Using Derivative Logic to Speculate on the Future of the Social Investment Market

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Abstract

This paper prises open the black box of the social impact bond (SIB), the novel financial instrument at the heart of social investment. We discover that concrete information is currently limited and our method is thus more speculative. We address the obfuscation of the nomenclature of the instrument, and explore the mechanics of SIBs to suggest that they are not simple bonds but rather also bear properties akin to those associated with derivative contracts. We speculate on possible developments of the market in these bonds by considering the history of some previous financial innovations, namely CDOs underpinned by microfinance loans and the short-lived Policy Analysis Market. Our discussion leads us to re-evaluate Goodhart’s law and the ways in which it operates in relation to SIBs. We conclude by suggesting that SIBs inherent indifference to the underlying state of the world renders them ultimately unlikely to delivery improvements in public services.
The world is on the brink of a revolution in how we solve society’s toughest problems. The force capable of driving this revolution is “social impact investing”, which harnesses entrepreneurship, innovation and capital to power social improvement.


**Introduction**

At a time when public budgets are severely constrained, and many pressing social problems are perceived to be “too large and too complex to be solved by government and the social sector alone”, the G8’s Social Impact Investment Taskforce estimates that, globally, more than $45 trillion of private capital might be available for social or “impact investment” (Social Impact Investment Taskforce, 2014, pp. 1 & 18). While urban finance and the funding of urban welfare present persistent and substantial challenges (Bowman, MacManus & Mikesell, 1992, p. 331; Gonzalez & Oosterlynck, 2014; Oosterlynck & Gonzalez, 2013) the contemporary stakes – both social and financial – associated with the emergence of a social investment market-model of public-service delivery are vast and critical. Perkins, Nelms & Smyth (2004), for instance, have suggested that incursions by financial capital into the social sphere threaten to take us beyond neoliberalism, whilst others warn of social relations and public welfare being reconstituted through the disciplinary logics of finance (Harvie, forthcoming; Peck, Theodore & Brenner, 2010; Porter & Craig, 2004).

Underpinning the new model is a drive to harness private capital — both capital itself and investors’ appetite for risk and ability to make good allocative decisions — in order to fund new and innovative projects to deliver desirable social outcomes. This model fuses and extends a number of existing trends or developments in the political economy of the public sector. These include the shift from a “welfare state” to a “social investment state”; what’s become known as “new public management”; experiments with marketization and outcomes-based or payment-by-results (PbR) contracts; and the
increasing “rationalization” of charities. Framed by the concept of a social investment market, itself part of the wider terrain of so-called social finance, at the heart of the model is an innovative financial instrument known as the social impact bond (SIB).

Although it is fairly easy to explain the mechanics of the SIB – we do so in the next section – the underpinning logics and motivations of the social investment market are more opaque. Opening up the “black box” of the SIB in order to speculate on this nascent market is our objective in this paper. At the core of our argument is the idea that the social impact bond is, in fact, more akin to a financial derivative than previous commentary has imagined. This insight allows us to situate the SIB in a world in which “derivative logic” (Martin, 2007; 2015) is increasingly ubiquitous – and thus to cast light on the social investment market and its possible future development by drawing on other social-financial practices where somewhat longer histories of such a logic at play are available. We do so in order to alert ourselves and our readers to potential pratfalls to come in the further development and normalisation of social impact bonds by connecting other derivative histories with official documentation of extant SIBs and reports published or commissioned by government, along with the limited number of empirical studies of SIBs published thus far.

Our argument proceeds as follows. We begin by discussing the precise nature of the SIB, following others in arguing that, despite its name, it is not really a “bond” in any conventional sense. Rather, we contend, it is better understood as, at least in part, a derivative instrument; an understanding that is important in teasing out how SIBs are likely to function in the wild. We then turn our attention to some of the informational requirements of the market in SIBs. We posit that the stringency of these requirements might present a barrier to the realization of some of the more grandiose aims and claims of the social investment market’s boosters. Following this we speculate on a possible development of this emerging new asset class by comparing it to an emerging new asset class of the “noughties”, namely Collateralized Debt Obligations (CDOs) underpinned by microfinance loans. In our final substantive section we return to the question of information, considering the lessons of the short-lived Policy Analysis Market, an attempt to harness the power of
markets as information processing machines that we think offers some lessons into the
developmental risks and opportunities that SIBs as derivatives might present. This leads into a
discussion of a derivation of Goodhart’s law – the proposition that all measures become targets and
when a measure becomes a target it ceases to be a good measure. We conclude by considering the
consequences of SIBs, as derivative instruments, being always and utterly indifferent to the
underlying state of the world.

**Actors and Instruments; Scale and Scope**

The SIB is itself an example of a PbR contract. It is designed to mediate the relationship between,
and align the interests of, three actors (or sets of actors). First, a commissioning agent, usually part
of the state, who defines a set of social outcomes which it desires to see. Second, a service provider,
tasked with the responsibility of delivering these outcomes. Third, a financial investor or investors,
whose investment will fund the service or intervention. If, at the end of the contract period, the
commissioning agent-defined outcomes have been met (i.e., if the intervention is successful), the
investor receives a financial return; if the outcomes are not met, then no dividend will be paid and
the investors may lose their initial investment. Dividends are paid by the commissioning agent (the
state), but since it only pays for successful interventions, overall state spending (for a given level of
service – or given outcomes) should fall. The (financial) risk associated with unsuccessful
interventions is meanwhile transferred to private investors. At the same time, because the focus is
on social outcomes (as opposed to inputs or outputs), the model is supposed to encourage
innovative new approaches to public services. Thus, the model should both drive innovation in the
social sector and at the same time improve value for money of public spending. In return, the
owners of this capital “will potentially gain a valuable new set of less correlated investment
opportunities”; a new asset class with behavior distinct from that of existing investment
opportunities (Social Impact Investment Taskforce, 2014, pp. 1, 18 & 5).
This new model for the delivery of public services is being pioneered in the United Kingdom; the world’s first SIB launched in Peterborough, a small city 120km north of London, in 2010. Commissioned by the Ministry of Justice, the Peterborough SIB was designed to facilitate a probation project, targeting recently released short-term male prisoners. The SIB was designed and managed by Social Finance, which also acted as intermediary between the commissioning agent (the Ministry of Justice), financial investors (17 charitable foundations, who invested a total of £5 million) and the service provider (the One Service, a purpose-created consortium of criminal-justice and prisoner charities). The One Service worked with three cohorts of roughly 1000 ex-offenders. Outcome payments for investors would be triggered if “reconviction events” amongst each cohort fell by 10% or more, relative to a UK-wide control group – or if there was a 7.5% relative reduction in reoffending for the entire group of approximately 3000 individuals. A Ministry of Justice report predicted investors might expect a return on investment of 7.5–13%, depending on the fall in reconviction events (Disley & Rubin, 2014), with the total outcome payment capped at £8 million. Returns to investors would be paid by the Ministry of Justice, together with the specially-created Big Lottery Fund (BIG). As it turned out, although there was a fall in recidivism amongst each of the first two cohorts, these falls (taken on their own) were insufficient to trigger outcome payments to investors. In 2014 the Ministry of Justice cancelled the programme and instead launched a national probation scheme, Transforming Rehabilitation. Probation support for ex-offenders in the third cohort was provided by the One Service, but under a more traditional fee-for-service arrangement. In 2017 it was announced that the reduction in reconviction events across the two cohorts taken together had reached the predetermined threshold, and thus investors would receive a one-off payment representing their “initial capital plus an amount that will represent a return of just over 3% per annum for the period of investment” (Social Finance, 2017). We return to this pay-out below.

Since 2010 the social investment market has continued to grow, both within the UK and internationally. In 2015 Whitfield (2015, p. 1) was able to claim that there were now at least “54 operational social impact bond projects in 13 countries with at least a further 23 at the planning or
procurement stage. The UK is the global leader with 32 operational projects with outcome payments valued at £91m”. Three years later the number of SIBs has doubled: according to Social Finance’s SIB database, at the time of writing there were 121 SIBs in operation, with a total capital raised of $413 million; 47 of these projects are in the UK. There are apparently also over 70 SIBs currently in development (Social Finance, retrieved 16th October 2018). According to The Economist (2017) “impact investing”, once a “niche product”, is now “ inching into the mainstream”.

Britain not only leads the way in terms of number of projects. Successive governments have enthusiastically promoted the social investment market, both within Britain and internationally. In 2013, for instance, the UK used its presidency of the G8 to establish the Social Impact Investment Taskforce (SIIT), which we quoted both in our epigraph and in our opening paragraph. In 2015 this became the broader Global Social Impact Investment Steering Group, whose members include 13 countries and the EU, along with many other observers. Most recently, in March 2018, Theresa May, who replaced David Cameron as prime minister in 2016, commissioned a new “industry taskforce”, charged with “unlock[ing] the capital to boost impact investment even further” (Prime Minister’s Office, 2018).

An interesting facet of the model is its local-geographic specificity. The social investment market is being promoted at a national and even international level, and many of its key actors operate at this level. We have noted the development of the G8’s social impact investment taskforce into the Global Social Investment Steering Group. Within the UK, the model is being pushed by national government, with both the Cabinet Office and the Treasury particularly enthusiastic. Social investment’s non-governmental boosters and enablers, among them Social Finance (which designed the Peterborough SIB) and Big Society Capital (the UK’s social investment wholesale bank), are national entities, as are most of those investors, such as Big Issue Invest, who have purchased SIBs. But individual SIBs are themselves generally specific to local geographies. Indeed the Localism Act, passed in 2011, did much to facilitate the SIB model and the Department for Communities and Local
Government has played an important role in developing the policy, with the commissioning agents of SIBs frequently being local authorities.

Thus, the Peterborough SIB financed a probation project targeted at short-term prisoners released from that city’s gaol. Similarly, a set of SIB-funded projects, announced in 2014, designed to assist homeless young people, are all specific to local regions and most are urban and metropolitan. Much of the funding is provided by new central government vehicles, the Fair Chance Fund and the Single Homeless Fund, whilst other funding comes from local authorities themselves and, according to the government’s press release, more than half of all English local authorities are involved (Cabinet Office, 2014).

This place-specific characteristic of the SIB has drawn the attention of geographers. To date, they, alongside accounting and finance scholars, have led the critical interrogation of social impact investment. A number of scholars (e.g. Berndt & Wirth, 2018; Cooper, Graham & Himick, 2016; Dowling & Harvie, 2014; Harvie, forthcoming; Sinclair, McHugh, Huckfield, Roy & Donaldson, 2014; Williams, Goodwin, & Cloke, 2014) explore the role of the state in the making of the social investment market, the “shifting boundaries” between “private” and “public”, and the relationship between social investment and neoliberalism. McHugh, Sinclair, Roy, Huckfield, & Donaldson (2013) and Berndt & Wirth (2018) also explore the difficult issue of quantification, specifically, the measurement of outcomes, a question we return to below. Several authors approach the social investment market through the lens of financialization – see, for example, Dowling (2017) and Harvie (forthcoming).

Lake (2015, 2016) explores the broader financialization of urban and municipal governance in the United States and the spatial concerns he raises are developed by Rosenman (2017), who highlights the “geographies of social finance”. She points particularly to both the physical and social distance between investors and the “targets” of their investment. This relationship between investors and the targets of their investment – and the mechanics of its realization – is an important one, to which
we return.

Hybrid or Hijack?

Confusion – or possibly obfuscation – associated with the operation of the social investment market begins with its very nomenclature. The term “social impact bond” was coined in 2008 by the Young Foundation’s then-chief executive Geoff Mulgan (Bolton & Savell, 2010, p. 2; Nicholls & Tomkinson, 2015, p. 343). But a social impact bond is not, in fact, a bond – at least not a conventional bond (Warner, 2013). As we noted above, a distinguishing characteristic of a SIB is the dependence of its financial performance on the performance of an underlying activity funded by the bond. Of course, a variant of this relationship pertains in any bond. But in the case of UK gilts, say, or other government or corporate bonds, the dimension of performance is a strictly etiolated one. Except in the case of default, repayment of principal and predetermined interest payments will be made at predetermined dates.

For Arena, Bengo, Calderini & Chiodo (2016, p. 928), drawing on Bolton & Savell (2010), Liebman (2011) and Warner (2013), SIBs “can be better defined as hybrid instruments with elements of both equity and debt”. We would go further and contend that key aspects of the social impact bond are better understood by viewing it as a derivative instrument, since it has “a value deriving from an underlying variable” (OED). Or as Investopedia.com puts it:

A derivative is a security with a price that is dependent upon or derived from one or more underlying assets. The derivative itself is a contract between two or more parties based upon the asset or assets.

The underlying variable or “asset” in this case being the performance of the service provider against the set of metrics that measure the success of the intervention funded by the SIB.

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1 Two decades earlier, New Zealand economist Ronnie Horesh had proposed ‘social policy bonds’; these share many features with SIBs, but also some important differences, as explained by Horesh (2015), who ‘do[es]n’t like’ the latter. For a longer history of social investment, see Harvie (forthcoming).
This derivative instrument-like quality of the SIB is worth stressing; it is not a mere matter of semantics or labels. The SIB is similar to debt or equity in that the owner’s investment makes possible the project. But the owner of both equity and debt has a claim on the underlying asset itself. This is obvious in the case of equity: its owner literally owns a share of the company or corporation and, at least in principle, has a say (proportionate to their share) in the way the corporation is run. With debt (a corporate bond, say) the holder does not formally own any part of the corporation, but in the event of default then this bond holder does in fact have a claim to the corporation’s concrete underlying property – physical, intellectual and so on – and, indeed, the bond holder’s claim legally precedes that of the equity holder. The holder of a social impact bond, by contrast, enjoys no such claim. If the intervention their “investment” is financing is unsuccessful (i.e. it fails to meet its pre-defined performance targets – for that is the only measure of success that counts) then they have no claim to any asset of the failed service provider. To repeat: their stake is in the performance of the service providing company only, not in the company itself.

**Barriers to Realization**

Given the complexity of social impact bonds (and the difficulty of managing risk), it is difficult to discern with any certainty how the market might develop. However, for any significant expansion and development to occur considerable information is necessary to enable investors to take informed and secure choices about where to place their bets. A putative player in the social investment market requires an additional layer of information beyond that pertaining in conventional financial markets, such as those for equities, bonds or foreign exchange. Specifically, what is required is information on what level of performance the service provider has delivered on, for the bond’s payout (or lack thereof) is determined by this. Obtaining such information entails the additional costs of surveying, interpreting and formally authorizing an “objective” level of performance – or in dealing with the costs of contestation if no agreed “objective” view of performance is available. The cleanest way of achieving the former, more desirable, outcome is to have actual performance assessed or audited by a third party – or, in fact, a fourth party, since the
SIB already involves three parties with a “stake” in the performance attained. Of course it is this additional step that enables the bond to parade as deliverer of social impact. But, we would speculate, the complexification of the transaction entailed has significant impact upon the capacity of the bond to be marketized and thus may also impact upon the capacity of this set up to afford easy access to the $45 trillion of capital that is apparently seeking to be invested impactfully.

A major informational lacuna around SIBs is that underpinning PbR contracts are rarely if ever fully disclosed, as we discuss below with reference to the Peterborough SIB, and that elements of “performance” measurement vary between studies and interventions. This can be the outcome of SIB commissioning agents applying different ratios and techniques for estimating the “point” of intervention and applying different discount rates (Cooper et al., 2016), or randomized control trial methodology (Neyland, 2017; Tse & Warner, 2017), which makes comparisons between different SIBs applying different techniques challenging. However, the creation of a central costing system could mitigate the problem of comparability across SIBs regarding the valuation of social problems.

In fact, since 2014 it has been possible to develop social impact bonds in the UK with reference to a Unit Cost Database. Developed by the Manchester-based policy thinktank New Economy, in conjunction with the national government, this database is an attempt to standardize the costs and monetary benefits associated with specific social problems and their amelioration and thus to ensure a degree of consistency in rendering more positive social outcomes and their associated costs of delivery.²

The database offers financially quantified estimates for local or governmental commissioning agents and social enterprises and includes over 600 figures for various “outcome details”, organized into seven categories: crime; education and skills; employment and economy; fire; health; housing; and social services. For instance, under the crime category, a single incidence of domestic violence is

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² Other proponents of the social investment market have also developed accounting tools and algorithms that seek to quantify expected outcomes and otherwise rationalize the construction of SIBs. For example, the Global Impact Investing Network (GIIN) oversees a ‘catalogue’ of social, environmental and financial performance metrics called IRIS (See https://iris.thegiin.org/).
estimated in 2008/09 to carry a fiscal cost of £2,836, an economic cost of £1,692 and social cost of £7,803. The costs associated with persistent truancy (per person per year) are estimated to be, in 2005/06, £1,878 (fiscal) and £1,048 (economic), with no estimate for social cost.³ The database forms part of the UK government’s SIB toolkit. It is intended to inform both the cost-benefit analysis that assesses the feasibility of a proposed SIB and decisions concerning outcomes payments. Official documentation, such as the UK’s HM Treasury’s (2011) *Magenta Book*, explicitly recognizes the difficulty of rendering visible all associated costs and benefits and points to the importance of forecasting and confidence-led bias correction to initial data and benefit estimates. With variation in projections and actual outcomes and their reporting inevitably persisting in such circumstances, commensuration between different SIBs across different local contexts of the sort necessary to enable market integration and expansion will remain difficult.

While interventions such as the Unit Cost Database are important steps in making the SIB more transparent, there are still significant details which remain enshrined within the contract and are not disclosed to all parties - a point noted concerning the design of the St Mungo’s bond by Cooper et al. (2016). As such there remain elements of black-boxing through which the internal operations of SIBs are shielded from public view. Thus, at least for now and the foreseeable future, important information on extant SIBs and the social investment market in general is much more notable by its absence than its presence.

Some more detail concerning the case of the Peterborough SIB is instructive here. As we noted above, this programme ended (prematurely) in 2014. The final process evaluation report published a year later, stated that “[f]inal outcome results are expected in summer 2016” (Disley, Giacomantonio, Kruithof & Sim, 2015, p. 3). Extensive searches of governmental web pages and

³ A fiscal cost here is a cost to the public purse, such as delivery of police response. An economic cost is the cost to the local economy, such as lost production. The social cost is the additional wider financial implications to society as a whole of the matter at hand. The database is available here: [http://www.neweconomymanchester.com/our-work/research-evaluation-cost-benefit-analysis/cost-benefit-analysis/unit-cost-database](http://www.neweconomymanchester.com/our-work/research-evaluation-cost-benefit-analysis/cost-benefit-analysis/unit-cost-database).
reports, repeated telephone calls to various government departments involved in the enactment or oversight of the scheme and email correspondence with the Ministry of Justice repeatedly failed to yield a clear answer to the question of whether the scheme had been deemed a success in the final analysis. At the last point of asking, we were assured that “the Ministry of Justice intends to publish the final cohort results for the pilot after the current General Election, and prior to the end the Parliamentary term in late July 2017” (email from HM Prison and Probation Service, 24 May 2017). A terse report (cited above) was finally issued by Social Finance on 27 July, a week after the last day of the parliamentary term. It stated that the bond had “reduced reoffending of short-sentenced offenders by 9% in Peterborough; investors are repaid in full. ... [T]he 17 investors ... will receive a single payment representing their initial capital plus an amount that will represent a return of just over 3% per annum for the period of investment” (Social Finance, 2017). No further information beyond Social Finance’s 4-page press release appears to be publicly available and, thus far, the reported success of the scheme has been subject to no critical public scrutiny.

A week before the publication of that press release, a Miss R. Barnett submitted a Freedom-of-Information request to the Ministry of Justice on the subject of the Peterborough SIB. The response, delivered on 17 August, provides two salient pieces of information. First, that “the Big Lottery Fund, a non-government departmental body, committed up to £6,255,751 for the development of the Peterborough social impact bond. This figure includes part payments based on successful outcomes”. Second, that “the total cash value of the outcome payment made to investors by the government” is “commercially confidential” information, the release of which could both “prejudice the [Department of Justice’s] current or future negotiation strategies” and “undermine the confidence of suppliers bidding for future services” (Ministry of Justice, 2017).

This relative dearth of information leaves us in something a difficult position. We thus propose advancing our speculations by looking at the development of markets and instruments that bear similarities to the attributes of those we might expect to find in the social impact arena, beginning with the market in microfinance.
Previous Attempts to Do Well and Do Good

The first Microcredit Summit was held in Washington, D.C. in 1997. There more than 2000 officials from 137 countries pledged their commitment to combating poverty by making finance available to some of the world’s poorest people. They agreed to provide political and financial support to the further development of microfinance institutions (MFIs), recognizing the major part such institutions can play in the eradication of poverty. With such a clear goal in mind, and with most existing MFIs organized as non-profits, the result was the maintenance of, on the whole, coherent policies within those institutions. Typically, MFIs avoided charging high interest rate, did not seek to maximize returns and displayed flexibility in their pricing and lending policies. More recently, however, capital for microfinance institutions provided through non-profit and governmental sources has been supplemented and even supplanted by that drawn from global capital markets on commercial terms.

We draw on an insider’s account of a system of rating MFIs published just before the Global Financial Crisis – Arvelo, Bell, Novak, Rose & Venugopal’s (2008) “Morgan Stanley’s Approach to Assessing Credit Risks in the Microfinance Industry”. The New York-based global investment bank was involved in the creation of Collateralized Debt Obligations (CDOs) based on loans to microfinance institutions. These share the same basic structure as the “toxic assets” of pooled “subprime” mortgages and, just as those CDOs needed ratings of risk and reward (no matter how spurious they subsequently proved) to enable their marketing and sale, so too did these agglomerated loans to microfinance institutions.4 Their system demands, for the best ratings: an

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4 Our use of somewhat cynical language to describe CDOs is both deliberate and far from constrained to avowedly critically oriented commentary, as the ubiquity of the term ‘toxic assets’ in international press from 2008 onwards attests. Collateralized Debt Obligations have, of course, been used to ‘pool’ all types of debt. But their increasing ubiquity should not lead us to assume they are therefore benign, as the similarly increasing ubiquity of the notion of ‘toxic assets’ reminds us. Indeed we would contend that their association with the subprime crisis is not necessarily a particularly aberrant instance of their use. There are several characteristics of securitization – the process through which a CDO is created – that are germane to our discussion and which, we suggest, apply to both the US mortgage market and, potentially, the social investment market. First, securitization involves a further separation between the ‘performance’ of some underlying activity or asset and the actors who benefit financially from this performance. This creates principal-agent problems related to the monitoring of this underlying performance – or portfolio of performances. Second, an often-implicit assumption associated with the CDO is that the performances of the underlying activities or assets are uncorrelated. This assumption clearly proved to be false in the case of
“efficient” loan portfolio; profitability; sustainability; effective management policies and reporting; strong operational procedures; and tight internal control. In evaluating a strictly commercial organization these might, indeed, be sensible criteria. But let’s look at how this plays out in relation to microfinance.⁵

According to the Morgan Stanley approach, sustainability (defined, in a demonstration of the reductive nature of high finance, as income divided by expenses, including loan write-offs) and profitability can be achieved through earning high levels of interest income from loans. However, the target market of microfinance is inherently risky because borrowers lack credit history, may not have the ability to repay loans and do not have collateral to offer, while the large number of small loans makes rigorous scrutiny of all borrowers prohibitively expensive for lenders (see, for example, Cull, Demirgüç-Kunt, & Morduch, 2011, p. 3). Finance theory, accepted and advocated by Morgan Stanley, suggests that this can be compensated for by charging high interest rates (ibid.). Now, it might appear demanding extremely high interest repayments from some of the world’s poorest people is an unusual way of alleviating poverty, but microfinance’s goals are also subverted in a second way. High interest rates will eventually decrease demand so that only those people who can pay higher interest will take up loans. And, in particular, those with riskier enterprises, if they are also projecting higher returns, will be given loans at the expense of poorer borrowers. Similarly, the law of diminishing returns suggests that entrepreneurs employing less capital can make higher returns and are thus able to pay higher interest charges. Unfortunately, this is effectively counteracted by the impossibility of achieving the sorts of economies of scale available to those with greater capital, an argument tellingly made by the microfinance experts Armendariz and Morduch.

⁵ See Hina et al. (2009) for more details.
Overall then, the Morgan Stanley approach can be seen as pushing towards more expensive loans, increasingly directed towards the relatively better-off, administered through a more formal, rule-driven bureaucratic structure. These are developments destructive of both the original goals of microfinance and of its traditionally successful way of operation. Part of this comes from a marked disregard for anything that might be unique or even important about microfinance. Morgan Stanley approaches it as if was no different from any other commercial lending activity, despite evidence that microfinance has been a unique source of innovative products and services specially designed for the needs, objectives and business activities of the poorest people in many communities. A clear case of, despite the warnings of Morduch (2000, p. 618), comparing oranges with apples. Of course, the making commensurable of oranges and apples is exactly what capitalist exchange does, a process analyzed in depth by Marx in the opening chapter of *Capital*. Financial markets, especially when one includes trading in derivatives, have greatly facilitated this process of commensuration, as ably demonstrated by Bryan and Rafferty (2006). Earlier we pointed to problems incommensurability presents for development and expansion of a market in which SIBs might be compared and traded. Here we witness the price paid in terms of loss of uniqueness and specific fit when commensurability is engineered and a market made.

**Counting the Costs of Complexification in Context**

Although there are considerable differences between the more mature market in microfinance and the thus far small and emergent market in SIBs, there are potentially significant similarities in terms of how underlying financing of these mechanisms might develop. We can see evidence of desires to pool SIB instruments on investment platforms, which hold out the promise of both managing costs more effectively and disciplining providers via market reallocation. However, if such a trajectory were to take hold there would also be substantial risks of the same sort of mission or purpose drift that we witnessed in the collateralization of mortgages and microfinance wherein the same
etiolation of relation to underlying activity that enables disciplining can act to produce a market which has shifted considerably in terms of its putative beneficiaries.

In the case of mortgage-backed or -pooled securities within microfinance, supporting financial mechanisms are typically designed to draw customers further into cycles of debt and borrowing, such as in US sub-prime markets for example (Keys, Mukherjee, Seru, & Vig, 2010). In so doing, households become increasingly precarious, with their holding of illiquid assets in a sea of liquid exchange forcing them to act as involuntary “shock absorbers” for broader system risk (Bryan & Rafferty, 2014, p. 891). This process owes much to the transfer of risk from global financial markets to individuals and into various aspects of everyday life (Bryan & Rafferty, 2006, 2014). Social life becomes subject to the traditional investment logic of finance in which higher returns are offered as compensation for increased risk, enabling specific aspects of everyday life to generate increased reward for investors. And this subjection to finance plays out at a variety of scales. Roy (2010), for example, marshals ample evidence of the way in which (commercialized) microfinance became the preferred development tool of powerful global institutions, such as the World Bank and the US State Department, in effect becoming a part of the Washington consensus. On the ground, as Hina (2013) notes in the case of Pakistan, when institutions move towards commercial borrowing as their prime source of underlying finance, interest rates charged to end borrowers of microfinance tend to increase. The unpleasant corollary here is that such a model of microfinance has resulted in the redistribution of wealth from some of the poorest people in the world to some of the richest (remarkably, in a way that can be, and often is, described as Responsible Investment). Another case of what Joseph Stiglitz has repeatedly described as “money flowing uphill”.

The same financially-biased perversion attention to the urban environment and the performance of its constituents may be seen in the construction and issuance of SIBs. In Cooper et al. (2016), for instance, the SIB was designed to alleviate homelessness and recidivism but they note that it is not the most vulnerable that become principal targets for intervention. Rather it is those homeless groups and individuals that possess the greatest capacities to engage in transformation of
circumstances, with the greatest capacity to generate wealth for bond holders.

In such circumstances there is little reason to expect the financial performance of an impact bond to effect substantive and desirable societal change or urban growth in the round. Cities and the urban environment have experienced the most significant damage since the financial crisis (Oosterlynck & Gonzalez, 2013), where, in the UK at least, council budgets have been particularly slashed, devastating local economies (Gonzalez & Oosterlynck, 2014). Since SIBs offer opportunities to councils to access new areas of funding there is likely to be inter-local competition – perhaps stretching to a law of the jungle (Peck & Tickell, 2002) – between councils as they compete to host these investment vehicles. This, in the context of post-crisis urban governance, is likely to increase current conditions of urban poverty and promote a race to the bottom as councils turn their attention to the derivative promises of SIBs in the face of few, if any, substantive funding alternatives.

Financialization of governance at the local and supralocal levels engenders more business-like operation, resulting in a keen eye being placed on seizing financial opportunities to overcome the monetary and budgetary limits imposed by central government (Gonzalez & Oosterlynck, 2014; Leach & Roberts, 2011). Within this set-up social and urban interventions, such as family support, are outsourced to private service providers, while basic council services become offered at basic and premium rates (Leach & Roberts, 2011). This, in itself, produces increased complexity for governance as service providers and local councils clash over responsibility for monitoring results (Neyland, 2017). The underpinning neoliberal logic of SIBs (Dowling, 2016; Harvie, forthcoming; Harvie & Ogman, forthcoming) is likely to intensify this change – at least extant studies demonstrably point to this (Cooper et al., 2016, p.66; Mitchell, 2017; Warner, 2015) – and produce more confusion at the local level regarding the governance and accountability of contracted services within the SIB. This is in large part because they introduce a yet further layer of complexification around the disputability

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6 Or, as is more likely, justify the defunding of social care initiatives (Dowling, 2016).
of performance that is a matter of pecuniary interest for not only providers and commissioning agents but also an additional and distinct stakeholder group, the investors in the social impact “bonds”. Gilts and real bonds, due to their lack of hypothecation and the level of agglomeration at which they operate, do not transform governance in the same ways.

Hence, across the examples raised, the range of actors and financial participants increase through issuance of SIBs, which raises the complexity of finance at the local level (Warner, 2013), particularly as the role of the state and local councils become squeezed in the turn towards impact investment (Mitchell, 2017). This renders state interests as just another stakeholder in the function of local governance, eroding the structures of policy-making and accountability and increasing the institutional web of local change actors. The arrangement sees the responsibility for regulation also diluted to include private impact investors and social finance intermediaries.

**Intelligent Design?**

If the SIB is at least partly a derivative, then it is a derivative of a particular sort. Specifically, its underlying variable is not some pre-existing asset value or measure of performance, as in the case of derivatives based on commodity or currency prices. Rather this underlying variable has been explicitly and deliberately designed for an instrumental purpose, as in the case of financial instruments derived from weather “events”. Darkly entertaining similar beasts are the contracts that were to be traded on the very short-lived Policy Analysis Market that existed for a matter of hours in July 2003.7

The Policy Analysis Market is an example of a particular market technology known as “information markets”, “ideas futures” or “prediction markets”, with the three terms typically used interchangeably. According to Berg, Nelson & Rietz (2003, p. 3):

“Prediction markets” are designed and conducted for the primary purpose of

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7 See Robin Hanson’s ‘Policy Analysis Market (and FutureMAP) Archive’ for considerably more detail on this curious beast (http://mason.gmu.edu/~rhanson/policyanalysismarket.html, last consulted 18th October 2018).
aggregating information so that market prices forecast future events. These markets differ from typical, naturally occurring markets in their primary role as a forecasting tool instead of a resource allocation mechanism.

PAM’s predictions were to emerge from enabling speculation on an avowedly instrumentally designed market on such then possible future occurrences as the overthrow of the King of Jordan, a North Korean missile attack, the persistence of the Iraqi regime and US recognition of Palestine, each by a pre-specified date. One would also have been able to bet on combinations of events such as these, and it was in these combinatorial bets that PAM’s greatest predictive power resided, at least according to its zealots. Take the examples of the possibility of the overthrow Abdullah II, an event in which a specialist in Jordanian domestic affairs might feel comfortable taking a position, and a contract linked to the ability of Sadaam’s regime to survive more than one month of hostilities, which a specialist in US military planning and operational capabilities might be comfortable trading.

Others, however, were less convinced. Mason Richey (2005) follows the logic of PAM to its self-defeating terminal conclusion. As he notes, traders purchase a contract on PAM if they think its underlying event is more likely than its current price would suggest. *En masse*, such trading raises the price of that contract. But PAM is an information and prediction market. Its *raison d'être* is to provide a signal to those who are interested in the occurrence, or rather the prevention, of the events that underlie traded contracts. Thus a rise in prices is likely to instigate a response from those for whom the market was created as signaling mechanism. In turn this thus reduces the likelihood of the occurrence of the event. I bet, you see I bet, you act, I lose. Or as Richey puts it: “The idea that government authorities employ the market to foresee events that they will prevent would, a priori, mute the signal” (2005, p. 10). But this is not the most fundamental of the flaws. It merely reflects one of a deeper level. For in the act of specification of the possible future, the job that the signaling market of derivatives is intended to achieve is already done. In the case of PAM, again in Richey’s (2005, p. 10) words:
The derivatives of maximal predictive interest, the impetus for the system’s design, terrorism derivatives, must be explicitly articulated in order to be offered. But if the market designers can list a specific terrorist event, then they have already defined, determined, and predicted the very event that the market is designed to identify. If the market designers know which terrorist derivatives to offer, then they have already done the work of the market.

For Richey then: “The system does both too little and too much” (2005, p. 10). Might something similar hold with the SIB? Let’s try to make the comparison a little more specific. As several scholars make clear (Harvie & Ogman, forthcoming; McHugh et al., 2013; Mitropolous & Bryan, 2015), the SIB model is being rolled out in a context in which prevalent ideology holds that existing governmental provision is inevitably flawed. Or as Ronald Reagan pithily put the pitch: “The nine most terrifying words in the English language are, “I’m from the government and I’m here to help”” (The President’s News Conference, 12 August 1986). So part of the superficial appeal of SIBs is the way in which they appear to take the work of welfare out of the hands of bureaucrats, instead allowing the market to decide what’s best, mirroring much of the broader “social turn” in finance (see, for instance, Bryan & Rafferty, 2014). But to what extent does the market do the deciding here? Just as in the realm of policy analysis, the “market” is mere sideshow, Richey’s “too little”. The “market” in PAM’s case merely trades those contracts that have already been set up and designed by the market’s implementers. With SIBs and the “social investment market”, the “market” is, at least thus far, notable only by its absence: the design work rests solely with the interactions between the commissioning agent, service providers and, in some cases, investors – and, of course, “intermediaries” such as Social Finance, which frequently double-up as evangelists. In such a set-up, all we see is a contracting arrangement with some bells and whistles attached, none of which appear tradeable in any market that we can at present discern. Indeed, it is perhaps of little surprise in this context that the third cohort of prisoners to benefit from the HMP Peterborough bond’s provision ended up receiving their assistance via a contracted scheme when the SIB was brought prematurely.
to a close!

What then of the “too much”? In relation to PAM, this was the inappropriate way, in relation to pretty much all gambling codes and legal frameworks the world over, that the counter-party to your bet could act on the information contained in your bet to reduce the likelihood of the occurrence that you had placed your wager upon. In relation to SIBs, it is the construction of the metrics that determine investors’ payouts that does too much.

Unintended consequences in the form of distorted activity... can result from perverse incentives which lead... entities away from activities that are most needed towards activities that are most measurable. (McHugh et al., 2013, p. 7)

This distortion is an instance of a variant or derivation of Goodhart’s law, named after the British economist, Charles Goodhart. Goodhart’s (1975) original formulation – “Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes” – was intended as a critique of emerging Thatcherite monetarist policy. Its purchase is considerably broadened by its more usual contemporary rendering as “any measure that becomes a target ceases to be a useful measure”. Some commentators, including Marilyn Strathern (1999) and Keith Hoskin (1996), go still further, suggesting not only that measures that become targets cease to be useful measures but also that any measure introduced into an environment seems destined to become a target and thus useless as a measure, regardless of the intent behind its original introduction into that environment. Such drift is exactly what we witnessed above in our account of the development of a market in microfinance from support for poorer members of society towards those more able to demonstrate their capacity to deliver a return on the projects for which the investment is sought. Indeed evidence from SIBs aimed to reduce recidivism in the UK appear to bear this out (Cooper et al., 2016; Golka, 2016). Cooper et al.’s (2016) case noted tensions between investor representatives and service-providers wherein those on the frontline of delivery were deliberately kept ignorant of some outcome metrics – a clear case of intentional dulling, on the part of the service provider, of the
The danger of Goodhart’s law playing out around SIBs seems particularly obvious in the case of a series of ten such schemes commissioned by the Department of Work and Pensions’ Innovation Fund and launched in 2011. Designed to target 17,000 “disadvantaged young people and those at risk of disadvantage”, a total of 25 “proxy outcomes” has been defined, each with an associated payout. To give some examples, in round 1 of the project, for children in years 10 and 11 (14–16 year olds), “improved behaviour at school” or the halting of “persistent truancy” yield maximum payments of £800 and £1,300, respectively. In round 2, loosely equivalent “proxy outcomes” for 14 and 15 year olds include “improved attitude to school” (£700), “improved attendance at school” (£1,400) and “improved behaviour at school” (£1,300). For slightly older youths, “completion of first NQF Level 3 training/vocational qualifications” yields a payment of £3,300 in round 1 or £5,100 in round 2; “entry into first employment including a training element (e.g. an apprenticeship or work-based learning)” yields £2,600 (round 1) or £5,500 (round 2). Maximum payments per participant (i.e. per young person assisted) are capped at £8,200 (round 1) and £11,700 (round 2). Moreover the SIBs are designed such that bidders pick and mix from this list of proxy outcomes (for more details see Cabinet Office, 2017, particularly the “Knowledge Box”; and Sallis, Wishart & McKay, 2018).

The possibilities for service providers and investors to game this system – to the detriment of these disadvantaged youths, their teachers and society in general – seem almost endless. Indeed, there is tentative evidence in SIB analyses to suggest that service providers already exhibit gaming tendencies by offering services to individuals that appear to be the easiest to help (Cooper et al., 2016). In so doing, this focus on outcomes means the most vulnerable are ignored and neglected as policy goals made compatible to the financial interests of private investors become subservient to the interests of those investors.

A provider-investor dyad might, for example, increase its chances of hitting an “improved behaviour [or attitude] at school” target by tolerating or even subtly encouraging disruptive students to truant.
Alternatively, it might “pick” an “improved attendance” target, in which case offering small incentives to persistent truants to attend school – whilst remaining utterly indifferent to their behaviour in the classroom – could prove profitable. Going further the logic can become more perverse: “problem students” registering their attendance twice a day, then leaving before actual lessons begin, might be a solution suiting both school and service provider-investor – again with society, specifically local communities, footing the bill. Indeed, as Tse and Warner (2017, see particularly p. 28) highlight, the introduction of financial incentives to outside investors in city-level social interventions, mediated via measures of the performance of those interventions, can easily create a situation in which overly narrow metrics lead to overpayment of those outside investors.

One recent US example, the Utah School Readiness Initiative, offers insight into gaming selectivity based on expected outcomes. Here $7 million was provided to develop a preschool curriculum for underprivileged children and was designed to avoid funding costly special education initiatives. Investors would receive their investments plus a 5% return if at least 50% of the sample of children predicted to need special education did not require it. The first assessments of the bond revealed that 109 of the 110 students identified as at-risk did not subsequently require special education, suggesting that the extrinsic motivations of investors were more important on how the bond was implemented than providing local cost savings (Gustafsson-Wright & Gardiner, 2016, p. 27).

In such circumstances interventions sold to cities’ authorities as enhancing provision through enhanced funding of provision instead deliver a drain on the city purse and, in the round, a reduction in the level of city-service delivery. For SIBs can easily fuel divergence between success in investment terms, via narrowed metrics of performance, and what otherwise appear to be ineffective social transformation. Here the investment vehicle’s indifference to real circumstances is revealed, just as it is in relation to any derivative product.

**Conclusion: The Wrong Sort of Indifference?**

This paper has explored the functioning of SIBs from a theoretical perspective. We have argued that
the public policy version of SIBs as a “new” or hybrid asset class is misleading; conversely, our contention is that SIBs exhibit a number of characteristics that are common to financial derivatives. This insight, which lies at the core of our paper, opens up a fresh perspective on the social impact bond, allowing us to situate it in relation to several other instances of financial innovation over the past two or more decades – such as new markets for Collateralized Debt Obligations where the underlying assets are microfinance loans, and the deliberately-designed, though short-lived, Policy Analysis Market – and thus speculate on the possible future development of the social investment market. More generally, the insight allows us to see a specific derivative logic at play in SIBs.

In Randy Martin’s (2007; 2015) magnificent accounts of the revolution being wrought in finance and elsewhere by the emergence of the derivative, and the “derivative logic” it sustains, three key elements are seen as particularly salient: risk, its leveraging, and the processes of disassembly and reassembly of attributes of prior wholes through which that leveraging is achieved. Despite the apparent assumption of relatedness at the heart of the derivative’s derivation – recall it is “a value deriving from an underlying variable” – the derivative itself is ironically ultimately utterly indifferent to the underlying state of the world (Bryan & Rafferty, 2006; Martin, 2007; Wigan, 2009). Indeed, this is one of its key virtues, since its capture of (a version of) the future in the present – or, more precisely, its capture and pricing of the contestability of future value – means that said future can effectively be deleted from thought; for it is already present and priced in the here and now.

Of course, this does not mean that the derivative’s value is immune to change. The value of the derivative does change on the basis of change in the value of an underlying variable. It is not indifferent to this change. Rather it is indifferent to what it was in the world that brought about the change. In its distillation of the world into a series of risk profiles, it gives up not only on particularity to focus upon generalizability, but also shifts focus to a different order of being. Just as the mathematical derivative allows us to retreat from position in time and space to focus upon first

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8 Causality is not one-way: the value of the ‘underlying’ may change in response to change in the value of its ‘derivative’ variable.
velocity, and then the relative change in velocity that is acceleration, and so on, in an endlessly reiterable process of ever-increasing abstraction, so too does the financial derivative take us away from an interest in the actual state of the world to a focus upon relative volatility.

However, this interest in relative volatility cannot be sustained by the social impact bond, for it is a derivative of a curious nature, specifically one that, due to the particularity of its construction, cannot be easily traded. In this sense it bears all of the disadvantages of the derivative in terms of orientation to sensible action, but none of the benefits. The purchaser of an SIB takes a one-off punt on the outcome of a specific intervention, but can do nothing with her punt if her views change on the odds of the outcome. This is perhaps why many commentators (see for example Nichols & Tomkinson, 2013; Rowell, 2016) have called for the construction of a secondary market in such bonds, in ways that mirror Salomon Brothers’ liberation of value from “sticky” individual mortgages in the early eighties – a story recounted in Michael Lewis’s Liar’s Poker (1989) – and Morgan Stanley’s development of the ramified microfinance market that we considered above.

Perhaps in conceptualizing the SIB as a derivative it may also be possible to signal a further cautionary note on the transfer of risk to the local level. As the lines between public and private investment become increasingly blurred through promulgation of SIBs (Cooper et al., 2016; McHugh et al., 2013; Warner, 2013), one would also expect efficient risk re-allocation from private to public to compensate for investment in SIBs as new unsecured asset classes with unknown levels of attached risk. Though the underpinning idea of SIBs is to transfer risk from public service providers to private investors (McHugh et al., 2013), the subsequent black-boxing of SIBs matters as this occludes how precisely the transfer of risk might be happening. Certainly, there is no published evidence on the efficacy of SIBs, and how effective they have been in generating private and public returns relative to the risk attached. And given the problems of commensurability that we considered it is far from certain that such evidence can ever be marshalled in a convincing way.

By viewing SIBs as derivatives, however, the risk transfer becomes slightly clearer and subject to the
traditional investment logic of finance in which higher returns are offered as compensation for increased risk. Neyland (2017) provides a detailed account of how this logic is embedded in the pricing and marketing of the Essex Children-At-Risk bond. Here randomized controlled trial data were used as a benchmark to determine the level of outcome payments before the bond was officially launched. This explicitly positions the relative risk of the project so that investors can assess if the risk-return trade-off on offer is a worthwhile one to take on. However, evidence suggests that just as published profit expectations become obligatory to achieve if the firm is not to be punished by analysts and investors (Macintosh, Shearer, Thornton & Welker, 2000), so too can a desired risk-adjusted return reach back to tailor interventions and the rewards available for demonstration of their success. A case of cart and horse changing places as consideration of the attractiveness of price to an investor overwhelms consideration of the appropriate price of delivery to the wider community of socially desirable outcome.

A number of policy warnings stem from our theoretical analysis. Firstly, viewing SIBs as derivatives alerts us to the risk that they will likely stimulate a slicing of the urban environment consistent with the desire to find cashable savings rather than promoting local governance. In turn, this can lead to confused accountability as previously coherent provision is parsed and re-ordered and additional stakeholders with potential divergent interests are added to the mix. In such circumstances it is likely that policy will become more fragmented, disparate and confused. The Essex bond probed by Neyland (2017) certainly appears to demonstrate the implementation of local policy – mediated by SIB targets – that offers a specific contracted solution (therapeutic intervention) that does not reflect any central policy concern. It also potentially occludes other systemic causes of children-at-risk falling out of mainstream education and directs attention away from their amelioration towards interventions for which a paying investor has been secured.

This leads to an entirely new set of “perverse” incentives that threaten the delivery of public services and social care initiatives. Thus any such attempt to develop SIBs in future may have to address delimiting the potential for conflict and perverse engagement with performance management
schema solely for the achievement of financial outcomes. Equally, approaching the development of policy through local performance management and contracts suggests that SIB service provision cannot be scaled-up to a national level to reach larger populations. Even with the noted philanthropic and tax incentive to entice investors, SIBs remain a firmly local initiative.

We have warned of various risks, dangers and several sets of perverse incentives associated with SIBs and the social investment market. One obvious policy implication that follows is that the architects of the social investment market – politicians, civil servants, thinktanks and “boosters” such as Social Finance – should be attentive to these issues in their design of new SIBs and their ongoing shaping of the market more generally. There is a second – equally obvious – policy implication, likely less attractive to at least some of the actors above, but which we favour. To be blunt, like Horesh (2015), though for different reasons, we do not like social impact bonds. We do not think they can facilitate the maintenance and development of public services that meet society’s needs, particularly the needs of its vulnerable members. In Finance and the Good Society Nobel-laureate Robert Shiller (2012) argues that “we need more financial innovation not less”. We disagree. We have had quite enough financial innovation. Nor do we agree with Shiller’s contention that we can “reclaim finance for the common good”. A quarter-century after first making its appearance, the Private Finance Initiative, a previous example of “financial innovation” – once-popular amongst policy-makers but derided by critics – has at last fallen from favour (see, e.g., Giles, 2017). We don’t want to wait a similar period to witness the popular discrediting of SIBs: our policy recommendation is that the experiment ends now.

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