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Enabling Social Innovation through Developmental Social Finance

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ABSTRACT *This paper explores social finance as a strategy for generating social innovations and, at the same time, financial returns. It explores why risk assessment for social finance is so challenging and suggests three sources of difficulty: setting boundaries, integrating heterogeneous values, and responding with sufficient speed and flexibility to support innovation. It suggests links between the seemingly distinct challenges of social finance being able to maximize its impact at different stages of the innovation process in a complex socio-ecological system, whilst also acting as a reframing agent in terms of the understanding of the system itself at other stages. Finally, this paper develops a new concept 'developmental impact investing' as a modified version of a portfolio strategy that uses a range of projects both to manage risk and to generate new knowledge about the complex systems in which the social finance attempts to create impact and innovation.*

KEY WORDS: Impact investing, impact measurement, portfolio theory, social innovation

Introduction

Social finance is a growing field of practice that often aims to provide resources to support the scaling of social innovation (e.g. Pradhan *et al.* 1998). At the same time, such finance may also increase the resilience of complex socio-ecological systems. In mainstream finance, portfolio theory provides the underpinning for most risk management in investment strategies. However, portfolio theory is usually applied in situations where risk and return metrics are easily measurable and comparable. However, such consistent metrics are largely absent within the emergent field of social

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finance and this undermines any attempts to develop social risk portfolios (Wood *et al.* 2012). Moreover, this lack of consistent performance data reduces the opportunities for resource providers to learn from the on-the-ground experiences of the social entrepreneurs that they are supporting and this, in turn, reduces the effectiveness of subsequent capital allocation strategies (this is, of course, also true of all emerging markets: Glaser and Weber 2007).

To help fill this gap in theory and practice, this paper examines the limits and opportunities of social finance in terms of supporting social innovation. A review of the current literature on social finance will demonstrate the challenges involved in attempting to capitalize social innovation to resolve complex problems. In particular, the discussion will focus on the need to internalize externalities, and to adopt a modified portfolio approach that enables learning. The adaptive cycle (Gunderson and Holling 2002) – drawn from resilience theory – will be presented as a conceptual framework for understanding the phases and dynamics of social-ecological innovation. By highlighting the complexity and multi-phased nature of the social innovation process, the adaptive cycle is used to build a rationale for an alternative evaluation model for social finance, referred to here as 'developmental impact investing'. A brief case study of the Vancity credit union is used to demonstrate how a strategy of developmental impact investing has worked in practice. Ultimately, the argument is made for the synergistic value of holding a portfolio of social finance as an integrated risk-management strategy, along with a parallel learning strategy based on developmental evaluation (Patton 2011).

According to the Canadian Task Force on Social Finance (2010, p. 34), impact investing is a subset of the wider social finance market characterized as, at least, returning capital to the investor, it is: '[actively] placing capital in businesses and funds that generate social and/or environmental good and (at least) a nominal principal to the investor. Impact investors seek to harness market mechanisms to create social or environmental impact.' By incorporating a range of capital allocation opportunities between not-for-profit and profit-only investment, this concept expands the diversity of opportunities to stimulate social innovation and effect transformative change (Nicholls 2010a). The recipients of impact investments can range from charities to purely commercial enterprises, given that the primary requirement is only that they provide a blended return of both social impact and financial performance (Emerson 2003). Investors include the JP Morgan Urban Renaissance Property Fund, which targets market rate returns while developing environmentally friendly affordable housing, and Root Capital, which provides loans to co-operatives that are too large for micro-finance and too risky for traditional corporate finance, while accepting below-market rates of return (Parthenon Group and Bridges Ventures 2010). For not-for-profits, moving from the purely charitable to a blended return model can encourage projects that are more self-sufficient and capable of growing without undue reliance on donations and grants. However, such revenue-generating operations do present new management challenges for not-for-profits (Weisbrod 1998,

Bugg-Levine and Emerson 2011). For business or mainstream finance, moving from the purely profit-oriented to a blended return approach means incorporating a greater range of objectives and metrics into investment decision-making.

The Evolving Role of Social Finance

New businesses or companies seeking to expand their operations with debt often turn to banks as a source of financing, and most banks now include a role for corporate social responsibility in their overall strategy (Schuster 2001). This includes the diverse field of socially responsible investing (SRI) (Sandberg *et al*. 2009). SRI requires integrating positive and negative environmental, social and governance criteria into investment screening processes (Jayne and Skerratt 2003), engaging in shareholder advocacy (Monks *et al*. 2004), and engaging with companies and donors. Beyond SRI lies impact investing. Socially responsible investing seeks to minimize negative impact, while impact investments are 'intended to create positive impact beyond financial return' (O'Donohoe *et al*. 2010, p. 5). The goal for impact investors is to channel financial capital towards activities that are designed to produce socially and environmentally sustainable impacts (Buttle 2007, Weber 2006), but that can also offer some minimum financial returns. Maximizing positive social or environmental impact rather than minimizing negative social or environmental impact presents a different set of decision-making challenges for investors. Impact maximization concentrates on achieving the greatest amount of combined financial and socio-ecological gain. In some measurement systems, such as the Social Return on Investment (SROI: see further below) model, monetary proxies are assigned to non-market goods (Nicholls *et al*. 2012), although there are limits to how effectively these non-market benefits can be valued in monetary terms (Maree and Mertens 2012). Implicitly, such an approach requires advancing two or more objectives simultaneously. Indeed, in Porter and Kramer's (2011) articulation of creating 'shared value' to connect societal and economic progress, these concurrent objectives can be a source of competitive advantage in the marketplace.

In contrast, conventional financial risk management implies a strategy of seeking primarily financial returns while operating within a set of structural and systems-level uncertainties and constraints. This may not necessarily be as sharp a contrast as it first appears; Power (2007) argued that the 'logic of opportunity' pervasive in a neoliberal rhetoric of entrepreneurial value creation is also pervasive in new ideas of risk management, although it may be limited by management demands for auditability. Furthermore, given the extent of attention devoted to managing reputational risk, and to framing issues of socio-ecological impacts internally, risk mitigation can develop into an all-pervasive organizational logic permeating decision-making (Power *et al*. 2009).

Whilst there has yet to be a consensus on the best approach, there has already been a good deal of work done on developing social impact metrics

for social finance, particularly within the impact investment sector. The Monitor Institute found that the impact investing community is in a phase of moving from uncoordinated innovation to building a marketplace, and, thus, centres of activity are starting to develop, although a lack of efficient intermediaries, infrastructure and absorptive capacity present significant barriers (Freireich and Fulton 2009). J.P. Morgan *et al.* (O'Donohoe *et al.* 2010) conducted substantial applied research on impact investors and argued that impact investment is an emerging 'asset class' characterized by a high variance in its expected returns, ranging from competitive with standard market rates to concessionary below market return rates. However, although the financial risks of impact investing are similar to those in high-yield investment spaces such as venture capital, they also include high reputational risks (O'Donohoe *et al.* 2010). Further work by J.P. Morgan and the Global Impact Investment Network has found that the perception of those in the impact investment industry is that the sector is still in its infancy and growing; the lack of a track record of successful investments is highlighted as a key barrier to growth in the industry (Saltuk *et al.* 2011). The UK's Big Society Finance Fund examined the state of the social finance industry and identified the need to develop intermediaries as a key piece of infrastructure for the sector (Joy *et al.* 2011).

Nevertheless, capturing and valuing non-financial performance continues to present a challenge. Grabenwarter and Liechtenstein (2012) argued for the inclusion of 'gamma' as a score of the socio-ecological impact, in contrast to the standard 'beta' value indicating the volatility of an investment's performance, and an 'alpha' value that captures the real underlying performance of an investment. Elsewhere, SROI is a methodology for calculating the value of social impact that has come to be used extensively in the UK, and is increasingly used elsewhere. SROI is based on seven principles of stakeholder involvement: a clear theory of change; valuation of what matters; materiality; methodological conservatism (i.e. do not over-claim); transparency; and verification. The process itself seeks to attach proxy valuations to non-financial metrics (Nicholls *et al.* 2012). However, the opportunities to apply SROI to maximize the socio-ecological impact of an investment portfolio remain under-explored, since comparing the SROIs of different projects is made difficult by the use of different sets of metrics and proxy valuations. For social finance intermediaries seeking to support social innovation, there is an increasing need to frame social risk and uncertainty in ways that make capital allocation defensible to a variety of stakeholders. Yet, the landscape of metrics to support such calculations remains inchoate, at best.

Internalizing Externalities

Most economic activities produce benefits, or costs, that affect a group of people other than those directly involved in the activity. These are called *positive externalities* when they produce a benefit to these individuals, such as the pleasure a pedestrian feels from seeing a stranger's well-tended garden, and *negative externalities* when they produce pain in others, like smelling the

noxious smoke from a factory. One way of viewing social finance is as the *internalization* into the investment decision of what would otherwise be social or environmental externalities. This requires measuring them, which is often a challenge. For example, placing a monetary valuation on non-market outcomes such as improved air quality is difficult or impossible (Maree and Mertens 2012). Even so, these measurements are valuable to a social entrepreneur's stakeholders as control, planning and accountability tools (Nicholls 2010b).

Ebrahim and Rangan (2010) argued that a useful way of uncovering the limitations on measuring social impact comes from looking at the complexity of an organization's theory of change and its operational strategy. The authors suggested that the simpler an organization's theory of change and operational strategy, the easier it is to use specific and well-defined metrics. Mulgan (2010), in turn, maintained that even when there is effective measurement, the findings are rarely used to guide decisions because of the inherent complexity of attempting to capture social value measurements.

If well-defined impact measurement is possible, the question becomes whether or not a difficult trade off between social and financial returns is inevitable (Schaltegger and Wagner 2010). After the global financial crisis and the relative resilience of investment funds driven by strong socially responsible investing standards (Weber *et al.* 2011), the advantages of taking a broader range of risks into account when investing are, perhaps, becoming clearer. In this sense, social finance may turn out to be less risky than traditional finance. Taking externalities into consideration in portfolio planning can reduce the exposure to unexpected shocks and offer risk and variance profiles uncorrelated with mainstream markets (as was the case with securitized micro-finance debt products, for example). Indeed, there is evidence that sustainability criteria have power in predicting the financial performance of debtors (Weber *et al.* 2010). The result is reduced downside exposure to negative externalities, and also the possibility of identifying new market opportunities as impact investors and other market actors incorporate socio-ecological externalities into their activities (Porter and Kramer 2011).

However, it is not always clear where the focal point should be for assessing returns in social finance: investor objectives, investee objectives, or a blend of the two (Nicholls 2010a). Given this confusion, the most that can be expected from social financiers is what Simon (1982) called 'bounded rationality': that is, the attempt to make the greatest possible positive impact in light of the information available. Often, social financiers will be operating in domains that are stable and where they have strong knowledge of what key non-financial impacts need to be measured. Yet when a domain is rapidly changing due to a social innovation process, or there is little agreement on what a 'good' outcome looks like, identifying relevant externalities and impacts is difficult. For example, in environmental domains, the science and technology is continually evolving, rendering previous research findings less relevant. In social domains, changing demographics and social values, key contextual variables and institutional structures make it difficult to determine

which social changes will be likely to have the most impact and for whom. In both cases, and in particular where the two overlap, 'success' and impact are moving targets. Because of this, many of these complexities can only be surfaced and accounted for after the impact of an initial social investment has been felt.

Building a Portfolio and Learning Together

Effective and continuous learning processes and systems can lead to the optimization of organizational outputs and outcomes. Yet, the process of comparing the risks and returns of different investments that provide different social and environmental returns can be daunting. Nevertheless, investors in social finance need to know how exposed their capital will be to loss before they can be comfortable with higher risk investments.

When there is a great deal of uncertainty, it is reasonable for an investor to be concerned about exposure to loss. Even if this assumption is not accurate, the costs of being wrong in assuming a project is riskier than it actually is are far less than assuming the opposite, a fact that leads reasonable investors to make fewer investments. This highlights the importance of providing measures of impact, yet three key challenges make measuring non-financial impact difficult:

1. Defining the boundaries of what does and does not get measured;
2. Integrating the heterogeneous values of different investors;
3. Managing 1 and 2 without it being so burdensome – or costly – as to discourage innovation.

Boundary setting involves the challenge of establishing a firm line around the benefits, costs and risks that will be included in an assessment of potential impact, and those that will be excluded. The broader the definition, the greater complexity there will be in designing effective measurement systems. However, there is a trade-off: measuring impact is costly and can steal valuable time from the social innovation effort itself. Of significance here are notions of materiality and the identification and ranking of key stakeholder perspectives and impacts.

The inevitable diversity of values held by different investors presents the challenge of reconciling objectives that are sometimes contradictory. While financial returns are, broadly, the same for everyone, social returns are not. What may be important to one investor, such as reducing homelessness or reducing carbon emissions, may not be the social priority of another investor. Moreover, social innovation processes may lead to unanticipated consequences, or problematic 'second-order' effects. For instance, a project that successfully reduces homelessness may achieve this by building housing that dramatically increases carbon emissions. In mainstream investment, financial intermediaries such as banks transform a variety of investments into a set of financial products attractive to investors with heterogeneous risk tolerances, at the same time reducing cost through economies of scale and scope. In the

arena of social finance, intermediaries may also play these roles, although strongly held and heterogeneous values on the part of investors may ultimately limit the extent to which investments can be pooled and transaction costs reduced. Even the intermediaries who have been successful in brokering social finance funds to date find themselves having to combine a wider variety of capital sources and portfolio structures than similarly-sized mainstream financial investments (O'Donohoe *et al.* 2010), which, in turn, means higher transaction costs than in traditional finance.

Finally, encouraging social innovation involves managing the costs of the two issues described above. If boundaries are set widely, a wide variety of social and environmental impacts can be included. And if stakeholders and social investors are engaged in a deep and thoughtful bargaining process, differing values can be explored and reconciled. Yet both of these are costly processes, and some combination of investors and social entrepreneurs must cover that cost. Although transaction costs are falling as the social finance market grows, many potential social investees are small companies where the size of most financial transactions is under $1 million, making due diligence and other transaction costs large relative to the size of the capital allocated (O'Donohoe *et al.* 2010). These high transaction costs reduce investible capital by making it expensive, and may also impose burdens that screen out projects that are particularly experimental or innovative.

Having comparable financial metrics is the cornerstone of mainstream investment strategy. By holding a variety of investments simultaneously, and looking at their overall return rather than at the return of individual investments, sophisticated investors can better manage their exposure to risk (Markowitz 1952). The goal of portfolio management is no different in principle in social finance (Ottinger 2007), and studies show that the integration of social impact criteria into the portfolio management may not influence financial performance negatively (Milevsky *et al.* 2006, Koellner *et al.* 2007, Weber *et al.* 2011).

Yet, once it is accepted that social and environmental challenges are often complex, it must also be recognized that they can only be partially understood, captured and calculated. Observers of a complex socio-ecological system, whether they are researchers, social entrepreneurs or impact investors, inevitably become elements of the complex system they are observing and in which they reside (Maturana and Varela 1987). Moreover, systems change over time and at different speeds – depending on scale issues – with larger socio-ecological systems often changing at a slower pace than those operating at smaller scales (North 1990, Ulanowicz 1997). Taken together, this means that the provisional understanding that observer-participants in a system have of it may well degrade over time, unless knowledge and perception is updated in response to changes in the system itself. This concept has strong affinities with similar theory in sociology, most notable Giddens' (1990) work on structuration.

When the social and environmental impacts of an investment are measured, much can be learned about the system in which it operates, and the degree to which the investment has succeeded or failed. The learning is even greater

when a portfolio contains projects of different sizes using different approaches (Arthur 1994). The portfolio can then be used not just to make an impact, but also to better understand a complex social or environmental system upon which it aims to have effects. This is quite unlike examples of the direct measurement of outcomes in cases where, for example, a service is being optimized and social investors know in advance what outcomes are sought. Such historical measurements provide little insight into what new services might be needed in the future or how systems change may alter the best leverage points for future interventions.

The Adaptive Cycle

As has already been noted, a key challenge facing social finance is the complexity that social and environmental contexts creates in terms of specifying non-financial impacts and their attendant risk and return metrics. Any social innovation process that emerges within a complex environment will co-evolve with its sources of resources. This fact suggests that best practice in social finance should involve internalizing externalities and iterative learning processes based upon a portfolio approach. However, it is also the case that current research has yet to provide a consensus in terms of the analytical tools to support such approaches. This section will explore the adaptive cycle as one such tool and it suggests that this model may build a better understanding of the dynamic nature of social finance effects in contexts. It is also proposed here that using this theoretical lens leads to an enhanced understanding of social finance categorized here as 'developmental impact investing'.

The adaptive cycle (Gunderson and Holling 2002) is a four-phase model that characterizes the dynamic properties of a complex system. The first two phases, *exploitation* and *conservation*, are the 'front loop' of the adaptive cycle. In the *exploitation* phase, the system may start out with few connections among its elements and, thus, low productivity, but as some of these elements acquire resources, interconnectedness and productivity increase. This brings the system to the *conservation* phase, in which the system is both highly productive and strongly interconnected. However, this can lead to system rigidity and the risk of collapse, leading to the 'back loop' phases of *release* and *reorganization*. During the *release* phase, connections between system elements dissolve and productivity falls. This is followed by the *reorganization* phase, characterized by 'sense-making' in which system elements identify the new characteristics of a post-release system and start to act on this new understanding, leading back to the exploitation phase of the cycle.

Using the adaptive cycle to frame social finance decision-making processes makes the learning challenge clear: many investments are in projects that fall into the easily understood phases of *exploitation* and *conservation*, for example, a wind farm or a solar farm. However, projects that are directed at entrenched societal problems such as poverty or mental illness often fall into the more potentially turbulent *release* and *reorganization* phases and metrics for these activities present new territory for social finance. Experienced social

entrepreneurs have learned to respond by defining any theory of change or observations in these phases as necessarily provisional, all the more so because they are part of the transformation process themselves (Maturana and Varela 1987). However, such a co-emergent concept is not familiar to conventional investment thinking. The consequence of this is that, much like public policy actors operating in complex spaces (Moore *et al*. 2012), there are choices to be made within social finance depending on the context for collaborating with social entrepreneurs; it is suggested here that such collaborations will deepen as both parties experience projects in all stages of the adaptive cycle.

While most projects seeking investment capital in order to scale up their activities are proposing strategies for managing the fairly stable 'front-loop' of the adaptive cycle, scaling up social innovations requires an understanding of the 'back-loop' strategies of sense-making and reorganization around new ideas and approaches (Moore *et al*. 2012). For social finance, this means consciously using measurements of non-financial impact to learn about the complex socio-ecological systems in which capital is deployed (Nicholls 2009). To accomplish this level of adaptability while still minimizing risks requires investors to adopt a *developmental* approach to evaluation and measurement. A developmental approach ensures that feedback from the social innovation process and from the complex socio-ecological systems that these processes are seeking to change, is timely. It is also important that learning about real-time impacts is supported within a social finance community, and the capacity to use the knowledge generated about a complex socio-ecological system more effectively in the future is also developed (Patton 2011).

This paper argues that the difficulty associated with social impact investing evaluation can be managed by combining two models: the portfolio theory approach and a developmental evaluation approach. Taken together, this can be termed developmental impact investing, an approach that seeks to take advantage of the natural complementarity between portfolio theory and inductive learning. Portfolio theory asserts that investors can strategically manage a variety of investments as a risk-management strategy, allowing them to select a risk-reward strategy that best meets their preferences (Markowitz 1952). Arthur (1994) suggested that understanding how a complex system works requires trial-and-error experimentation. Developmental impact investing, then, involves holding a portfolio of impact investments as not just a risk management strategy, but also as a series of learning experiments. Each investment-experiment not only makes an impact, but also informs capital allocation decisions in terms of how complex social-environmental systems work, and how social innovation occurs. In turn, this increases the likelihood of successful impacts and outcomes in the next round of investment. By exploiting the natural synergy between the experimental approach of a portfolio strategy and its use in financial risk mitigation, developmental impact investing can both reduce the cost and increase the efficacy of social finance projects.

The overall logic of developmental impact investing can be understood as a cycle that has three components. First, an understanding of the particular

complex socio-ecological system is used to guide portfolio selection. Second, the portfolio of social finance projects injects capital into a set of activities that then generate changes in the complex socio-ecological system. Finally the impact is measured, allowing a better understanding of how the complex socio-ecological system operates. This then allows capital allocators to reformulate their understanding of the system itself and make more informed decisions about their own theories of change and those proposed by their prospective investees.

Vancity Credit Union

As was noted above, there has not yet been any universal adoption of standardized metrics in the social finance community. Indeed, only 31% of impact investors use third party systems at all (Saltuk *et al*. 2011). However, of these, 65% use metrics aligned with the Impact Reporting and Investment Standards (IRIS) (Saltuk *et al*. 2011). Most notably, the Global Impact Investing Rating System (GIIRS) that a growing number of social fund managers are currently using has attracted over $1.2 billion in social investments and is built on IRIS standards. Similar to a for-profit investment-rating agency, GIIRS evaluates different projects to provide potential investors with an assessment of the likely outcome of an investment in those projects. But unlike a for-profit rating agency, their company and fund impact ratings have built-in relative valuations of different environmental and social impacts. As a result, GIIRS allows the comparison of like-with-like social investments, which should – over time – make maximizing impact in a coherent way possible and lower the cost of pooling capital from multiple sources of social finance.

A coherent approach to relative valuation, like that used by GIIRS, means that social financiers can pool their capital more easily, encouraging further growth and flexibility in the sector (Ottinger 2007). GIIRS can provide benchmarks for the development of particular impact investment niches, but the wide variety of socio-ecological systems in which impact investors may operate will ultimately serve as an upper-bound limit on the number of intermediaries that will be able to use the GIIRS. Indeed, the constant change inherent in complex systems will force a difficult balancing act for all impact ratings systems. On the one hand, there is value in maintaining a core set of metrics to allow comparability of performance over time. On the other, as impact investors and social entrepreneurs learn more about the socio-ecological systems in which they operate, they will push for metrics that more closely meet their operational needs.

GIIRS allows for the comparison of performance between multiple projects, but it remains relatively inflexible in operationalizing metrics.[1] As an alternative, SROI sets standards on how to engage in stakeholder relationships in order to develop operationally meaningful metrics and to find proxies for monetary values that can be applied to these metrics (Nicholls *et al*. 2012). In this sense, SROI is a powerful tool for the 'bottom-up' generation of meaningful impact performance measures. Although project

comparisons may not be of interest to all impact investors, without the possibility of making meaningful comparisons, the development of an investment portfolio becomes impossible.

One organization that uses many of the developmental impact investing tools discussed here is Vancity Credit Union in Vancouver, Canada. Vancity has an active portfolio of impact investments in a variety of domains, primarily in Vancouver and the surrounding area. It even goes as far as labelling some of its initial investments in new complex socio-ecological domains as 'proof-of-concepts' in order to make the learning objectives explicit. As Derek Gent, Executive Director of Vancity Community Foundation, noted:

> If we're going to take a deeper dive into local organic food we really need to understand it a bit better. So let's try to make investments into a few different things … just to see what works, what doesn't and what we've learned in the process. (Gent 2010)

When Vancity decides to invest in a new domain, it typically chooses a balance of high-risk and low-risk projects. The high-risk projects let Vancity gain a wider perspective on what is not possible, while the low-risk projects allow them to identify what success looks like and how to measure it. Since its initial moves in the early 1980s into what would now be termed impact investing, Vancity has built an organizational culture that uses its social investments as opportunities to learn about the system in which it operates (Hardin 1996).

Vancity typically makes use of all available types of capital – debt, equity and grants – to support its investees, depending on its particular capital needs. It may also blend different types of capital in innovative structured finance deals. Unlike many other social investors, Vancity is a credit union, with a membership based in the community where most of its impact investments are made. As a consequence, the positive externalities generated by many of its investments either directly benefit some of their members, or can be personally observed by the membership. Furthermore, this close alignment of the interests of investors, investees, beneficiaries of community services, and Vancity's own member-owners has the advantage of reducing the level of value heterogeneity amongst their stakeholders, something not available to most impact investors. This, in turn, reduces the demand for a variety of metrics by the capital providers (who are also their member-owners), as they can often directly verify that the impact has occurred. As a consequence, Vancity has been able to adjust its social finance strategy over time to respond to the learning of the social entrepreneurs it supports and its own dynamic relationships with them. Vancity has used this learning to try to improve the effectiveness of both impact investing programs and the development of a variety of new services oriented to their social finance objectives.

There can sometimes be a tension between the top-down demands for accountability from social financiers and the bottom-up development of

operationally useful metrics, derived from the social entrepreneurs that the finance supports. The demands of risk-management and the attempt to maximize the impact of limited funds create an additional push for accountability and transparency. However, it is those closest to the changes occurring in the socio-ecological system being invested in who are often best placed to engage in the sense-making that can reframe relevant understandings of the system as a whole and reveal further opportunities for radical social innovation. In effect, the relationship between the information demands of social finance and the information needs of the social entrepreneurs they support mirrors the apparent tensions between the 'front-loop' and 'back-loop' of the adaptive cycle in a complex socio-ecological system.

The appropriate balance between whether an *exploitation-conservation* 'front-loop' strategy or a *release-reorganization* 'back-loop' strategy should be followed depends on the state of the system the social financier is attempting to change. Moreover, the collection and use of information in these complex socio-ecological systems is itself an intervention that may change the system. Furthermore, the bounded rationality of both investors and entrepreneurs may make it impossible to understand fully where the system is in its adaptive cycle (Arthur 1994). Finally, the natural movement of a system through the phases of the adaptive cycle may also quickly render out of date any approach that strives to pick a particular balance between *exploiting-conserving* and *release-exploration* strategies in a static way.

Developmental impact investment does not favour one approach or the other – it sees an investment portfolio as a strategy that can contain both purposes. On the one hand, the risk-management aspect of traditional portfolio theory provides the stability that can be used to attract resources for the *exploitation-conservation* phases. On the other hand, the natural experimentation aspect of a portfolio of interventions in a complex socio-ecological system may provide the sense making that is vital to reframing the understanding of the system during its *release-exploration* phase (see Figure 1). The right balance between maintaining stable and standardized metrics for an investment portfolio and allowing for revisions will depend on the state of the system itself when a developmental impact investing approach is initiated.

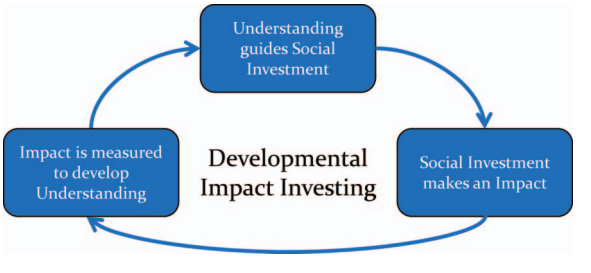

Figure 1. The Developmental Impact Investing Cycle

Conclusion

The adaptive cycle framework, and the understanding of complex social-ecological system dynamics that it provides, has been used in this paper to demonstrate the value of a more *developmental* impact investment strategy. It is argued here that developmental impact investing is a process that involves both the use of a provisional understanding of a complex socio-ecological system to guide impact investment strategy and investing in a portfolio of theories of change to impact that system. As a consequence, such a measurement system is of use in reframing a social financier's understanding of the system under scrutiny. This approach places an emphasis on the importance of creating a portfolio of social investments that can be used to manage risk, and at the same time building an understanding of the complex socio-ecological systems they seek to change. In doing so, a developmental impact investor can build the capacity to generate social innovations at various points as a complex system moves through the phases of the adaptive cycle.

This paper is exploratory in approach and has aimed to generate new thinking around social finance, impact measurement and social innovation. Clearly, further research is required in this area to test the key concepts put forward here and also to see how best such an approach can be operationalized in practice. There are three significant lines of future research that emerge from this paper. First, the generation of multiple investment-specific metrics with different monetary valuations calls for the development of tools that can allow for easier comparisons between these metrics within a single impact investor's portfolio: this is a prerequisite for including non-financial metrics in a portfolio. Second, the cost of measuring impact has to be borne by one or more parties in a transaction. The decision about how to bear the cost, and how this is divided between investor and investee, can change the composition of an impact investment portfolio. The cost issues of measuring complex theories of change may crowd out some interventions in favour of easier-to-measure impacts or may alter key objectives to meet investor requirements. Finally, there is a need for greater understanding of metrics as units of reporting, which will give impact investors and social entrepreneurs the tools to self-organize by improving the ease of project and investor comparisons and accountability. Tied to this is the need to explore the tension between metrics as enabling social innovation through the reorganization of complex systems, and the role of metrics in standardizing – and perhaps restricting – organizational innovation.

Note

1. This can be particularly the case across different cultural and economic contexts. For example, some of the GIIRS measures have proved quite inappropriate for embedded contexts based in developing countries.

References

Arthur, W., 1994. Inductive reasoning and bounded rationality. *The American economic review*, 84 (2), 406–411.

Bugg-Levine, A. and Emerson, J., 2011. *Impact investing: transforming how we make money while making a difference*. San Francisco: Jossey-Bass.

Buttle, M., 2007. 'I'm not in it for the money': constructing and mediating ethical reconnections in UK social banking. *Geoforum*, 38 (6), 1076–1088. doi: 10.1016/j.geoforum.2006.12.011.

Canadian Task Force on Social Finance, 2010. *Mobilizing private capital for public good*. Toronto: Social Innovation Generation. Available online: http://socialfinance.ca/uploads/documents/FinalReport_MobilizingPrivateCapitalforPublicGood_30Nov10.pdfcx [Accessed 26 June 2012].

Ebrahim, A. and Rangan, V.K., 2010. *The limits of nonprofit impact: a contingency framework for measuring social performance*. Working paper 10-099. Social Enterprise Initiative, Harvard Business School.

Emerson, J., 2003. Blended value proposition: integrating social and financial return. *California management review*, 45 (2), 35–51.

Freireich, J. and Fulton, K., 2009. *Investing for social and environmental impact: a design for catalyzing an emerging industry*. New York: Monitor Institute.

Gent, D., 2010. Interview with Derek Gent, Executive Director, Vancity Community Foundation, November 2, 2010.

Giddens, A., 1990. *The consequences of modernity*. Cambridge: Polity Press.

Glaser, M. and Weber, M., 2007. Why inexperienced investors do not learn: they do not know their past portfolio performance. *Finance research letters*, 4, 203–216.

Grabenwarter, U. and Liechtenstein, H., 2012. *In search of gamma: an unconventional perspective on impact investing*. IESE Business School, University of Navarra and Family Office Circle Foundation.

Gunderson, L.H. and Holling, C.S., 2002. Resilience and adaptive cycles. *In*: L. Gunderson and C. Holling, eds. *Panarchy: understanding transformations in human and natural systems*. Washington, DC: Island Press, 25–62.

Hardin, H., 1996. *Working dollars: the VanCity story*. Vancouver: Douglas & McIntyre.

Jayne, M.R. and Skerratt, G., 2003. Socially responsible investment in the UK—criteria that are used to evaluate suitability. *Corporate social responsibility and environmental management*, 10 (1), 1–11. doi: 10.1002/csr.25.

Joy, I., de Las Casas, L., and Rickey, B., 2011. *Understanding the demand for and supply of social finance*. London: NESTA. Available online: http://www.nesta.org.uk/home1/assets/features/understanding_the_demand_for_and_supply_of_social_finance.

Koellner, T., Suh, S., Weber, O., Moser, C., and Scholz, R.W., 2007. Environmental impacts of conventional and sustainable investment funds compared using input-output life-cycle assessment. *Journal of industrial ecology*, 11 (3), 41–60.

Maree, M., and Mertens, S., 2012. The limits of economic value in measuring the performance of social innovation. *In*: A. Nicholls and A. Murdock, eds. *Social innovation: blurring boundaries to reconfigure markets*. New York: Palgrave Macmillan, 114–136.

Markowitz, H., 1952. Portfolio selection. *The journal of finance*, 7 (1), 77–91.

Maturana, H. and Varela, F., 1987. *The tree of knowledge: the biological roots of human understanding*. Boston: Shambhala Publications.

Milevsky, M., Aziz, A., Goss, A., Comeault, J., and Wheeler, D., 2006. Cleaning a passive index: how to use portfolio optimization to satisfy CSR constraints. *The journal of portfolio management*, 32 (3), 110–118.

Monks, R., Miller, A., and Cook, J., 2004. Shareholder activism on environmental issues: a study of proposals at large US corporations (2000–2003). *Natural resources forum*, 28 (4), 317–330. doi: 10.1111/j.1477-8947.2004.00104.x.

Moore, M., Westley, F., Tjornbo, O., and Holroyd, C., 2012. The loop, the lens, and the lesson: using resilience theory to examine public policy and social innovation. *In*: A. Nicholls and A. Murdock, eds. *Social innovation: blurring boundaries to reconfigure markets*. New York: Palgrave Macmillan, 114–136.

Mulgan, G., 2010. Measuring social value. *Stanford social innovation review*, 8 (3), 38–43.

Nicholls, A., 2009. 'We do good things, don't we?': 'Blended value accounting' in social entrepreneurship. *Accounting, organizations and society*, 34, 755–769.

Nicholls, A., 2010a. The institutionalization of social investment: the interplay of investment logics and investor rationalities. *Journal of social entrepreneurship*, 1 (1), 70–100.

Nicholls, A., 2010b. The functions of performance measurement in social entrepreneurship: control, planning and accountability. *In*: K. Hockerts, J. Mair, and J. Robinson, eds. *Values and opportunities in social entrepreneurship*. New York: Palgrave MacMillan, 241–272.

Nicholls, J., Lawlor, E., Neitzert, E., and Goodspeed, T., 2012. *A guide to social return on investment*. London: Cabinet Office (Office of the Third Sector). Available online: http://www.european-microfinance.org/data/file/A%20Guide%20to%20Social%20Return%20on%20Investment.pdf.

North, D.C., 1990. *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press.

O'Donohoe, N., Leijonhufvud, C., Saltuk, Y., Bugg-Levine, A., and Brandenburg, M., 2010. *Impact investments: an emerging asset class*. New York: J.P. Morgan Global Research.

Ottinger, R., 2007. Portfolio philanthropy: how philanthropists can apply portfolio theory to make wiser social investments. *Stanford social innovation review*, 5 (4), 25–26.

Parthenon Group and Bridges Ventures, 2010. *Investing for impact: case studies across classes*. London: The Parthenon Group, Bridges Ventures and Global Impact Investing Network.

Patton, M.Q., 2011. *Developmental evaluation: applying complexity concepts to enhance innovation and use*. New York: The Guilford Press.

Porter, M. and Kramer, M., 2011. Creating shared value: how to reinvent capitalism – and unleash a wave of innovation and growth. *Harvard business review*, 89 (1–2), 62–77.

Power, M., 2007. *Organized uncertainty: designing a world of risk management*. New York: Oxford University Press.

Power, M., Scheytt, T., Soin, K., and Sahlin, K., 2009. Reputational risk as a logic of organizing in late modernity. *Organization studies*, 20 (2–3), 301–324.

Pradhan, B., Roy, P., Saluja, M., and Venkatrum, S., 1998. *Income, expenditure and social sector indicators of households in rural and urban India*. Micro Impacts of Macroeconomic and Adjustment Policies, Third Annual Meeting, November 2–6.

Saltuk Y., Bouri, A., and Leung, G., 2011. *Insight into the impact investment market: an in-depth analysis of investor perspectives and over 2200 transactions*. New York: J.P. Morgan Social Finance Research.

Sandberg, J., Juravle, C., Hedesström, T., and Hamilton, I., 2009. The heterogeneity of socially responsible investment. *Journal of business ethics*, 87 (4), 519–533. doi: 10.1007/s10551-008-9956-0.

Schaltegger, S. and Wagner, M., 2010. Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business strategy and the environment*, 20 (4), 222–237. doi: 10.1002/bse.682.

Schuster, L., 2001. The societal responsibility of commercial and savings banks. *In*: C. Guene and E. Mayo, eds. *Banking and social cohesion*. Charlbury, UK: John Carpenter, 159–163.

Simon, H.A., 1982. *Models of bounded rationality: behavioral economics and business organization*, vol. 2. Cambridge, MA: The Massachusetts Institute of Technology Press.

Ulanowicz, R.E., 1997. *Ecology, the ascendant perspective*. New York: Columbia University Press.

VanCity, 2010 [online]. Vancouver City Savings Credit Union. https://www.vancity.com.

Weber, O., 2006. Investment and environmental management: the interaction between environmentally responsible investment and environmental management practices. *International journal of sustainable development*, 9 (4), 336–354.

Weber, O., Mansfeld, M., and Schirrmann, E., 2011. The financial performance of RI funds after 2000. *In*: W. Vandekerckhove, J. Leys, K. Alm, B. Scholtens, S. Signori and H. Schaefer, eds. *Responsible investment in times of turmoil*. Berlin, Germany: Springer, 75–91.

Weber, O., Scholz, R., and Michalik, G., 2010. Incorporating sustainability criteria into credit risk management. *Business strategy and the environment*, 19 (1), 39–50.

Weisbrod, B., 1998. Conclusions and public policy issues: the road ahead. *In*: B. Weisbrod ed. *To profit or not to profit: the commercial transformation of the nonprofit sector*. Cambridge University Press, 287–305.

Wood, D., Thornley, B., and Grace, K., 2012. *Impact at scale: policy innovation for institutional investment with social and environmental benefit*. InSight at Pacific Community Ventures & The Initiative for Responsible Investment at Harvard University.