THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Institute of Global Affairs

# 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. 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 changing how people want to organise society**. 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 meaningful savings of their own and be at the origin of the demand for an engaged, responsible capital. A broad discontent is likely affecting different generations alike.

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**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 SOCIALLY RESPONSIBLE INVESTMENT TODAY?

**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. Yet, mainstream investors also see themselves as having values, an ethos, a consciousness, a purpose. Those at the origin of the SRI 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. More often than not, however, profit results from an action that does something useful, such as providing finance to a diligent government or skilful company, supporting investment and job creation along the way. Notwithstanding the slightly populist naming, the point of SRI is to make a financial return while doing something good to society and the planet.

**Three strategies fall under the umbrella of responsible investment**.

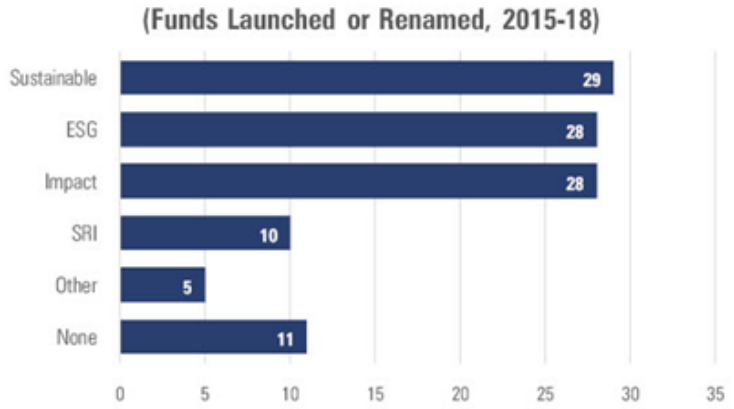
- Picking investments that respect Environmental, Social and Governance (ESG) standards is the most famous. About two-thirds of ESG investors screen their usual investment universe and simply exclude those issuers that do not respect a set of chosen standards (J.P. Morgan, 2018). The remainder either 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 they earn to the success of their investment.
- 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 without necessarily measuring their impact or linking their return to it. The words sustainable and SRI can also be 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).

**Chart 1: What's in the Name?**




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

**The various SRI strategies have in common the long-run vision that investors adopt by making an explicit reference to the social or environmental role of their 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 come back to this question.

**Today, almost a third of global assets managed professionally follow a SRI mandate** (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 | 23 trillion (2016) 3/ |
| ESG | **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/ |
| *For memo* | |
| Global assets of philanthropic foundations | 1.5 trillion 8/ |

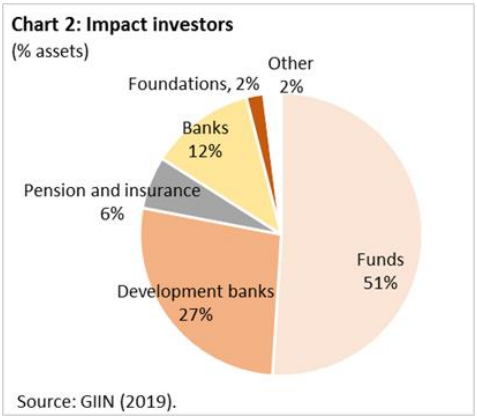
*Sources*: 1/ World Federation of Exchanges (2018); 2/ Boston Consulting Group (2018); 3/ GSIA (2017); 4/ J.P. Morgan (2018); 5/ Climate Bond Initiative (2018); 6/ GIIN (2019). The author takes impact assets net of double-counting ($361 billion) and adds the GIIN's estimate of unreported impact assets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

## II. WHAT IS IMPACT FINANCE?

**The World Bank's private lending arm, the International Finance Corporation (IFC), has defined a set of principles with which the impact industry needs to align**. The Operating Principles for Impact Management were launched in April 2019 and delineate 9 principles that an investment must follow to qualify as impact investment. They entrench the qualities of transparency and accountability, requiring an explicit analysis and report of how the investment contributes its impact.

### 1. Investing for impact in private markets

**A majority of impact investment is done through impact funds** (Chart 2). 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

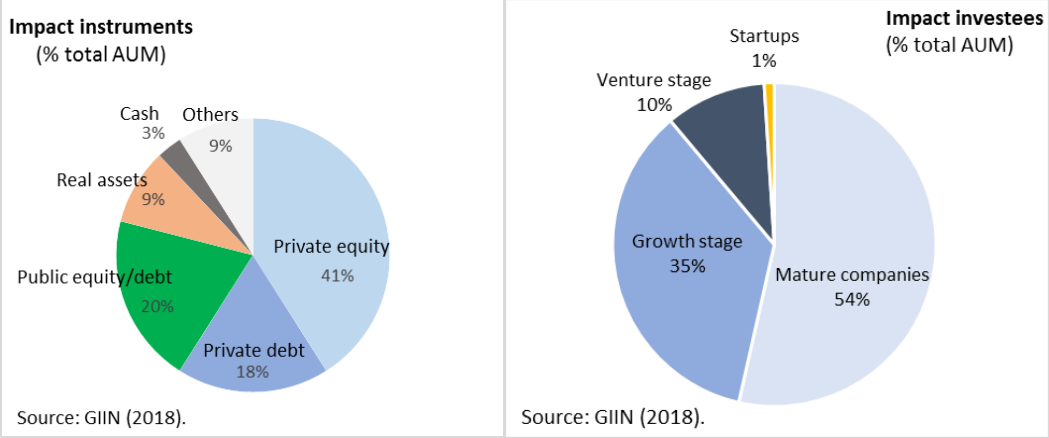
finance investments, which address broad development issues rather than specific social or environmental ones. Foundations for the moment are very small participants in this market.

**The shape of the impact industry is quite revealing of the stage of its development**. A number of stylised facts emerge (GIIN, 2018 and 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 3). 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.

**Chart 3: Investing for impact**




**Innovations in financial engineering address challenges with doing impact**. 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). 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.

**The quest continues to find financing structures that tackle the lack of liquidity of the investment, a key issue that puts at risk 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).

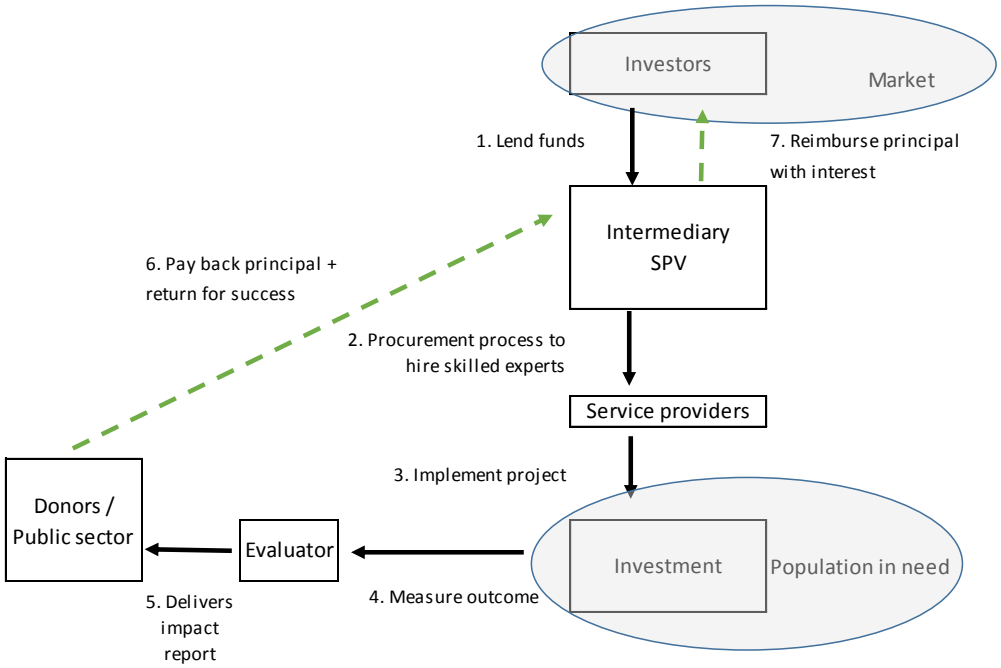
**Impact bonds offer a way to share risks when investing in risky and expensive social projects**. Their design aligns incentives in the achievement of impact, between the ultimate funders who want the project to be in place and those who can implement the project in the most efficient way, driven by the prospect of risk-rewarded return. The result-indexed mechanism addresses a costly asymmetry of information between public institutions or donors (who finance the desired investment but cannot easily monitor its implementation) and those who deliver the investment. The OECD (2016) sees in them a way to improve the effectiveness of public service delivery and aid spending.

**The contractual relationship underlying the impact bond is complex** (Chart 4). 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).

- 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 4: An impact bond**




**Impact bonds represent a paradigm shift in how social goods are financed.** They provide a new business model by introducing 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 – 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**. Impact funds that want to issue 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". 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. Thus, while PPP investors require guarantees in usage rates, market share, and toll increases, private investors in SIB (to date) have required substantial loan guarantees or subordinated debt (Warner, 2013).

**As many as 132 impact bonds have been launched since 2010, issued in 25 countries, and 69 are in the design stage**.[2] Most investments are in the advanced world (Table 2). The ultimate outcome funder is generally the government. 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 | 10 | 4 | Education, health | 14 |
| Total | 125 | 7 | | 132 |

Source: Social Finance, as of April 2019.

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

- Amounts have ranged from $148,000 to $24.5 million and averaged below $5 million.
- Bonds have had senior and junior tranches. Capital protection 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.
- 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).
- Many 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

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

tranches was offered in Australia, the lowest in Germany. It is not always easy for governments to explain why they pay a return on social investments, even when successfully implemented.

**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.

**The experience so far makes it clear that guarantee mechanisms are often required to improve the risk-return profile of the investment opportunity**. Most cited risks have to do with business model execution, country risk, and liquidity. The public sector understands the interest in leveraging private sector resources and provides credit guarantees to encourage private sector participation.

- Programs such as that of the Development Credit Authority at USAID and guarantees by groups like the US Overseas Private Investment Corporation (OPIC) have helped develop impact venture debt in EM start-ups (see GIIN, 2017 for a review of guarantees in the US).
- Blended finance instruments, allowing for different risk exposure by investor through tranching, are another way to de-risk exposure for some participants.
- The public sector can co-invest through a number of schemes. The Boost Africa initiative, launched in 2016, is capitalised for €100 million by the African Development Bank and the EIB. It co-invests with private investors in impact funds in Africa. It offers to reduce risk further by offering capacity building and technical assistance. It targets $1 billion in investments.
- The EU's European Fund for Sustainable Development was launched in 2017 with a budget of €2.6 billion to co-invest in projects in Africa and €1.5bn to provide partial financial guarantees (it approved the first guarantees in July 2018). It also offers technical assistance. It wants to leverage €44 billion investments by 2020.

**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.

**There seems to be necessary conditions for impact bonds to perform** (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 requested 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 quality 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?

**The merit of investors who want to entrench accountability for social or environmental impact is high**. 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 5 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 5: ESG translated**


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

**Investors like to use the broadly-defined UN's Sustainability Development Goals (SDG) to classify and report the value achieved through their investment choices**. The SDG, to be achieved by 2030,

present 17 broad areas that need action for the good of humanity and the planet (Chart 6). 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 arrest the deterioration of the climate. Putting forward the SDG as a benchmark of what is good for the planet results from an effort to converge on a broadly-accepted set of values. Investors see them as simple, practical boxes to map their holistic impact into.

**Classifying impact is of course different from providing a measure of the impact**. The SDG represent very broad values and are also used by issuers to signal their eligibility to socially-responsible portfolios. The UN Global Compact helps translate the SDG into actions and 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). 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).

**Chart 6: Sustainable Development Goals**


Source: United Nations.

**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.

**This leads to the even more complex question of who can define—and rank—what is good and bad**. By global political consensus, the SDG define the nature of sustainable growth in a variety of areas. 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? Scientific results, economic outcomes, or changes in the dominating culture affect them. For example, it can be simplistic to exclude companies that hire children. In poor countries, parents 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. 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 goals are shared, there remains daunting trade-offs to taken into account when making a value-based investment**. Banning investments in the weapons sector raises at least a question about what the scenario in mind is if a population is attacked, in the absence of a global authority to enforce the ban universally. As regards actions that protect the climate, is it green to issue a bond to finance a dam in the Amazon? And is a green bond financing a new highway positive for the environment while supporting car usage?

**It has become necessary to seek a second party opinion to assess the green nature of investment projects to help judgement 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".

**These dialectics between regulators and financial innovators are a sign of progress and sophistication of the industry**. It has been taking place in mainstream finance for years and helped

standardise complex innovations. The development of standards applicable to ESG investments would strengthen the credibility of the asset class, while 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 emerging market 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. Digital access and literacy 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 that direct measurement is more convincing than story-telling to scale up. Independent impact rating agencies, which do not exist for the moment, could emerge to help investors compare private market projects and assess performance.

**Given the obstacles, 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.[3] 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 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.

[3] 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.

**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.

**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.[4] 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 market coordination device, 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;

[4] All the economic arguments in this section are formally demonstrated in Laffont (1988).

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.

**And it is probably through this exact process that the impact investment industry is gradually going**. 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.
- 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.[5]
- 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.
- To find a solution to the lack of liquidity of idiosyncratic impact projects, financial engineering is crafting blended debt-equity funds and evergreen funds.
- To address risks, public sector guarantees and insurance schemes are available to participants.

[5] 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.

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

## 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 emerging markets through private equity performs best. Absolute returns are high in advanced economies but investing requires accepting some sacrifice when compared with traditional investments.

**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. Nonetheless, they show impact can deliver respectable financial returns.

**Table 4: Fund performance (%)**

| | | Impact private equity | Comparative universe | Impact private debt |
|---|---|---|---|---|
| *Cambridge (2015)* | *Number of funds* | *51* | *706* | |
| | *AUM* | *$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 | |
| *GIIN (2018)* | *Number of funds* | *53* | | *56* |
| | *AUM (author's estimate)* | *$12 billion* | | *$34 billion* |
| | **Total return** (%, gross) | | | |
| | EM | 17.6 | | 8.2 |
| | DM | 17.0 | | 1.9 |

*Notes* : In Cambridge (2015), the comparative universe is made of conventional funds of of the same vintage years, asset class, geographies, and industry as impact ones. GIIN (2018) does not build one.
*Abbreviations* : EM refers to investments made in emerging markets, DM to those in developed markets, and AUM means assets under management.

### b. Impact bonds

**Only a fourth of these bonds have matured and all bar one were successful**, **reaching targets and making payments**. The only emerging market 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. This raises the question of whether the instrument requires too significant a risk transfer to the private sector to be sustainable. Governments are however 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 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-tranch" 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 emerging market 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).[6]
- For emerging markets 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.

[6] 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).

# V. CONCLUSION

**For a bit more than a decade, impact investors have been developing a strategy to fund social and environmental projects for a financial return**. Of all impact investors today, 80% have been active for more than 5 years, pointing to viability of the business (GIIN, 2018). 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.

**Impact investors remain of a venture capitalist nature**. They 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 or exit opportunities. In turn, this hampers market entry. Yet, some of those obstacles will likely be removed as 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.

**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.

**Designs also exist to handle the intermediate case when the theory of change is unclear, the impact too hard to determine ex ante, or the beneficiaries unable to pay for the investment**. 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 and large multilateral development banks offer risk mitigation mechanisms. There is no private insurance on offer for now. Public credit guarantees and insurance mechanisms to absorb the first loss help leverage the funding put forward by private impact investors. Here, one of the challenges is probably to increase the risk-taking capacity of these public institutions so they can help develop markets—or refocus their activity to free capital. Discussions are ongoing at the G20, also to take a look at the regulatory capital to provide to these institutions.

**The question of scale remains a key question**. 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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