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Transitions to Sustainable Investment**Abstract**

During the last few years the international financial system has demonstrated its inability to carry out one of its basic functions, namely, to receive deposits from investors and channel those safely and efficiently to organisations that provide goods and services for the benefit of society. This is because for the last three to four decades the model used was the theory of the free market. This failure has been at a conceptual and practical level. While regulations and controls need to be established, these are not sufficient for sustainable investment because the economic and financial systems are still not based on the need for humans to live within the capacity of Earth to support human life. This failure is of strategic significance because the financial sector plays a key role in any transition to a sustainable world.

It is estimated that less than 1% of investment under professional management is sustainable. The proportion of Sovereign Wealth Funds that are sustainable is likely to be less than 5% and closer to less than 1%. There are major problems with international financial standards, such as the UN PRI and the Equator Principles. Reference is made to a fund, Portfolio21, that attempts to invest sustainably, and to a bank, HSBC Holdings, that is leading in sustainable commitment. Both demonstrate how far we have to go. A transition to where investments are sustainable will require substantial reform of the international financial institutions and standards, and this change is unlikely to occur in the immediate future. Investment strategies need to take into account the turbulence that will result from a deteriorating ecology that will be unable to support human life on Earth as we know it.

Key Words ethical investment, financial sustainability, sustainable banking

Introduction

During the last few years the international financial system has demonstrated its inability to carry out one of its basic functions, namely, to receive deposits from investors and channel those safely and efficiently to organisations that provide goods and services for the benefit of society at large. This failure is due to the support by significant sectors of the economic academic community, the managers of the financial sector, and the international business and political community, of a model (the general equilibrium theory, the formal theory of the free market) that was shown in the 1950's to be conceptually inadequate. There has been considerable literature about this weakness (examples: Cassidy, 2009; Stiglitz, 2010). In supporting a failed economic model humanity has lost 30-40 years in planning and executing a transition to a sustainable Earth that will support human life on it as we know it.

However, regulation proposed by many reformers is not sufficient for an adequate

transition to sustainable world or sustainable investment. Regulation which is aimed at only correcting market weaknesses within the existing Business As Usual (BAU) model will not be effective in dealing with the ecological degradation that the Earth is undergoing. A regulated economy still rests upon certain assumptions about the availability and use of resources for human utility, and that economic model is still detrimental to the life systems upon which human life on Earth depends. What is required is the shift from an unlimited growth, to a steady state economy. With this a change in ethics is needed from a utilitarian and a version of Locke's philosophy (with property rights to ownership of resources and exploitation for human utility), to where human-human and human-Earth relationships are based on notions such as respect, integrity, or intrinsic value, and equity (Howell, 2009 a; 2010).

Because these reforms have not occurred, the Earth's ability to support human life is diminishing. There is considerable scientific evidence of ecological degradation (Intergovernmental Panel on Climate Change, 2007; Millennium Ecosystem Assessment, 2005; Rockström et al, 2009) and the consequences for a 3-4°C and more warming of the Earth as described by Lynas (Lynas, 2007; 2009) and Hamilton (Hamilton, 2010). The major global change drivers to 2030 and beyond will include critical issues around population; climate change; price increases for hydrocarbons; water; food; toxins; geopolitical shifts; wide swings in economic activity; technological advances (Sustainable Aotearoa New Zealand, 2009).

‘There will be complex interactions between all of these change drivers. All are subject to uncertainty about timing and magnitude. The changes will be outside the range of prior human experience in terms of magnitude, speed of arrival, and simultaneity (several change drivers occurring together so that their impacts reinforce each other). The changes will cause abrupt and radical shifts in human living and work, creating risks and opportunities’ (Sustainable Aotearoa New Zealand, 2009).

It is against this turbulent future that the thinking of transitions to a sustainable world and sustainable investment needs to occur.

Limitations of SRI Model and Investment

The traditional Socially Responsible Investment (SRI) model has limitations. The SRI model permits investment that does not deal with the challenge to the environment described above. EuroSIF (EuroSIF, 2009) estimates that 17.6% (€2.665 trillion) of the European asset management industry can be classified as SRI. However, 14.2% or €2.154 trillion is where there is a single screen such as weapons (€656), norms-based (€402) or tobacco (€17.5). The Social Investment Forum USA estimates that 11% of \$US27.1 trillion under professional management is SRI (Social Investment Forum, 2007), but the bulk of this (77% or \$US2.098 trillion) is simple screening, mainly tobacco, followed by alcohol and gambling (Social Investment Forum, 2005). Probably less than 5% is ethical and most probably less than 1-2% is strongly sustainable. Moreover, the SRI model does not include the major financial reforms needed (Howell, 2008; Howell 2009b).

Sovereign Wealth Funds

The largest 50 sovereign wealth funds (SWF) have \$3891 billion under investment (SWF Institute, 2010). Just under 60% is oil and gas related. The largest fund is Abu

Dhabi investment Authority with \$627 billion. Norway is currently the second largest with \$443 billion or 11% and is the leader in setting ethical requirements for SWF. One of the ethical standards it is required to meet is to avoid investment in companies that cause severe environmental damage (Council on Ethics, 2010). On this criteria it excluded Rio Tinto because of its investment in Freeport's mine in West Papua. SAFE Investment Company is the largest Chinese SWF with \$347.1 billion. It does invest in Rio Tinto. China is investing in renewable energies, but there are no published ethical standards for its four SWFs whose investments total \$1010 billion.

In terms of disclosure on performance, investment strategy or even basic philosophy, many SWF rank below the most secretive hedge fund (Robinson, 2007). What environmental standards that are set would be using a weak definition of sustainability. The Norwegian Fund has invested in Shell, which is involved in Canadian tar sands extraction (Koerner, B, July 2010; Norges Bank Investment Management, 2010). No companies have been excluded by the Council of Ethics on the basis of extraction of tar sands (A. Karlson, personal communication 2010). Tar sands extraction is a major contribution to Canadian greenhouse gas emissions (Greenpeace, 2010; McRobie, H. 11 May 2010). Because the Norwegian Fund only excludes companies causing severe environmental damage, rather than companies that have a high carbon impact and are ecologically unsustainable, investment of SWFs that are strongly sustainable is likely to be less than 5% and closer to less than 1%.

The Needed Changes

Necessary changes to the financial sector will include a shift away from "the Anglo-Saxon model of growth based on financial wizardry and property bubbles" (Unger, B. 2010) towards the German or Japanese model that values long term investment and a stakeholder rather than a shareholder concept of the firm. Under this approach, asset stripping would not occur. Methods of remuneration of bankers and financial advisors needs to change (Gerard, 2009). The workforce in the sector will need to drastically downsize (Economist 2008). Financial institutions will lose their ability to create money (Howell and Cartwright, 2009; Von Uexküll in Girardet and Mendonca, 2009). Reserve requirements should be by 100%, instead of fractional reserve banking, as the latter commits to a growth economy (Daly, 2007). These changes are substantial and are unlikely to occur in time to have the necessary shift to the infrastructural changes needed to avoid major ecological and social deterioration.

International Principles and Standards

Many of the principles and standards established for proper practice, need changing. Many have no adequate content and construct validation processes to show that the standards measure all and only those essential components of what they claim to measure. Many have ranking and scaling processes giving weights or values that are methodologically unjustified (Howell, 2001). The initiatives taken by the UNEP Finance Initiative (UNEP FI), and the Equator Principles (Equator Principles 2010), do not make distinctions between weak and strong sustainability. Weak sustainability, that includes the triple bottom line (TBL) model, allows economic matters to dominate the social and environmental matters (Sustainable Aotearoa New Zealand, 2009). The need for economic activities to be based within the limits of the Earth's systems and ability to nourish life is not a necessary condition of weak

sustainability and TBL. While sustainable companies need to make profits, the TBL model permits companies to avoid the difficult transitions to sustainability that substantially deals with the ecological degradation threats. While they encourage financial institutions to adopt policies that are a move in the right direction, they are based on a modified BAU economics model, rather than an ecological economic model. The Equator Principles, founded on a distinction between Categories A, B and C, are not well defined.

Case Study: Description of Portfolio21

Portfolio21 is based in Oregon, USA. They have \$322 million in assets in 105 companies. Their investment philosophy is that the greatest risks are the ecological challenges caused by humans consuming beyond the limits of what our natural systems can support. They state the best long-term investment opportunities are found in companies using environmental frameworks to make business decisions. These companies understand that the Earth's ability to provide natural resources, such as oil, or clean air and water is finite and that BAU is an inadequate response to a likely ecological crisis. The understanding of sustainability principles demonstrates the qualities of innovation and leadership that create a distinct competitive advantage and builds long-term value. Portfolio 21 invests only in companies that are integrating environmental strategies into their overall business planning. They state that they are informed by the Natural Step framework (Portfolio21, 2010).

Portfolio21 chooses companies that meet their environmental selection criteria with respect to eight factors. First, does the company's business model plan to gain competitive advantages within ecological constraints? Second, does the company understand the ecological impact of its products and/or services and has taken significant steps to reduce those impacts? Third, has the company demonstrated an environmental commitment through its investments, such as significant investments in the research and development of ecologically superior products or technologies, or in new plants or equipment with advanced environmental performance? Fourth, does the company's management understand the magnitude of the ecological crisis and do they view environmental sustainability as a major business opportunity? Fifth, does the company's environmental management system identify and address environmental impacts and liabilities, develop action plans and procedures, and establish environmental accounting practices that are publicly reported and certified? Sixth, is the company concerned about resource efficiency? Seventh, does the company's strategic plan include reducing direct and indirect greenhouse gas emissions, and decreasing exposure to other environmental liabilities? Eighth, does the company meet good standards in the areas of employee relations, human rights, community involvement, or product safety? Excluded on this latter criterion are nuclear energy, tobacco, gambling, or weapons companies (Portfolio21, 2010).

They state that there are no truly sustainable companies: therefore no companies excel in all of the areas listed below. They select companies with strengths in multiple areas that are well positioned to make further advancements in addressing sustainability challenges. They place the most emphasis on a company's biggest impacts. The representative for Portfolio21 said

“So, for example, to the extent that a manufacturing firm is using recycled paper in its offices while ignoring the resource efficiency opportunities in its

supply chain and plants, yes, we place less emphasis on the office level improvements. For most banks, the biggest environmental impact is the projects they finance, so we place more emphasis on this than on office practices. We don't ignore these other areas, but they are weighted less heavily. ...The challenge is to balance the near term (3 to 5 years for us) with the inevitable consequences of ecological limits as they unfold over the next century (L. Christian, personal communication, 2010).

It was stated that the global drivers described in the Sustainable Aotearoa New Zealand publication (Sustainable Aotearoa New Zealand, 2009), are taken into account through their selection criteria.

In response to a question about the choice of banks by Portfolio21, it was stated that the biggest direct ESG risk confronting a global bank is that its clients' credit quality and/or asset value deteriorates because of the failure to address environmental and/or social issues. This means that financial institutions need to become experts in evaluating the full breadth of Environmental Social and Governance risks in their existing and future portfolios. Portfolio 21 avoids banks with excessive leveraging. They feel this leveraging is predominantly utilised for activities based on speculation, rather than the provision of tangible products or productive services, and thus represents a significant risk for investors (L. Christian, personal communication, 2010).

Portfolio21 is underweighted in financials for several reasons. First, most banks and other financial institutions concentrate on office-level environmental improvements and do not integrate environmental sustainability into their core lending/financing activities to a meaningful extent (Bank of America, for example). Second, the combination of highly leveraged assets and lack of transparency is very risky. Third, they expect that financial regulation will eventually curtail many of the most profitable (and egregious) activities (L. Christian, personal communication, 2010).

Portfolio21 engages with nearly every company in the portfolio via email and telephone. Site visits tend to be region/country focused. For example, one of their portfolio managers and one of their research analysts during a trip to South Africa to attend a conference, will meet with academicians and practitioners in the area of environmental sustainability, and then meet with five to ten individual companies. The decision by Intel to amend its corporate charter to include mandatory reporting on corporate responsibility and sustainability performance came about through Harrington Investments sponsoring the shareholder resolution and dialogue. But the company and its legal counsel were influenced by the whole mosaic of individuals and organisations, including Portfolio 21, who are working to increase corporate responsibility (L. Christian, personal communication, 2010).

Portfolio21's non-public guidelines state " The Principles of Responsible Investing (PRI) is an investor initiative in partnership with UNEP Finance Initiative and the UN Global Compact. Unfortunately, in the case of both of these initiatives, actual results (and successful strategies for minimizing ESG risks) are difficult to measure due to client confidentiality issues that limit transparency and reporting. Also, the qualitative nature of the guidelines and the varied interpretations and implementation by different financial institutions make performance challenging to evaluate." (L. Christian, personal communication, 2010).

Evaluation Of Portfolio21

Their philosophy is based on ecological economic principles, and their risk analysis takes into account the global drivers described by Sustainable Aotearoa New Zealand above. They recognise that there are no truly sustainable companies. It is hard to assess the impact of their engagement practice: comments by Christian about the change by Intel seemed realistic.

Comments about the reasons why Portfolio21 is underweighted in financials illustrate a healthy appreciation about the risk of banks. However, in regard to the choice of banks, Portfolio21's use of the Equator Principles and the Principles of Responsible Investing, are publicly accepted without criticism. But organisations can sign up to such Principles and use a very weak definition of sustainability. This is in conflict with Portfolio21's support of the Natural Step framework. But generally their transparency is very good, with reasons for inclusion and exclusion of companies made public.

Case Study: Description of HSBC Holdings

HSBC is one of the largest banking and financial services organisations in the world. They have assets of US\$114 billion and assets of US\$2,527b as at 31 December 2008. HSBC has around 9,500 offices and 325,000 employees in 86 countries and territories in Europe, the Asia-Pacific region, the Americas, the Middle East and Africa. HSBC offers a range of financial services to over 100 million personal, commercial, corporate, institutional, investment and private banking clients. Shares in HSBC Holdings plc are held by over 210,000 shareholders in 120 countries and territories (HSBC, 2010).

In 2005, HSBC became the first bank and FTSE100 company to become carbon neutral. They have four-year targets for energy use, water use, waste and carbon dioxide. They have programmes in place to reduce the direct environmental impact. This includes the energy, water, waste and carbon emissions from their 10,000 buildings, IT infrastructure and business travel (HSBC, 2010).

HSBC says tackling climate change will require a concerted effort between government, business and individuals. Innovation in renewable energy and clean technology is required to help reduce the world's dependence on carbon intensive fuels. Through lending, investment and insurance products and services, HSBC anticipates playing a leading role in the transition to a lower carbon economy over the long term. The impacts of climate change can already be seen and there will be a need to invest in adaptation, particularly in the developing world (HSBC, 2010).

Key actions that HSBC has undertaken to prepare the business and our customers for the impacts of climate change include the HSBC Climate Change Centre of Excellence; adoption of the Climate Principles; five-year partnerships costing US\$100 million with four leading climate NGOs; and the establishment of the HSBC Global Climate Change Benchmark Index (HSBC, 2010).

In 2003, HSBC adopted the Equator Principles for large projects. HSBC voluntarily

extended the Principles to export finance loans and other facilities where the use of proceeds is known to be directly related to a project. In addition, HSBC has developed a series of risk policies for sensitive sectors, including Chemicals, Defence, Energy, Forest Land and Forest Products, Freshwater Infrastructure and Mining and Metals. These policies cover a wider range of financial services than lending and are applied regardless of the value of the transaction or size of the business (HSBC, 2010).

Evaluation of HSBC

HSBC score highest (92 points) for Financials on the Carbon Disclosure Project (Carbon Disclosure Project 2010). HSBC received the highest score for banks in a Ceres Report (Cogan, 2008) on how the banking sector was responding to the threat of climate change. The survey was of 16 US and 24 non-US banks representing more than 60 percent of the total market capitalisation of the global publicly traded banking sector. However, to quote Cogan,

“this rank is somewhat of a hollow victory. According to the survey, many of the 40 banks have done little or nothing to elevate climate change as a governance priority. Only 14 banks have adopted risk management policies or lending procedures that address climate change in a systematic way. Only a half-dozen banks say they are formally calculating carbon risk in their loan portfolios, and only one of the 40 banks—Bank of America—has announced a specific target to reduce the rate of greenhouse gas emissions associated with the utility portion of its lending portfolio. And no bank has set a policy to avoid investments in carbon-intensive projects such as coal-fired power plants. While many banks have made improvements, the actions to date are the tip of the iceberg of what is needed to reduce greenhouse gas emissions consistent with targets scientists say are needed to avoid the dangerous impacts of climate change” (Cogan, 2008.)

In the Banktrack report on meeting socially and environmentally sustainable standards (Banktrack, 2010), HSBC is the only bank of 49 in the survey to receive a score of 4 (for its forestry policy). It scored 1s for its biodiversity and climate change policies. Overall it scored two 0s, thirteen 1s, one 2, one 3 and one 4. (A score of 0 is where there is no policy and a 4 is where essential elements are included in policy.)

HSBC has taken a number of initiatives that deserve support: setting up research teams; partnering with NGOs; committing to climate change principles based on a low carbon economy; and establishing a Climate Change Benchmark Index. These actions indicate that HSBC understands the real threat of ecological degradation, and is prepared to give major commitment to this concern, although I do not know where it stands on the weak/strong sustainability question. It is significant that HSBC felt it needed to adopt climate change principles based on a low carbon economy: the UN Principles were obviously not sufficient. It is also significant that it recognised that mitigation now is not sufficient, and that adaptation is also required, particularly for developing countries.

Its development of policy for Chemicals, Defence, Energy, Forest Land and Forest Products, Freshwater Infrastructure, and Mining and Metals, is to be encouraged. Some of these are very good: the Defence, and Forest Land and Forest Products, are examples. Others can be best described as a start.

The Energy, and Mining and Metals policies are timid. At a global level, energy supply (25.9%), transport (13.1%), residential and commercial buildings (7.9%) and industry (19.4%) contributes around two thirds of global warming (IPCC, 2007). According to James Hanson, coal contributes the largest percentage of anthropogenic carbon dioxide into the atmosphere (Hanson, 2007). Until this matter is addressed in a significant way in bank policy, then much of the other initiatives are interesting but less significant.

Implications for Transition to Sustainable Investment

Portfolio21 is an example of a fund committed to strong sustainability, but its selection and discussion of where to invest indicates how far is the transition to a sustainable economy. HSBC is one of the best, if not the best publicly owned bank from its commitment to sustainability, but it still has a substantial way to go. (Government owned banks, such as KfW Bankengruppe, and cooperatives, such as the UK's Cooperative bank as not included in this evaluation.) Internationally a transition to a sustainable world can only occur with investment based on international financial institutions that adopt policies that acknowledge ecological boundaries.

If the wrong standards and principles are set, then operational performance cannot achieve the desired goals. Many standards in the sector are set without validated processes and justifiable scaling and ranking methodologies. The UN measures (Howell, 2009a) and Equator Principles suffer from a model of weak sustainability. This leads to compromises penalising the environment in favour of economic outcomes. There is an urgent need for principles based on strong sustainability. It is important to note that HSBC needed a set of principles (the Climate Principles) other than UNPRI and the Equator Principles in developing policies dealing with the threat of climate change, and that Portfolio21 had difficulties in using UNPRI because their qualitative nature led to various interpretations and different methods of implementation. Many banks in the Banktrack report had signed up to UNPRI, UN Global Compact, and the Equator Principles, but received low scores on their policies.

Investment needs to be directed towards a low carbon economy, or an economy based on ecological principles for living within the capacity of the Earth to support life. This is a steady state economy and that is inconsistent with the current system where virtually all money is created through the issuing of credit by banks. Repayment of debt with interest relies on the expansion of the supply of money and this commits to a growth economy. Von Uexküll asks *“Does it really make sense that our sovereign governments should have to borrow the funds needed to protect our common future from private moneylenders, who create this money themselves from fractional reserve banking, and whom we as citizens and taxpayers have just rescued from bankruptcy?”* (Girardet and Mendonca, 2009). This issue is not on the agenda of financial institutions concerned about sustainability.

Any firm, to be sustainable, needs to be profitable, and this is true for financial organisations. Unfortunately the time for a leisurely planned transition has gone and humankind is facing major disruption of a kind that is not easily imagined. The indications are that climate change and the trends in ecological degradation will have

greater impact than the introduction of electricity, the manufacture of metal and steel at the beginning of the Industrial Revolution, as disruptive as the enclosures of the commons in Britain, and perhaps as significant as the end of the most recent Ice Age. Copenhagen has shown that political agreement is hard to achieve. Major disruptions of this kind usually happen at times of major disruption, such as towards the ends of world wars (Brown, Carver et al, 2009).

Future turbulence is going to become much more agitated and a significant threat to financial institutions that have relied on traditional models of more benign times. The inventors of electricity and the technologies of the industrial revolution were not able to foresee the social and economic impacts, let alone define strategies for coping with them. It is therefore difficult to describe definite pathways forward, but some steps can be prepared, and financial organisations have an important contribution in helping prepare clients and the public to shift to strongly sustainable models of economic behaviour and adaptation to a turbulent future.

A strategy for prudent investors to cope with this turbulence will include investing in a smaller number of companies, taking a larger stake, and indicating to company management that a longer-term perspective will be taken (hence avoiding a short term requirement of regular high dividends). The choice of company will include how aware management is of the major global drivers and how they are incorporating these into their strategic plans. Ideally companies have calculated what their ecological impact is and are living within it, or according to the Daly formulae or Natural Step calculations (Daly 1996; Daly 2007; The Natural Step, 2010).

Under the Lynas scenario of $3+^{\circ}\text{C}$ (Lynas 2007, 2009), there will be a significant reduction in population, considerable movement in population, disruption and reduction in international trade, and an increase in conflict. Many of the goods that currently make up international trade patterns will disappear, as factories or production sites will have been destroyed by floods and storms, rising seawater, lack of water, and pollution. Prudent investment will be in goods and services essential for simple and sustainable living, with a focus on local resources and production in regard to such factors as food, housing, water and energy systems, and clothing. Production and distribution systems will need to be resilient, and able to cope with relatively rapid changes in temperature and weather. Transport and communication systems that are currently dependent on unsustainable energy and resource use will disappear.

A major turning point to the end of apartheid was the action of US investors in denying funds to South Africa (Sparkes, 2002). The availability and conditionality of finance can have a profound and immediate effect. Finance is a core component of economy activity: it has the ability to contribute to ecological decay or otherwise. Strategically it has a crucial role to play. If international finance adopted principles, policies and practices based on a strong sustainability philosophy, then the predicted catastrophes could be minimalised. Various groups and organisations (religious, environmental, and commercial) that are actively committed to a better outlook for the Earth could support archetype principles and policies that could be available for adoption (with regional adaptations where necessary) by financial organisations as a way of promoting public debate and encouraging change.

Conclusion

Investors seek a financial system that adequately identifies risk and gives fair protection and return. The current international system does not do this. In addition to the need for proper regulations, the financial sector needs to take into account the threat to human life on Earth posed by serious and substantial ecological and social deterioration. The current system does not do this either. Unless there is a rapid switch of investment away from activities that cause and contribute to ecological degradation, towards investment that provides solutions, then the future for humans is bleak. Investment in such a turbulent future will be difficult. The case studies that describe a fund and bank that have espoused sustainability principles have shown the gap between what is desired and where we are. Unfortunately the Ceres and Banktrack studies and the analysis above show that the two case studies chosen are not representative of the financial sector generally. The sector is doing too little and the time for mitigation alone has passed. Nevertheless, the financial sector is an important focus for change, and concerted engagement and advocacy is required.

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