DM	4.8	7.6	
	AUM < \$100million	9.5	4.5	
	AUM > \$100million	6.2	8.3	
<i>GIIN (2018)</i>	<i>Number of funds</i>	53		56
	<i>AUM (author's estimate)</i>	\$12 billion		\$34 billion
	Total return (%), gross			
	EM	17.6		8.2
	DM	17.0		1.9
<i>Notes:</i> In Cambridge (2015), the comparative universe is made of conventional funds of the same vintage years, asset class, geographies, and industry as impact ones. GIIN (2018) does not build one.				
<i>Abbreviations:</i> EM refers to investments made in emerging markets, DM to those in developed markets, and AUM means assets under management.				

In the absence of comprehensive data, the results need to be taken with a few grains of salt. Some argue that the Cambridge study was tilted toward an appealing narrative (Oxfam, 2017). It included many microfinance funds, which are an older sector different from impact and heavily subsidised for decades. Also, some 70% of the reported returns were unrealised at the time the study was published, although this is rather common in expressing financial performance. In addition, both studies likely suffer from a survivor bias in their good results. The GIIN survey may also face a lemon problem, with the less well-performing funds not submitting results. What it shows is that some impact funds are on track to deliver respectable financial returns. The jury is still out about the

model that can make the whole industry profitable, particularly given the scarcity of publically-available data about funds' portfolio and returns.

b. Impact bonds

Only a fourth of these bonds have matured and all but one were successful, reaching targets and making payments. The only EM impact bond that has matured so far paid a 15% return. This bond was issued in 2015 and sponsored by a foundation to raise girls' school enrolment in India. Results are available on the 7 UK government-sponsored impact bonds completed by mid-2016 and the success rate is high (Floyd, 2017). They however present a ratio of subsidies to investment value of 1.15, meaning that every £1 invested in a SIB was supported by £1.15 of government money. It is an open question whether the instrument imposes too much risk on the private sector to be sustainable. The ongoing development of prototype impact investments will reduce business model execution risks. Reaching a critical mass of collected data for impact measurement will also help. In the meantime, governments are willing to finance the learning curve and find out if the instrument can help raise the efficiency of public investments.

The performance of impact bonds need not be looked at in isolation. They provide the benefit of diversification in portfolios given that their horizon is long and they are uncorrelated with the market beta. Their return stream is linked to the delivery of a pre-agreed set of social outcomes, differently from listed bonds and equities. Their profile in a way resemble that of distressed assets held as alternative investments in absolute return strategies.

c. Green bonds

Green bonds trade in line with or at a small premium to equivalent non-green securities. J.P. Morgan (2018) finds the best performing ones to trade a few basis points tighter to the issuer's curve at most. This is despite public sector support in their favour. Green projects are perceived as so risky by private investors that they demand guarantees for participating. The EU, Asian Development Bank, and the EIB have all put in place credit guarantee mechanisms. These do not change the underlying risk of the project and are costly. Public institutions bear these costs as part of a public strategy to sponsor environmentally-friendly investments. Other financial features can be engineered to de-risk the project. They include a first-loss investor, equity, and risk insurance before the project becomes bankable. In the process, the financing has also become more equity-like.

At this stage, many green bond structures resemble the de-risking strategies that ended up triggering the 2008 great financial crisis. The Climate Policy Initiative (2013) highlights the existence of non-transparent, off-balance sheet entities that aggregate and "re-tranche" loans of various risk profiles through collateral or liquidity arrangement. They aim to tilt the credit rating upward, increasing correlations within the financial system and misleading investors on their true risk exposure. The risk may be lower, for now, as governments keep a watchful eye on a market they want to see develop.

d. ESG

There appears to be no return sacrifice in ESG, yet no over-performance either. A leading benchmark designer in the ESG field assesses that the incorporation of ESG factors improves

performance “but not much” for global macro investing (J.P. Morgan, 2018). For global stocks and EM bonds, returns are equivalent to non-ESG comparable assets.

- The ESG score-weighted global stock index (the MSCI ACWI ESG Universal) returned 9% during 2013-18, about the returns delivered by the regular index (MSCI ACWI).⁸
- For EM corporate bonds portfolios, J.P. Morgan uses data on 170 countries and 650 issuers starting in 2012 to compute an index of ESG-scored companies (JESG), valued daily and rebalanced monthly. It finds this index performs identically to conventional indices despite the exclusion of issuers with low ESG scores, which are also the riskier ones carrying higher yields. Issuers with high ESG scores are also those with a higher credit quality. This points to the idea that good ESG scores may later deliver a rating upgrade, thus good price performance.

According to data, ESG activism performs well for the target company. In event-study analyses, ESG activism delivers excess return for the median firm of 2.3% the year after it starts and 7.1% over time if it is successful, relative to firms without activism (Dimson, 2015). The study identifies that during 1999-2009 engagement in the median US corporate took 1 year to reach success. The likelihood of success is larger with governance causes (24%) than economic or social ones (13%), which are costlier to implement and take longer to realise their benefits. They also find no adverse impact on returns if the engagement fails, making activism a dominating strategy.

3. Initiatives to reduce risk

Risk remains elevated in impact investment. The previous section provided mixed evidence as to the ability of impact projects to deliver reliable returns at this stage of development of the market. They remain much riskier than ESG investments, where investors target well-established, legacy companies with a long track record and that want to improve their ESG practices. Time will tell whether good ESG behaviour alone will be enough to achieve the desired long-term improvement in social and environmental conditions. In the meantime, that is where responsible finance is going. Despite the stakes, environmental and social projects financed by impact bonds, private equity and debt represent only around 2% of all socially-responsible investments.

It would be helpful for the public, commercial, and not-for-profit actors on the impact market to enter further discussion on their respective role. Risk reduction, or at least risk sharing, requires good collaboration on the division of labour. Governments have been vocal about their need to attract private investors to help them finance the SDG. On that basis, it could make sense to design supportive mechanisms to reduce entry, information, and transaction costs. Already, private impact investors can benefit from public guarantees when they participate to the green bond market and from subsidies when they invest in impact bonds. The question arises about what could be done in addition to that, or differently from it.

A first type of de-risking strategy has to do with first-loss guarantees. It needs to be discussed with philanthropies whether they would consider providing, as part of their grant programmes, a first-loss insurance for impact investments. They often provide guarantees on principal exposure for impact

⁸ The [index](#) reweights companies in the original index, after excluding those found to be in violation of international norms (facing very severe controversies related to human rights, labour rights or the environment) and companies involved in controversial weapons (landmines, cluster munitions, depleted uranium, and biological and chemical weapons).

bond investors ([example](#)) so this could be extended to other instruments for impact investment. Under some conditions relating to the projects that would qualify, and this needs to be determined, governments could also consider putting resources to this use, as a small sum able to leverage large private resources. To avoid the drawbacks of the PPP model, performance risk would need to remain with the private sector and only a share of the capital be protected. The outcome of the investment would also need to remain the subject of rigorous evaluation such that any private returns remained conditional on success.

Insurance mechanisms can be part of the toolbox. This may be a role for Multilateral Development Banks (MDB) to play. The World Bank's Multilateral Investment Guarantee Agency ([MIGA](#)) already provides insurance against non-commercial risks such as expropriation, war and civil disturbance, and breach of contract. It has offered this to project bond investors in EM but not when this is an impact investment. When the US-managed [Terra Bella Colombia Fund](#) looked for insurance in 2016, only the [Overseas Private Investment Corporation](#) (OPIC) agreed to provide it. The fund invests in projects that reduce carbon emissions in Colombian agriculture and this was the first ever political insurance for an impact project. OPIC is available to US investors only and its function could be reproduced elsewhere. An open discussion needs to occur as to whether such products make sense, including for coherence as governments push for private sector participation.

The case is well-understood that guarantees are needed for projects investing in emerging and developing countries. It remains to be examined whether it makes sense for much-needed projects targeting the low-income populations of advanced economies.

- US Investors investing in EM can access guarantees provided, besides OPIC, by the [Development Credit Authority](#) at USAID. These institutions have helped develop impact venture debt. GIIN (2017) provides a review of guarantees in the US.
- The EU launched in 2017 the [European Fund for Sustainable Development](#) (EFSD), which has a budget of €1.5 billion to provide partial financial guarantees to investors financing impact projects in Africa. The first guarantees were approved in July 2018. The Fund also has a budget of €2.6 billion to co-invest and can offer technical assistance. The EFSD wants to leverage €44 billion of investments by 2020.

Blended financing helps de-risk part of the exposure and crowd in a variety of investors. It can mix different risk appetites and sources of capital for impact investing. The question arises whether this may best happen at a portfolio level or project by project, as it is not obvious how risks correlate between projects. Private and public investors need to collaborate on this topic and discuss who is best placed to afford each level of risk across the junior, mezzanine and senior tranches. Development agencies and philanthropies that are ready to provide catalytic capital could also take more or less of a risk ranking depending on their mandate.

MDB can play an important role as co-investors, helping to mobilise financing and indirectly addressing liquidity risks for private investors. They have started to set up and manage impact finance vehicles, in which public institutional investors can invest alongside private investors. They add their sectoral knowledge and investment expertise to those of private investors and target market returns. These vehicles can also help channel financing to impact projects that are too small in isolation for institutional investors. Lessons need to be drawn from 3 recent initiatives.

- In 2013, the IFC raised \$8 billion to create an investment platform, the Managed Co-lending Portfolio Programme ([MCCP](#)), to manage a portfolio of private loans in which it co-invests alongside Sovereign Wealth Funds (SWF) and private institutional investors. It has however found it difficult to convince investors it could manage money for them.
- The European Bank for Reconstruction and Development (EBRD) set up in 2016 the Equity Participation Fund to co-invest with institutional investors, mostly SWF, and develop private equity markets in EM. The investment could be extended to include equity stakes in impact projects.
- The African Development Bank, in partnership with the EIB, launched the [Boost Africa initiative](#) in 2016 and capitalised it for €100 million. It co-invests with private investors in impact funds. It offers to reduce risk further by offering capacity building and technical assistance. It targets \$1 billion in investments.

V. CONCLUSION

ESG and green bond investments, which provide liquidity to companies transitioning toward better social and environmental practices, have become mainstream. True initiatives that improve governance, social practices (for example in terms of employee health, safety and wellbeing), or the environmental footprint likely contribute to improving long-term firm performance, so much so that in some countries adopting ESG standards is not a choice. In France, for example, asset managers have to report every year how they incorporate ESG criteria into their investment policies. The aim is to ensure that information provided to investors is fair, clear and not misleading ([AMF](#), 2019). Keeping the regulatory framework tight to identify potential abuses of the label is one role of the public sector. Another would be to help coordinate the development of an impact reporting framework to anchor accountability in this asset class.

Some more money probably needs to be spent in learning what the right model is for impact investments, which are based on accountability for results and a reward for success. They continue to be more of a venture capitalist nature. Investors use private market financing because each impact project is different and needs a tailored contract. This makes it challenging to create secondary markets to provide liquidity. They need to innovate, find the right business model to implement their idea, and gather data to demonstrate impact. Country risk can be an issue and early exit is often impossible. Yet, some of those obstacles will likely be removed. Consultancies are drawing from the experience prototype business models to use as basis for social investing. Better understanding of the nature of the investment can help attract a variety of suppliers of funds characterised by different risk appetites and degrees of patience.

Economic theory makes it possible to reconcile public good with private interest when the externalities generated by the investment can be measured and priced. The design of the impact approach helps do just that. It revolves around the articulation of a theory of change, that is, of the process through which the investment achieves its desired outcome. This helps identify the ingredients for a successful investment and grasp who the beneficiaries are along the way. If these, who constitute the potential demand side of the market, have the ability to pay for the investment, either as a result of how the investment changes their condition or otherwise, a market-based approach for that social investment can be created.

A check-list can be drawn to assess the potential for success of an impact investment. The first 3 steps represent necessary conditions to be met before proceeding with the remaining 3.

- Define the targeted social or environmental outcome.
- Explain the expected channel of transmission of the investment to the desired impact, i.e., the theory of change it will implement. RCTs can help identify the design that can work.
- Consult with the population impacted by the investment to identify the demand side.
- Assess what parts of the demand side has the ability to pay for the investment, either as a result of the investment or independently. Ability to pay may not go together with willingness to pay and communication is important. If future generations are beneficiaries, governments have the means to transfer the cost of investing today to the future, through debt, and shoulder the financing for now. If there is no solvent demand or ready financier, there is no market solution to respond to the social need. Public institutions and charities are left to do the job alone.
- After the investment is undertaken, monitor potential deviations from the theory of change to improve the design of the investment along the way. Returns motivate innovation to succeed.
- Measure the outcome achieved and check it against pre-agreed targets to determine the return earned on the investment.

When the theory of change is unclear, the impact too hard to determine ex ante, or the beneficiaries unable to pay for the investment, other approaches may be used. The project can be tested on a small sample of the target population and financed by a mix of public and private sources. The pay-for-success impact bond is used to encourage best execution by the private sector, mandated by either the government or donors interested in implementing the full project.

Risk protection mechanisms at this early stage of market development appear unavoidable. There is not much controversy about this. There is no private insurance on offer for now. Public credit guarantees and insurance mechanisms to absorb the first loss would help leverage the funding put forward by private impact investors. One of the challenges is probably to increase the risk-taking capacity of public investment institutions so they can help develop markets—or to refocus their activity to free some of their capital.

Scale remains a key challenge. It matters to attract the support of public development banks, who do not support very small projects although that is what they often are. It also matters for investors to be able to recover their fixed costs and generate a profit remunerating the risk taken. A solution may be to rely on a portfolio approach to project financing. To scale up, it is important to remove relevant trade barriers across neighbouring countries so that an impact project undertaken in one can be scaled up in the probably similar conditions next door. This would support social investment in the smaller, and often poor, countries of Africa, Asia, and Latin America. It may also be relevant for suburbs and small cities in advanced countries. Technology also offers solutions to reduce barriers, including information and measurement costs related with impact investing, to afford projects of bigger scale. Whether responsible capital can revolutionise global finance depends on innovations in all these areas.

The alternative is to nudge. ESG investments represent the smallest deviation from standard investments people are familiar with. They aim to push companies to behave responsibly in their activities: to respect environmental standards, defend social values of openness and fairness, and

adopt good governance. How these practices change society or the environment is not measured in this strategy. Will the consumer notice? Regulators have entered the field to avoid abuses. Also, the choice of ESG criteria for investing warrants a much deeper reflexion. It is important to account for harmful secondary effects and deal with them. For now, the massive amount of savings collected by the strategy shows that savers are determined to use capital to influence society. If impact finance can take off, private capital could achieve even more.

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