ISSUES FOR RESPONSIBLE INVESTORS

IMPACT INVESTING IN EMERGING MARKETS

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For further information about WillowTree Impact Investors, please visit **www.willowimpact.com** or contact Nadine Kettaneh at nadine@willowimpact.com.

"Impact Investors support social entrepreneurs and their businesses. They believe that investing proactively for social and environmental impact not only makes good business sense, but increases efficiencies, reduces long-term costs and is central to the development of successful and equitable economies.

"Our primary objective at WillowTree is to deliver strong and sustainable financial returns for our investors while achieving maximum social and environmental impact. We expect to see this investment strategy gain increasing understanding and following from discerning and responsible investors."

Nadine Kettaneh, Managing Partner
WillowTree Impact Investors

EXECUTIVE SUMMARY

Investing for social and environmental impact is not new, but the recent concentration of efforts by investors, foundations, social entrepreneurs and others on this strategy has led to the recognition of impact investing as a fast-growing asset class in its own right.

A recent publication by the Monitor Institute estimated that impact investments could, over the next five to ten years, grow to represent 1 percent of current global assets under management – a figure estimated at around $500 billion.

There are a number of different approaches to impact investing in use in different markets around the world. This report adopts the definition put forward by the Global Impact Investing Network (GIIN), which states that impact investment strategies range from the simple return of principal capital to offering market rate or even competitive market financial returns to investors.[1] However, the primary focus of the report is on those impact investors who would aim to do the latter.

The consensus among this group of impact investors is that investments should deliver strong financial returns as well as significant social benefit or positive environmental impact, wherever these investments are made. The investment thesis is supported by macro trends that favour resource-efficient companies on the environmental side and by the strong license to operate and huge pent up demand for products and services as well as the relative lack of competitors on the social side.

Eyes on performance

As with most asset classes, manager selection is a primary determinant of investment success. However, one challenge facing impact investors, especially those with an emerging markets focus, is the lack of performance data and overall industry track record to support the strategy in raising funds.

Several factors make it difficult to get an accurate picture of the financial track record of the impact investment industry, most pertinently its relative youth, the fact that investments are made into private companies, and the varied remits, objectives and motivations of managers in the impact investment universe. However, selective data from diverse impact investors included in this report show largely positive returns over the past few years.

A survey by the GIIN, presented in a 2010 report on impact investing by J.P. Morgan, asked impact investors to predict the returns of their existing impact investments. For emerging markets debt investments, returns on capital invested were largely expected to fall in the 8 to 11 percent bracket. For emerging markets equity investments, invested capital was largely anticipated to return between 20 and 24 percent.

We benchmarked these anticipated returns against high-performing debt and equity indices, such as the US' S&P 500, Russell 2000 Growth, and the PIMCO Total return and J.P. Morgan Emerging Market Bond index, and found the expected performance of these impact investments to be comparable if not better.

Overall, there is strong supporting evidence for those investors that wish to treat impact investment as a purely financial asset class that it can deliver reasonable rates of return, possibly with an element of diversification. This is in line with the intuitive argument that the underlying businesses will have strong license to operate. Further, the enhanced due diligence involved compared to mainstream investment should prima facie remove a potential source of investment risk. However, the space is not yet mature and the full evidence base will only be developed as increasing numbers of financially oriented funds are wound up and performance statistics made more broadly available.

Trying to quantify the impact

A further challenge to the industry lies in quantifying the actual 'impact' of the investments.

Steps towards the development of a framework for the measurement of investment impact – crucial if the industry wants to continue to distinguish itself from regular venture capital or private equity investments – have been taken by several interested parties. Particularly significant in this area is the work of the GIIN, which developed a set of reporting standards called the Impact Reporting & Investment Standards (IRIS). The GIIN has also gathered all impact investment funds in an online searchable database called ImpactBase. In September 2010, the Cordes Foundation, Calvert Foundation and Giving Assets organisation, with support from the Rockefeller Foundation, launched the ImpactAssets Global 50 index at the Clinton Global Initiative. This index will closely monitor the top 50 impact investment funds that deliver financial returns along with social and environmental returns, thus providing would-be investors into impact funds with a valuable benchmarking tool.

Another project, the Global Impact Investing Rating System (GIIRS), which is being spearheaded by NGO B Lab, aims to emulate the approach of ratings agencies such as Morningstar

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in its evaluation of the social and environmental impact of both companies and funds.

Growing focus on emerging markets in impact investing

Impact investors are increasingly turning to emerging economies for a number of reasons. Firstly, it is mainly in emerging markets that the 2.5 billion people who live on less than $2.50 per day (a population collectively known as the 'Bottom of the Pyramid' or 'BoP' for short) is to be found, and hence where the need is greatest. World Bank statistics show that Sub-Saharan Africa and South Asia are the two regions with the greatest concentration of inhabitants living below the poverty line, with 50.9 percent and 40.3 percent of the respective populations living on less than $1.25 a day.

Unsurprisingly, it is in the countries where there is growing urgency to find sustainable solutions to poverty and the lack of basic services such as healthcare and education, environmental degradation and other areas of social and environmental need that the opportunities exist for impact investors. According to predictions from a 2010 report on impact investing by J.P. Morgan, a total of between US$400.6 billion and $987 billion could be invested over the next ten years to fund the capital needs of only five sub-sectors targeting the BoP. These sub-sectors are urban housing, clean water for rural communities, maternal health, primary education and microfinance.

Figure 1: Potential invested capital to fund selected BOP businesses over the next ten years

Sector	Potential invested capital required USD bn	Potential profit opportunity USD bn
Housing: Affordable urban housing	$214-$786	$177-$648
Water: Clean water for rural communities	$5.4-$13	$2.9-$7
Health: Maternal Health	$0.4-$2	$0.1-$1
Education: Primary Education	$4.8-$10	$2.6-$11
Financial Services: Microfinance	$176	Not measured

Source: J.P. Morgan

However, it is not just the BoP demographic in emerging markets that offers investment opportunities to impact investors. Gaps in public sector provision of education or healthcare in developing countries means there is also investment potential in targeting the lower middle income demographic in populations not sufficiently served by public infrastructure.

From a macroeconomic perspective, an emerging markets focus is supported by the more stable economic growth prospects currently offered by many developing countries and the resultant diversification it brings from investments in traditional asset classes in developed markets.

Sector-specific opportunities

Key sectors focused on by impact investors in emerging markets include education, healthcare, nutrition, environment, infrastructure and microfinance. In this report, we have presented at least one company case study in each of these six sectors in three regions: Asia, Africa and the Middle East. The aim has been to illustrate a concrete example of a financially sustainable and for-profit social enterprise. We chose non-public companies of a small size, usually in their first few years of existence. Investors should consider the ventures sampled in this report as examples of potential impact investment opportunities, as well as an indication of the portfolio strategies adopted by impact funds to achieve interesting diversification strategies and solid operational models.

Within each sector, there are specific areas that offer the impact investor the chance to reap returns both financially and in terms of impact. For example, within the field of nutrition, aquaculture can release pressure on the sea's altered ecosystems as well as on rising food prices. In addition, sustainable agricultural practices can help preserve the environment or maximise yields from regions poorly suited for crop production (for example, North Africa and the Middle East).

Given the existing financing gap between public sector investment and actual needs, there can be advantageous models for private investors in infrastructure. These include models that require less capital and have shorter investment horizons. For example, the provision of energy and water to under-served areas might come from new low-cost technical equipment, such as the solar power systems marketed in Africa by one of our case study ventures, Zara Solar. Very frequently, marketing goods to low-income communities is a viable opportunity if this is coupled with a credit-lending approach, such as that employed by Zara Solar.

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The enormous growth in mobile phone use in developing countries must be coupled with services to facilitate access to and from farmers, job seekers and people in need, as in the case of Souktel in Palestine.

Microfinance loans to micro-entrepreneurs combined with business support services generate higher loan repayment ratios for CBIRD in Cambodia than many of those seen in business models that do not include an advisory service. Challenges for the microfinance sector might come from country-specific regulations and the likelihood of overheating of the sector when indebtedness levels rise too high, as in the case of SKS Microfinance in India.

Stimulating entrepreneurship in the areas of education and nutrition can be an effective tool to encourage greater food production, fill the education gap left by the public sector and help people fight their way out of poverty.

Limiting factors for impact investors

We encountered difficulties in sampling case studies in certain sectors and regions, and found some important existing barriers to business operations and financial sustainability. India and a number of countries in Africa provided the richest regions for case studies, a fact we explain by the relative ease of doing business and by greater philanthropic interest from the international community. Microfinance was recorded as the most developed sector, due to its ability to generate high positive returns, while education and renewable energy were only marginally explored. One explanation for this distribution is the difficulty for education to generate sustainable models serving the BOP when revenues cannot come from tuition fees. For renewable energy, the scarcity of government subsidies available and the persistently higher costs relative to traditional energy resources are current barriers to impact investment in this sector.

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KEY FINDINGS

1 The potential financial returns of impact investments in emerging markets are compelling

Though data on realised investments for the impact investment industry in emerging markets is lacking, due both to the relative youth of the industry and also the fact most investments are made into private companies, there are several positive indicators that suggest overall industry financial performance will be compelling. Among these are select financial performance data available from a few established impact investment managers, such as UK-based Bridges Ventures and emerging markets focused E+Co, which show largely positive results even through the recent economic downturn. The financial competitiveness of a sustainable focus is also illustrated by the strong profit growth shown by other specialist impact-focused financial institutions, such as Netherlands-based Triodos Bank. Narrowing the focus to emerging markets only, the return expectations can be increased. A 2010 study by J.P. Morgan, based on a survey of impact investors, found the expected returns of many existing impact investments in emerging markets fall largely in the 8-11.9 percent bracket for debt investments, and into the 20-24.9 percent bracket for equity. This compares to developed market returns expectations of 5-7.9 percent and 15-19.9 percent in debt and equity respectively. Our analysis shows the emerging market projections to be in line with or better than the returns generated by benchmark equity and fixed income indexes such as the S&P 500, Russell 2000 Growth, PIMCO Total Return Fund and J.P. Morgan Emerging Markets Bond. Emerging market performance is boosted by the macroeconomic context: over the past few years, emerging and frontier markets have offered insulation from negative global macroeconomic events, recording better GDP growth stability and overall investment performance.

2 We record multiple efforts towards establishing clear performance metrics for 'impact'

A current definition states that impact investments are intended to create impact beyond financial return, therefore requiring the management and measurement of social and environmental performance. Among the most significant current initiatives to develop a framework to measure this impact is the work by non-profit body B Lab to develop a credit rating-style system for impact-focused funds and companies, the 'Global Impact Investing Rating System'. Supported by The Rockefeller Foundation, USAID, Prudential Financial and Deloitte, the project builds on the 'Impact Reporting and Investment Standards' developed by the Global Impact Investment Network.

3 There exist viable business models to resist a trade-off between impact and financial performance

Our research yielded interesting insights into ventures able to generate impact and financial returns across different sectors and geographies. Case studies of such business models are included throughout the report. There exist important macroeconomic factors to consider when investing in emerging markets, such as size of recipients' market, ease of doing business, political instability and corruption. Nonetheless, investing for impact in developing countries may offer better profits and more stable growth as compared to traditional investments in more advanced economies.

4 Within Asia, Africa and the Middle East, impact funds appear to concentrate activity in India and Africa, in the sectors of community development, microfinance and healthcare

Analysis conducted on the investment activity of a number of impact funds and development banks yielded uneven geographical and sector distributions. This may be due to the varying effectiveness of different models and country-specific barriers to economic activity. Energy and education appeared underexplored, while microfinance was identified as the most developed sector. Geographically, most impact investing activity is currently concentrated in India and several African countries.

5 Education: private schools in emerging markets are filling the gap left by the public sector

The number of private schools for the bottom of the pyramid is on the increase in developing countries. In our analysis we recorded the wide gap left by the public sector (especially in Africa) and a shift in recent years to investments in secondary education. Moreover we highlighted the better quality of private schooling in terms of cost efficiency, higher teacher to student ratio and less absenteeism.

6 Healthcare: medical facilities, services for the poor, and innovative products can make the difference

Africa presents the most severe example of scarcity of healthcare. The Middle East presents an overall better condition, while some Asian regions follow closely. The ventures sampled include the provision of medical services to the poor, innovative low-cost healthcare products, and the empowerment of women via the production and sale of hygiene products.

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7 **Nutrition: sustainable agriculture and aquaculture can alleviate poverty and release pressure on food prices**

Food prices have risen and become extremely volatile in recent years. Investments in innovative crops, seed supply, and road maintenance can increase food production and favour community development. In addition, sustainable aquaculture business can release pressure on fragile aquatic ecosystems worldwide.

8 **Environment: sustainable forestry, renewable energy and effective waste management are strong growth areas**

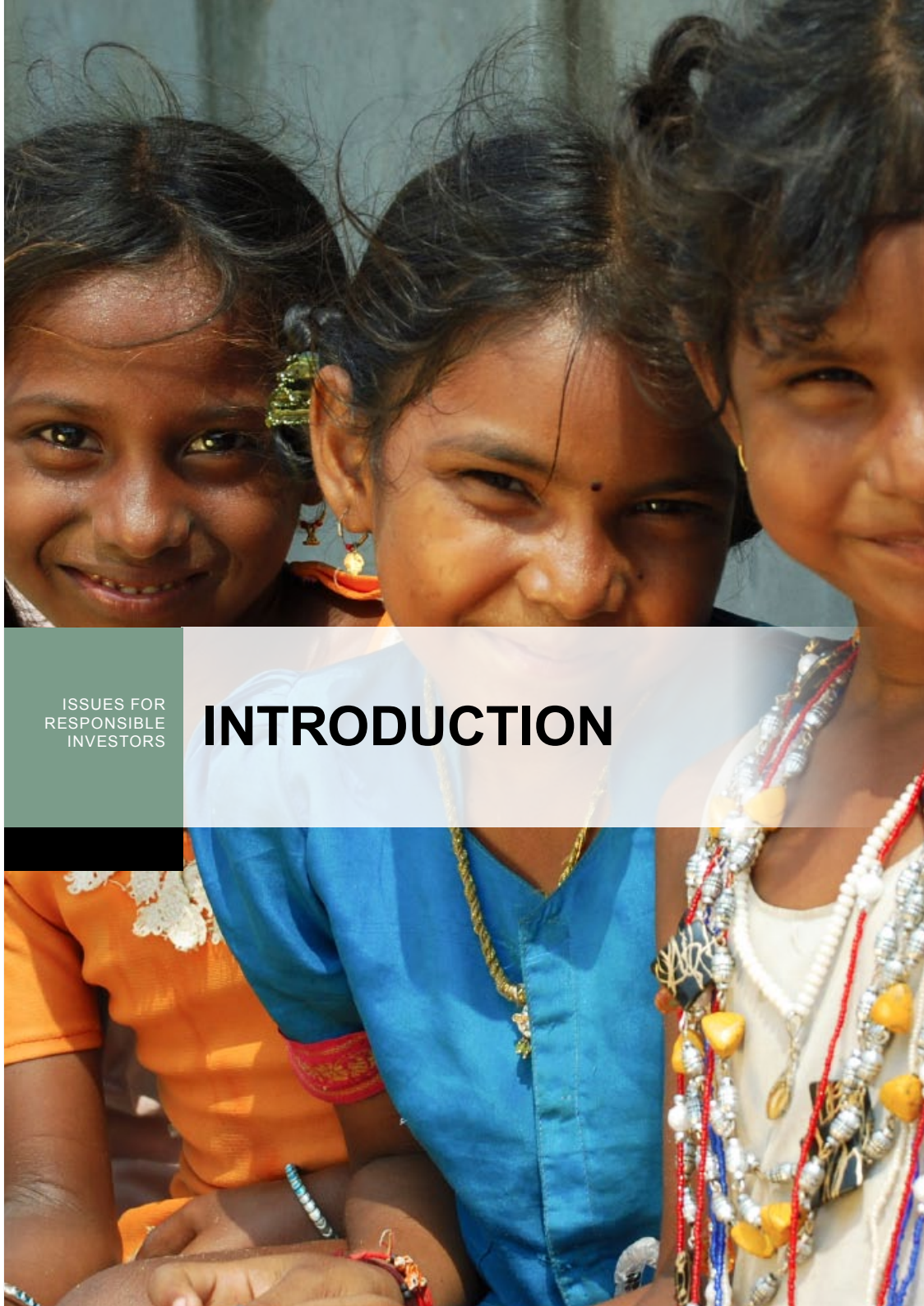
Carbon emissions and the overuse of natural resources cause extensive harm to the Earth's environment. Even in countries displaying the worst environmental records, effective waste management can produce energy and reduce pollution. Wind and solar energy in the Middle East can power households at little cost and help improve living conditions.

9 **Infrastructure: opportunities for impact investors exist in the provision of water, energy and telecommunications**

Improving infrastructure in developing countries can empower people with the tools to fight poverty. We identified business models in two key areas: energy and telecommunications. Examples of ventures that can contribute to the improvement of local infrastructure with little capital investment include: low-cost solar systems for households in Africa and mobile communication services for aid agencies in Palestine.

10 **Microfinance: the combination of financing with business support services can improve performance results**

Though microfinance is one of the most established impact investment sectors, criticism of lending practices and situations of high indebtedness have appeared in countries where the sector has shown the highest growth, most pertinently India. The most sustainable and interesting models identified here are small-scale microfinance institutions with a focused product, coupled with the provision of business support services to micro-entrepreneurs. This combination appears to result in greater financial and impact performance.



ISSUES FOR RESPONSIBLE INVESTORS

INTRODUCTION

INTRODUCTION

Interest in impact investments in developing countries has grown in recent years for a variety of reasons. First, the slow growth of OECD economies and the high positive correlation among them, as shown by the recent global financial crisis, have helped to shift interest towards the developing world. Second, the depletion of natural resources coupled with the rising demands of a growing world population will require more responsible and sustainable business practices.

In part, the wealth imbalances that characterise our world today are a result of flawed capitalist models and of historical events. Colonialism played an important role in focusing the benefits of economic activity on a restricted number of countries. Capitalism further concentrated wealth into the hands of a relative few. It is today clear that these models cannot guarantee an equitable and sustainable future for mankind, as existing economic disparities generate social unrest, increased violence and progressively make international peacekeeping efforts more challenging.

Impact investments offer a new approach in the way that they reduce the imbalance in the distribution of wealth between a company's ownership and the community in which it operates, while at the same time being respectful of the natural environment and its resources. In addition, these structures are readily applicable in the existing economic system.

There are two basic phenomena that will push the development of impact-style investments in the coming years: the dramatic growth of the human population and the diminishing availability of natural resources. Consequently, sustainability concerns will be paramount to the future of food, healthcare, education, environment and infrastructure. The world population has more than doubled in the past 50 years, rising from 3 billion in 1960[2] to 6.9 in the first quarter of 2011.[3] Oil reserves are reduced, while practices such as overfishing and deforestation substantially deplete the Earth's ecosystems.

Philanthropic activity cannot alone provide solutions to the challenges our world faces – private investment and capital markets are increasingly engaging in the development of an effective route to social and environmental progress.

Despite willingness from private investors to deploy capital in this new alternative asset class, there is still only limited understanding of the business models able to resist the traditional trade-off between impact and financial performance. As the market for impact investing evolves, more efficient models will emerge, causing an influx of private capital.

In this report, a number of social and environmental ventures from selected sectors and geographies are considered, with the aim of unveiling the opportunities and challenges associated with impact investing. The opportunities reside in untapped markets, innovative operating models and the glaring lack of services provided by the public sector. The challenges come from country-specific problems of social underdevelopment, such as corruption and regulatory complexities in running a business activity. These dampening factors not only affect financial profits but also the ability to generate lasting impact.

This report will first address the current debate around the definition of impact investing and then present some of the current efforts to formulate standards for measuring impact.

We continue by introducing the perimeter of our research and by assessing a number of factors for investors to consider when building an impact portfolio. In addition, we analyse the composition of current portfolios of projects undertaken by financial institutions and private equity firms active in the social arena.

We then dive into six sectors in three different geographies by describing relevant trends and examples of existing sustainable ventures, outlined in the table on the following page.

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Figure 2: The business models identified

Sector	Company case study	Business model	Country
Education	TeamLease	Connects students to business community and provides the vocational courses required for their employability	India
Healthcare	Embrace	A needs-based product development approach: sells low-cost infant incubators that do not require electricity	India, with plans to expand in Asia and Africa
	LifeSpring	Niche hospital chain providing affordable, high-quality maternal healthcare	India
	AFRIpads	Community-based, female-run production and sale of reusable cloth menstrual hygiene pads	Uganda
Nutrition	Egyptian Natural Oil Company (NATOIL)	Farming a commercially-valuable oil crop in water-scarce region	Egypt and MENA region
	Souk el Tayeb	Farmers' kitchen and market for local small-scale producers	Lebanon
Environment	Malua BioBank	Sells "biodiversity credits" to protect rainforest and offset palm oil plantations	Malaysia
	REAL Housing	Build and market affordable solar-powered houses	Israel
	ecoWise	Waste management that converts waste into renewable energy, recyclable products and organic composts	Singapore, China and Malaysia
Infrastructure	Souktel	Mobile phone software services that increase rural population's access to community leaders, NGO/relief initiatives, and potential employers	Palestine
	Zara Solar	Sells small photovoltaic solar devices to counter limited electrification	Tanzania
Microfinance	Cambodian Business Integrated in Rural Development (CBIRD)	Provides access to loans for developing rural business activities	Cambodia

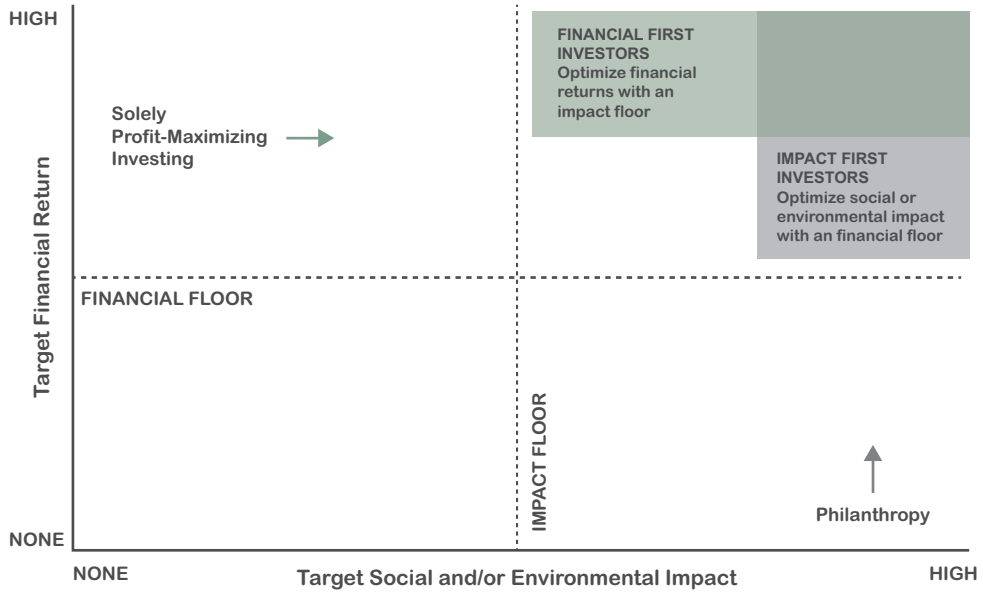
Source: Responsible Research 2011

Impact investing faces a conceptual challenge. Given the recent emergence of this asset class, a debate exists around its definition and around the development of optimal metrics to assess impact performance. According to a 2010 J.P. Morgan report[4], impact investments are investments intended to create positive impact beyond financial return. As such, they require the management of social and environmental performance in addition to financial risk and return.[5] For The Global Impact Investing Network (GIIN), impact investment strategies range from the simple return of principal capital to offering market rate or even competitive market financial returns to investors.[6]

Other definitions of impact investing place the focus on the end beneficiaries, notably people at the bottom of the pyramid (BOP). Consequently, this definition excludes environmental projects that typically do not directly benefit the less privileged. In June 2010, 50 international investors debated the question of "When is an investment an impact investment?" at the Global Impact Investing Network Council. One of the discussion's conclusions was that adopting an overly broad definition could undermine the credibility of the asset class, while too precise a definition could limit the amount of capital available for investment.[7]

According to a 2009 study by the Monitor Institute[8], participants in impact investing can be categorised according to their primary motivation for investing: financial first or impact first investors.

Figure 3: Segments of Impact investors



Source: Monitor Institute

There are also some investors who would define investing in a solutions oriented ethically screened equities fund as an impact investment. This is not a definition that is widely subscribed to in the impact investing space, which would tend to consider only direct investments in companies as designed to deliver social and/or environmental impact.

This report adopts the GIIN's definition of an impact investor in terms of financial objectives, although we focus more on those investors that would fall into the 'financial first' category in the chart above. We work on the basis that impact investing does not need to focus entirely on emerging or frontier markets, benefit the BOP or the lower middle-income groups, nor be deployed in one of the sectors covered by this report. Neither do we assume that impact investors always work specifically under the label of "impact investors": most actors in the impact investment arena today are venture capital and private equity firms, philanthropists, foundations and social entrepreneurs.

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ISSUES FOR RESPONSIBLE INVESTORS

MEASURING PERFORMANCE

FINANCIAL PERFORMANCE

As with most asset classes, manager selection is a primary determinant of investment success. However, several factors make it difficult to get an accurate picture of the financial track record of the impact investment industry.

Not least among them is the overall youth of the industry – although there are firms with an established track record and over ten years of investment history behind them, such as energy-focused E+Co, these are in the minority. The momentum behind impact investing has built in the last five years, especially in emerging markets, and given the medium- to long-term nature of many impact investments it is therefore arguably too early to assess industry performance.

Further complicating the issue is the fact most impact investments are made into growing private companies. As with the private equity and venture capital industries, this means the only way to achieve transparency on performance is through disclosure from either the company or the investor – which often isn't forthcoming. The ethos behind impact investing means it is likely to evolve into a more transparent industry than private equity, however, it should be noted that performance data in the private equity industry is often either a partial reflection of the overall industry and/or inclusive only of the better performing investments.

Another factor clouding the picture on performance is the existence of multiple definitions – and therefore boundaries in terms of capturing performance data – of impact investing.

Even where a group of firms has been identified under the same definition as impact investors, they may have different fundraising structures and performance objectives, making it hard to make apples for apples comparisons. Some, like UK-based Bridges Ventures and Dubai-based WillowTree Impact Investors, follow a private equity model, raising money through fixed-life Specialised Investment Funds, allowing for performance evaluation at the fund as well as individual investment level.

The investment objectives of WillowTree and Bridges include the generation of a financial return on investments, and as such their investment decisions, and investor base, are motivated by financial gain as well as by the desire to deliver social and/or environmental benefits. They are also subject to constraints on the length of the investment period – most private equity-style funds are structured with a fixed-term life, of which the investment period spans several years.

Others, like US-headquartered Acumen Fund and E+Co, are non-profit investors, and therefore their investment decisions are less motivated by financial gain, although they do expect at least a return of capital. Neither Acumen nor E+Co raises capital through

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investment fund structures; they instead develop relationships with donors (or 'partners'), who contribute on a more ad hoc basis to the firms' pools of investment capital. This means they can invest without time constraints. Any financial return on these two firms' investments is fed back into the investment capital pool and their donors do not expect any return on capital.

Sample industry returns

E+Co and Bridges Ventures have disclosed some financial performance data, which is outlined below. Other impact investment firms either had no data available due to their relative youth, or declined to disclose the specifics of their financial performance.

E+Co is a US-headquartered non-profit impact investor focused specifically on clean energy investments in emerging markets. It started investing in 1998 and makes both debt and equity investments ranging from US$25,000 to $1 million into companies meeting its criteria of mitigating climate change and reducing poverty.

Figure 4: E+Co portfolio summary performance as of 31 December 2009

Total Debt investments made	$33,572,310
Total Equity investments made	$6,024,278
Total Portfolio (US$)	$39,596,588
Number of Debt investments	237
Number of Equity investments	31
Total investments	268
Average investment (US$)	$147,748
Write offs – (52 investments)	$3,690,176
% of Total investments made	9.3%
Debt Portfolio after write offs – (191 investments)	$30,562,134
Equity Portfolio after write offs – (25 investments)	$5,344,278
Total Portfolio after write offs	$35,906,412
Projected Weighted Average IRR of Debt Portfolio	8.4%
Projected Weighted Average IRR of Equity Portfolio	10.8%**
Projected Weighted Average IRR of Total Portfolio After Write Offs	8.7%***
Total Equity 100% Exited (5 investments)	$565,000
Weighted Average IRR for Equity Buy-Outs	15.8%***
Total Loans 100% Repaid – (58 investments)	$6,743,546
Weighted Average IRR for Repaid Loans	9.1%***

** IRR calculation for equity investments is based on market value of equity portfolio
*** IRR calculations exclude E+Co's operating and enterprise development services costs. However, E+Co covers a large portion of these costs through contract revenues and grants and not through the proceeds of its investments

Source: E+Co Portfolio Summary; http://eandco.net/investments/portfolio-summary/ [accessed 28 April 2011]

Bridges Ventures meanwhile is a for-profit impact investor focused specifically on the UK. It has over £150 million in assets under management across four funds, including two venture funds, a sustainable property fund and a social entrepreneurs fund. Its venture funds, from which the performance data below are taken, make equity investments in companies for which social or environmental impact is intrinsic to the business model, or where the business is located in the most deprived 25 percent of the UK and the business model is regeneration-focused.

Figure 5: Bridges Ventures, select performance data

Name of fund	Ventures Fund I	Venture Fund II
Size of fund	£40 million	£75 million
Year raised	2002	2007
Number of investments made	28	14*
Number of exits	6	1
Capital returned to-date as percentage of fund value	70%	Not disclosed
IRRs on realised investments	Ranging from 12% to 216%	Not disclosed

*Venture Fund II is still in its investment phase and is described by Bridges as being 'substantially invested'

Source: Bridges Ventures

Given the differences in their remits – and also in the type and extent of performance data available for each firm – the inclusion of both Bridges and E+Co data in this section serves less as a basis for comparison than as a small representative sample of the impact investment industry globally. However, one factor to note is that the largely positive performance data for both funds spans the recent global economic downturn, during which time investors across many asset classes recorded negative returns.

Benchmarking industry performance

In addition to select performance statistics from individual firms, some studies that compute expected returns for a sample of impact investments do exist. A recent survey by the Global Impact Investing Network, presented in the 2010 J.P Morgan report, collected data

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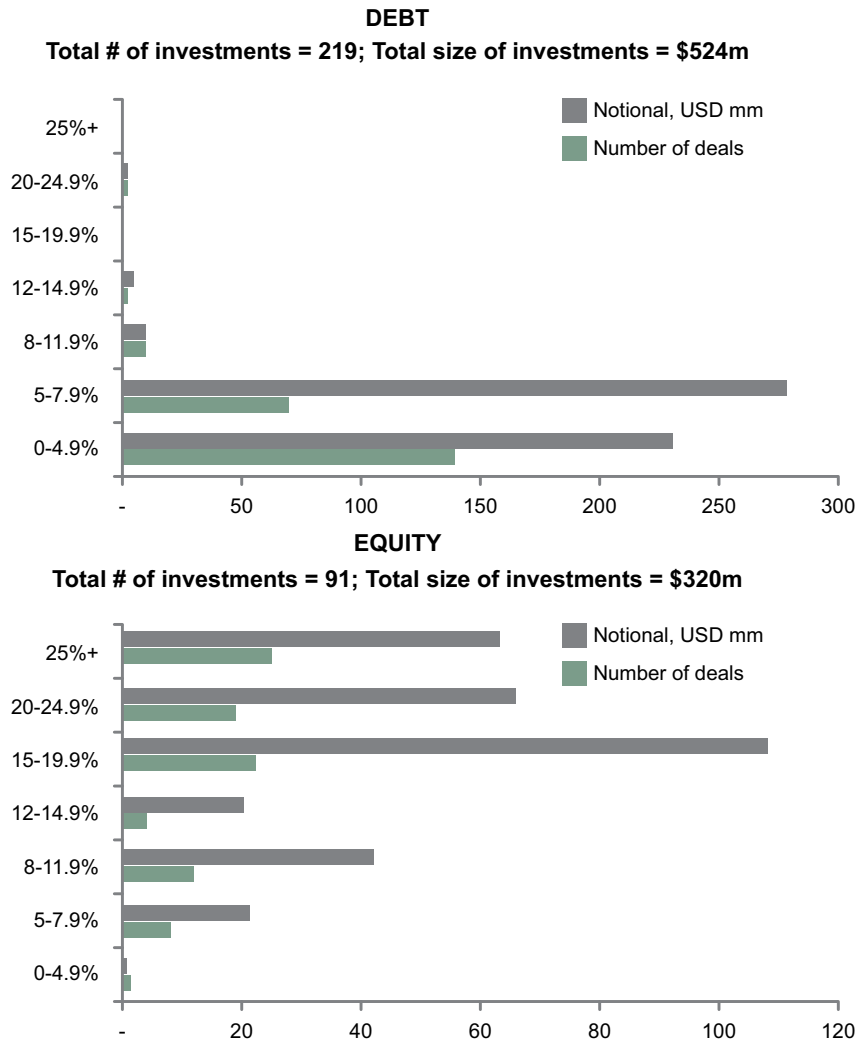
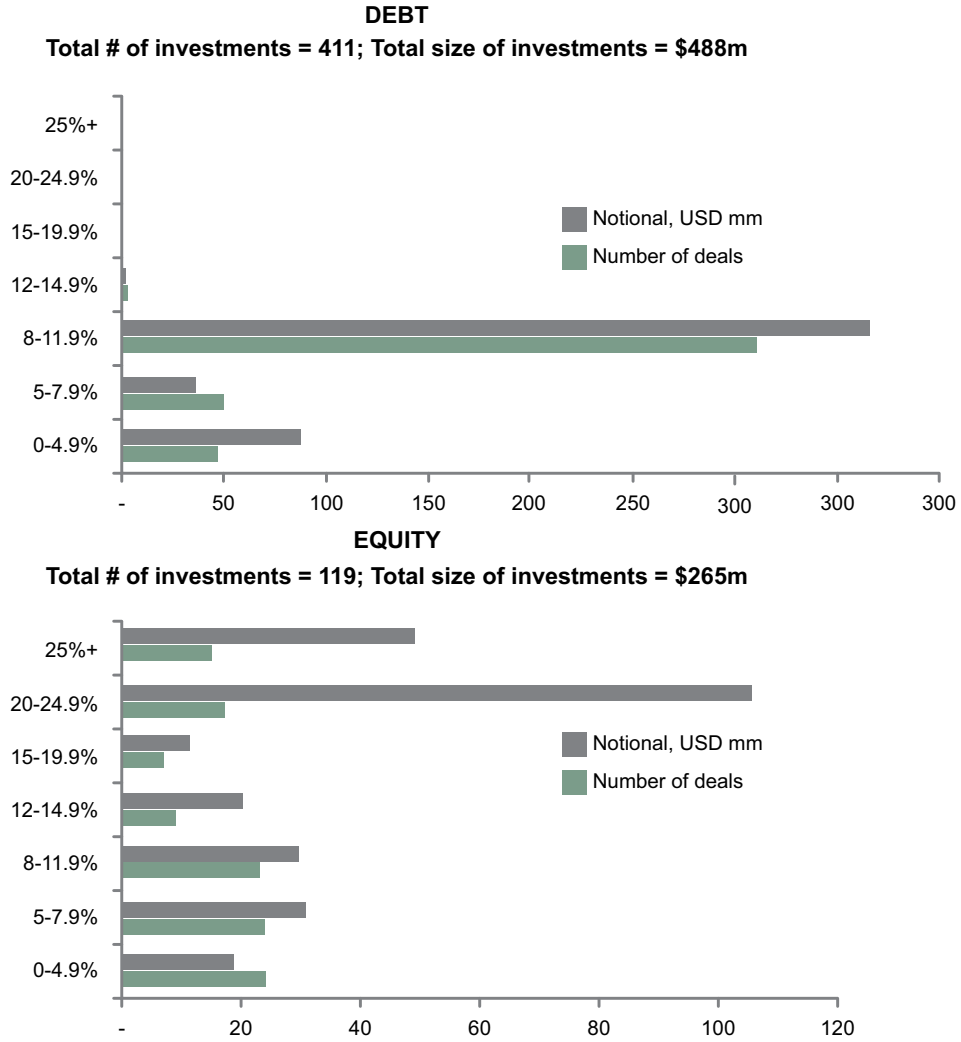
on anticipated returns from a number of investment management firms operating in the impact sector. The survey found marked differences in the returns expectations for emerging and developed markets, in both debt and equity. [9]

Figure 6: Distribution of expected returns for developed market impact investments, debt and equity



Source: GIIN, J.P. Morgan

Figure 7: Distribution of expected returns for emerging markets impact investments, debt and equity



Source: GIIN, J.P. Morgan

For comparison purposes, we collected the performance data of a number of benchmarking indices for one-, three- and five-year time horizons. For equity, we chose the S&P500 and the Russell 2000 Growth. The Russell 2000 Growth gathers the performance of

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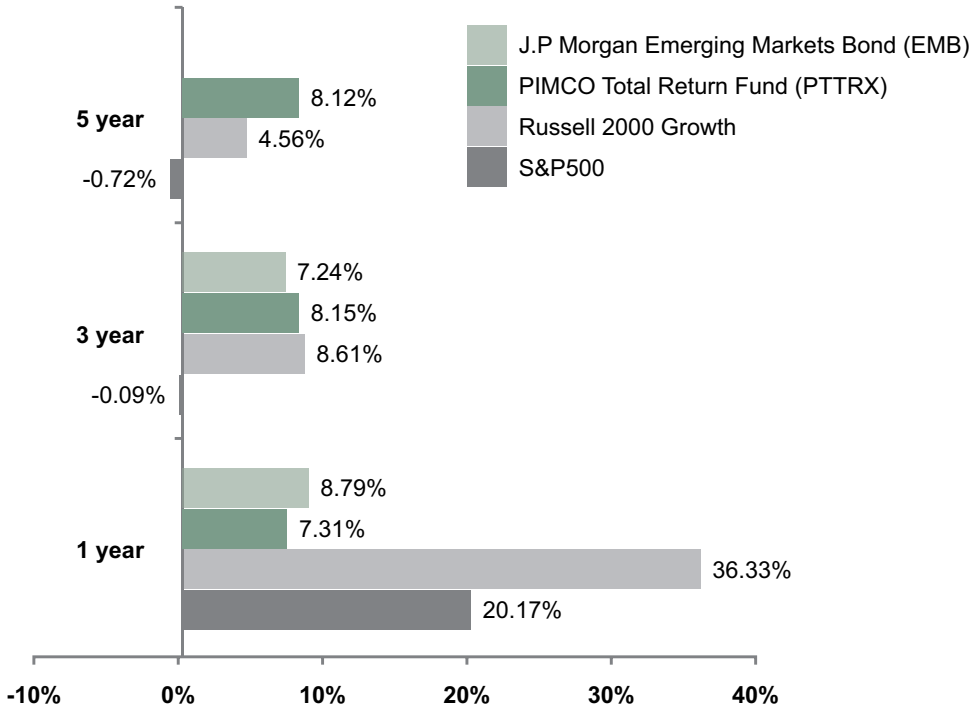
the top high growth U.S. companies. S&P500 has scored negative results over three-and five-year time horizons, while the Russell 2000 Growth has shown returns between 4.6 and 8.6 percent. The very strong performance observed for both indices over the past year (20 and 36 percent) is instead a further indication of the high volatility of developed markets in responding to macroeconomic events.

To benchmark debt returns, we looked at the PIMCO Total Return Fund (PTTRX) and the J.P. Morgan Emerging Market Bond (EMB). As of March 2011, The PTTRX, among the most successful fixed income investment funds globally, has delivered returns in the range of 7.3 and 8.1 percent. The JPM EMB has had a very similar performance. This data almost coincides with the expected returns of debt impact investments shown in the J.P. Morgan/GIIN survey.

Figure 8: Returns of selected equity and fixed income indices



Source: Standard & Poors, Russell, J.P. Morgan, PIMCO, Yahoo Finance

Alternative indicators of financial performance

Given the lack of real financial performance data for the impact investment industry, an alternative approach to assessing returns is to consider financial institutions that base their core business on providing financing to social ventures and capture the message that filters through their posted financial performance.

Netherlands based Triodos Bank, for example, is a leader in sustainable banking. Triodos only lends to and invests in organisations that generate social and environmental benefit.[10] The firm has just announced a 20 percent rise in profit to 11.5 million Euro and steady growth throughout the global financial crisis. The bank saw an increase in raised funds of 15 percent in 2010, amounting to 5.6 billion Euro (US$7.35 billion). Loans to sustainable businesses have also risen by 28 percent to 2.1 billion Euro (US$2.8 billion). In addition to its impact driven lending policy, the funds managed by Triodos Bank invest in companies operating in the sectors of organic agriculture, renewable energy, sustainable real estate and microfinance.[11]

Figure 9: Financial results of Triodos Bank

Triodos Bank (Figures in Euro Millions)	**2010**	**2009**	**2008**	**2007**	**2006**
Funds Entrusted	3,039	2,585	2,077	1,617	1,356
Loans	2,128	1,661	1,270	1,019	854
Funds under management	2,122	1,876	1,378	1,429	1,282
Total Income	102.7	88.3	73.7	59.2	45.9
Net Profit	11.5	9.6	10.1	9.0	6.1

Source: www.triodos.com

The International Finance Corporation (IFC), an organisation actively investing for social impact in emerging markets, recently estimated the economic value added per dollar of project cost across its own investment portfolio. The economic value added is an estimate of a venture's economic profit, or the return achieved in excess of the firm's cost of capital. The analysis yielded an average EVA of $0.56 per dollar invested by the IFC across its whole portfolio.[12]

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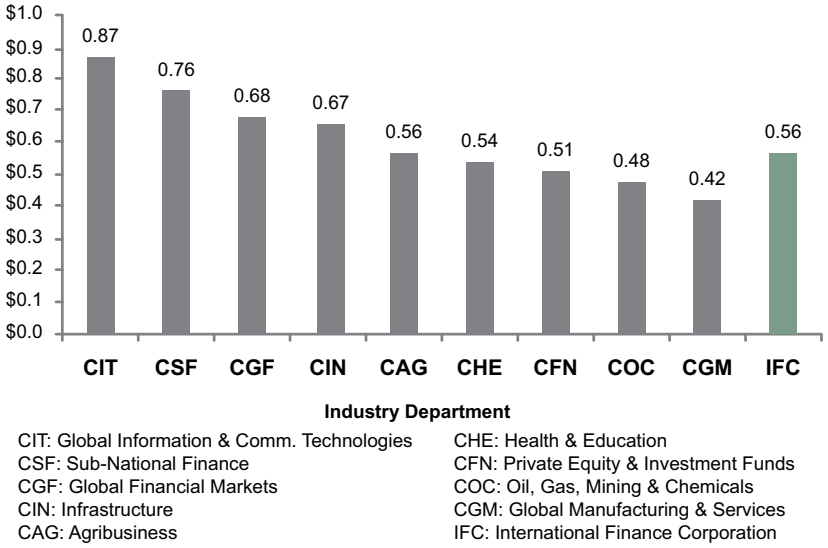
Figure 10: Economic Value Added of IFC projects per sector



Source: International Finance Corporation

Exit strategies

Greater clarity on the performance of existing impact investments will come as more exits are achieved.

The majority of exits from equity impact investments are still happening through industry sales rather than through capital markets, although the development of social capital markets, as described in the box text, is an interesting new development.

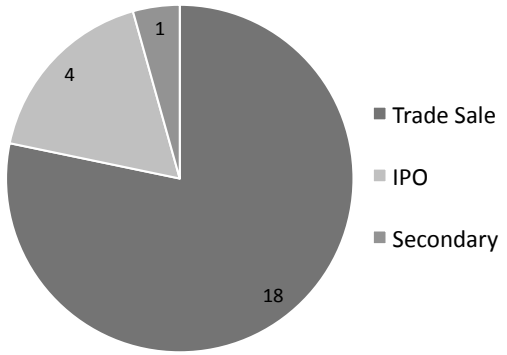
The Nexus for Impact Investing (NEXII) in South Africa, the South Africa Social Investment Exchange (SASIX), Impact Investment Exchange Asia (IIX) and Mission Markets in the United States are platforms that were launched with the mission to match investor capital with impact ventures. Social stock exchanges have been able to produce positive financial results from their platform. For example, the Mission Markets "Investors Circle" platform has facilitated the flow of over $134 million into more than 200 companies addressing social and environmental issues since 1992.[13] The Rockefeller Foundation, one of the most active philanthropic organisations in the world, is one supporter of the development of social capital markets.

In the private equity and venture capital sectors, of which most impact investments can be considered a subset, investee companies are held for a limited number of years with cash returns mainly obtained through particular exit strategies. In order to provide an example of the current practices in place and a reference point, we looked at Actis, a leading private equity investor in emerging markets.

UK-headquartered Actis manages $4.8 billion in assets. The company bases its philosophy on the concept of "the positive power of capital". Actis' main objective is to promote sustainable business practices in the private sector of emerging markets. The company has a long history of investments, with $3.1 billion invested in the last ten years alone. Actis invests across three different asset classes: private equity, infrastructure and real estate. Real estate investments are focused on Africa, while infrastructure initiatives are pursued across Africa, Latin America and South Asia. The private equity division, operating across all these regions, covers four different sectors: business services, consumer, financial services and industrials.

The main exit strategies undertaken by private equity firms are industry sale, management buyout (MBO) and initial public offering (IPO). Actis reports information on the exit strategy undertaken for 23 of the companies included in its portfolio of realised investments. The data indicate that the vast majority of divestments have been through a trade sale (18), while IPO (4) and secondary (1) exit types have been much less frequent.

Figure 11: Actis Private Equity – Frequency of exit types



Source: Actis Private Equity

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In summary, there is strong supporting evidence for those investors that wish to treat impact investment as a purely financial asset class that it can deliver reasonable rates of return, possibly with an element of diversification. This is in line with the intuitive argument that the underlying businesses will have a strong license to operate. Further, the enhanced due diligence involved compared to mainstream investment should prima facie remove a potential source of investment risk. However, the space is not yet mature and the full evidence base will only be developed as increasing numbers of financially oriented funds are wound up and performance statistics made more broadly available.

QUANTIFYING IMPACT

Although there is agreement that the measurement of impact is a naturally important component of assessing an impact investment, actually doing this still represents a subjective and daunting task for most investors and their portfolio companies.

There exist some well-designed metrics models. The Global Impact Investing Network (GIIN) for example has developed the Impact Reporting and Investment Standards (IRIS), a common framework by which investors can measure the social and/or environmental impact of their investments.

Building on the foundation laid by IRIS, non-profit organisation B Lab is in the midst of a more ambitious project to develop a Global Impact Investing Rating System (GIIRS). The GIIRS aims to emulate the approach of ratings agencies such as Morningstar in its evaluation of the social and environmental impact of both companies and funds. As of spring 2011, the team behind GIIRS – which counts The Rockefeller Foundation, USAID, Prudential Financial and Deloitte as partners on the project – was assessing its first batch of 200 portfolio companies from 25 impact funds.

For the moment, frameworks like IRIS are often applied in combination with internally drawn dashboards. Acumen Fund uses an internally developed framework called Best Available Charitable Option (BACO). The fund measures impact by computing the impact per dollar invested in a project and by comparing the result with its charitable alternative.[14] Bridges Ventures employs the BRIDGES Impact Scorecard to measure the social and environmental impact accomplished by its investee companies. The indicators monitored are, among others, job creation, supplier spend and capital expenditure on environmental sustainability. The scorecard is also used to identify new opportunities to create benefit for the community and the company, as well as highlight any governance problems.[15]

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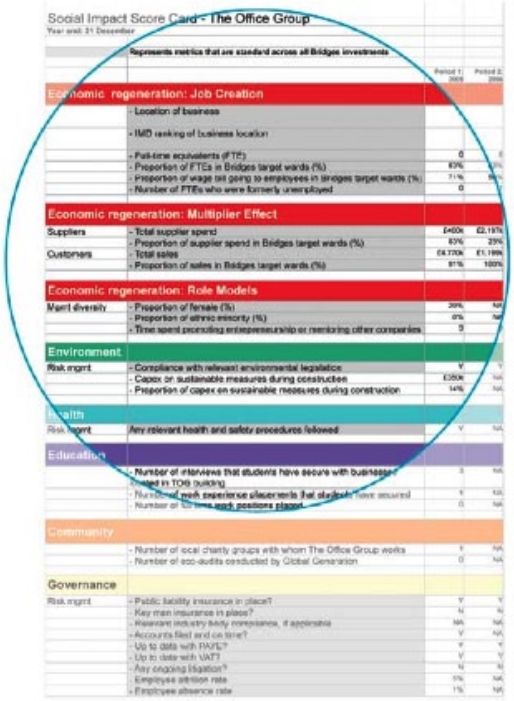
Figure 12: The BRIDGES Impact Score Card



Social Impact Score Card - The Office Group

Year end: 31 December

Represents metrics that are standard across all Bridges investments

		Period 1: 2009	Period 2: 2010
Economic regeneration: Job Creation			
	- Location of business		
	- IMD ranking of business location		
	- Full-time equivalents (FTE)	0	[illegible]
	- Proportion of FTEs in Bridges target wards (%)	83%	[illegible]
	- Proportion of wage bill going to employees in bridges target wards (%)	71%	[illegible]
	- Number of FTEs who were formerly unemployed	0	
Economic regeneration: Multiplier Effect			
Suppliers	- Total supplier spend	£460k	£2.197k
	- Proportion of supplier spend in Bridges target wards (%)	83%	23%
Customers	- Total sales	£8.770k	£1.199k
	- Proportion of sales in Bridges target wards (%)	81%	100%
Economic regeneration: Role Models			
Mgmt diversity	- Proportion of female (%)	29%	NA
	- Proportion of ethnic minority (%)	0%	NA
	- Time spent promoting entrepreneurship or mentoring other companies	3	
Environment			
Risk mgmt	- Compliance with relevant environmental legislation	Y	
	- Capex on sustainable measures during construction	£350k	NA
	- Proportion of capex on sustainable measures during construction	14%	NA
Health			
Risk mgmt	Any relevant health and safety procedures followed	Y	NA
Education			
	- Number of interviews that students have secure with businesses [illegible]	3	NA
	[illegible] in TOG building		
	- Number of work experience placements that students have ensured	1	NA
	- Number of [illegible] work positions placed	0	NA
Community			
	- Number of local charity groups with whom The Office Group works	1	NA
	- Number of eco-audits conducted by Global Generation	0	NA
Governance			
Risk mgmt	- Public liability insurance in place?	Y	Y
	- Key man insurance in place?	N	N
	- Relevant industry body compliance, if applicable	NA	NA
	- Accounts filed and on time?	Y	NA
	- Up to date with PAYE?	Y	Y
	- Up to date with VAT?	Y	Y
	- Any ongoing litigation?	N	N
	- Employee attrition rate	5%	NA
	- Employee absence rate	1%	NA

Source: 2010 Social Impact Report, Bridges Ventures

The GIIN has also gathered all impact investment funds in an online searchable database called ImpactBase. In September 2010, the creation of the GlobalAssets Impact 50 index by the Cordes Foundation, the Calvert Foundation and Giving Assets, with support from the Rockefeller Foundation was announced at the Clinton Global Initiative. This index will closely monitor the top 50 impact investment funds that deliver financial returns along with social and environmental returns, thus providing would-be investors into impact funds with a valuable benchmarking tool.[16]

All of these efforts should ultimately favour the popularity of impact investment as a new asset class and lead to increased demand from the investor community and public. However, until there is a critical mass of impact investors and investees adopting these metrics, the measurement of impact is likely to remain a thorny issue in the evaluation of impact investments.

Investment funds

In this report we concentrate primarily on the strategies of self-designated 'impact investment funds' investing in private companies in emerging markets.

However, it is important to look at the broader context of the impact investment industry, which includes many investors with broader investment remits, including impact-focused developed world investors and non-impact focused emerging markets investors.

Among these, private equity firm Actis, socially responsible bank Triodos Group, and UK-based impact investor Bridges Ventures, offer alternative views and approaches to impact generation.

Actis, a UK-headquartered private equity firm, focuses on emerging markets and endorses the concept of sustainable development and the so-called "positive power of capital". Its objective is to make sure that the capital invested will have a lasting and positive impact on the investee companies and their stakeholders.[17] In doing this, Actis does not stop at the most basic needs of mankind or the BOP but instead invests in a variety of industrial and consumer businesses that can benefit the wider economy of emerging and frontier countries.

Bridges Ventures provides capital to support high-growth businesses able to deliver impact returns. However, it does so by serving a fully developed market, the UK, and not only the lower middle-income parts of the population. Bridges Ventures manages its investments through four distinct funds: the Bridges Ventures Fund I and II, the Social Entrepreneurs Fund and the Bridges Sustainable Property Fund.[18]

The Venture Funds I and II focus on under-served areas, education, environment and well-being. Most of the investments here have been made in the most deprived urban areas of the UK. The investee companies hire previously unemployed local workers and operate in order to stimulate additional spending and investment in the area they operate. An example is SealSkinz, a company specialised in fully waterproof, windproof and breathable clothing accessories. SealSkinz employs 45 people, of whom 39 percent live in target areas, generates local sales of 33 percent and a supplier spend of 63 percent from target areas. Some investee companies have a specific environmental focus such as Whelan Refining Limited, a waste oil refining plant. Whelan recycles 19,223 tonnes of waste oil per year and has reduced the energy consumption per tonne recycled by 81 percent in the last year alone. As in the case of SealSkinz, Whelan is located in one of the most deprived areas of the UK, employs 26 staff of which 35 percent live in target areas and 31 percent of its supplier spend is generated in target areas.[19]

Netherlands-based Triodos Group meanwhile is a leader in sustainable banking. Triodos only lends to and invests in organisations that generate social and environmental benefit.[20] In addition to its impact driven lending policy, the Group manages several listed investment funds, which invest in sustainable companies operating in the sectors of organic agriculture, renewable energy, sustainable real estate and microfinance.[21]

Private and institutional investors

A number of high net worth individuals from around the world have adopted investing for impact as a policy for responsible investment and as a vehicle for generating impact that goes beyond philanthropy. The channels available to them are impact investment funds such a those mentioned above, venture philanthropy channels such as Acumen, direct investments and, in some cases, their own foundations as in the case of Bill and Melinda Gates.

Increasingly, institutional investors and sovereign wealth funds are also turning to impact investing and it is expected that this trend will hold as regulation and demand from the public continue to encourage different forms of responsible investing.

Companies

This report highlights 12 emerging markets-based impact-focused business models, mostly still in the start-up phase. However, it is important to note that there are many companies – including some of the world's biggest and most well-known – which can be considered as seeking to leverage some impact either socially and/or environmentally, not only in emerging markets.

One obvious example is global beauty products retailer The Body Shop, founded in the UK in 1976 by the late human rights activist Dame Anita Roddick and now operating over 2500 shops in more than 60 countries worldwide. The Body Shop, which was bought by French beauty product conglomerate L'Oreal Group in 2006, was founded on a set of ethical principles which saw it renounce product testing on animals, seek to source ingredients with minimal environmental impact and promote the concept of fair trade. Among the many quotes attributed to her, Roddick famously stated: "The business of business should not just be about money, it should be about responsibility. It should be about public good, not private greed." Besides its impact-focused business model, in 1990 the Body Shop also launched its own charity, The Body Shop Foundation, to commit to groups promoting human rights and environmental and animal protection.

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Supporting organisations and networks

A growing number of diverse organisations and networks exist to encourage and support the development of the impact investment industry globally and also promote or showcase environmental and social awareness at the company level. They are too numerous to cover in this section, but an example of each type of network or organisation is given.

There exist several organisations such as the UK-headquartered Fairtrade Foundation, which offers certification to companies adhering to its standards and pricing guidelines when sourcing products from developing nations. The Fairtrade logo, seen on products such as coffee and chocolate, has become an important selection criterion to many consumers in countries such as the UK.

Also UK-headquartered is the global listing and directory service for "social businesses", ClearlySo, which was a useful starting point for locating some of the case studies featured in this report. ClearlySo defines a social business as one that "integrates" two objectives, the standard commercial objective of growth and profit increase, with an additional (if not separate) social, environmental and/or ethical aim. ClearlySo has positioned itself as a middleman and service provider to social businesses, providing a forum for them to advertise job vacancies and invite third party investment, among other things.

Catering to the investment manager side of the impact investment story (and mentioned several times throughout this report), the US-based Global Impact Investor Network (GIIN) is the de facto impact investment industry body, promoting standardised reporting, transparency and advancement of the industry. In one initiative, the GIIN has also gathered all impact investment funds in an online searchable database called ImpactBase.

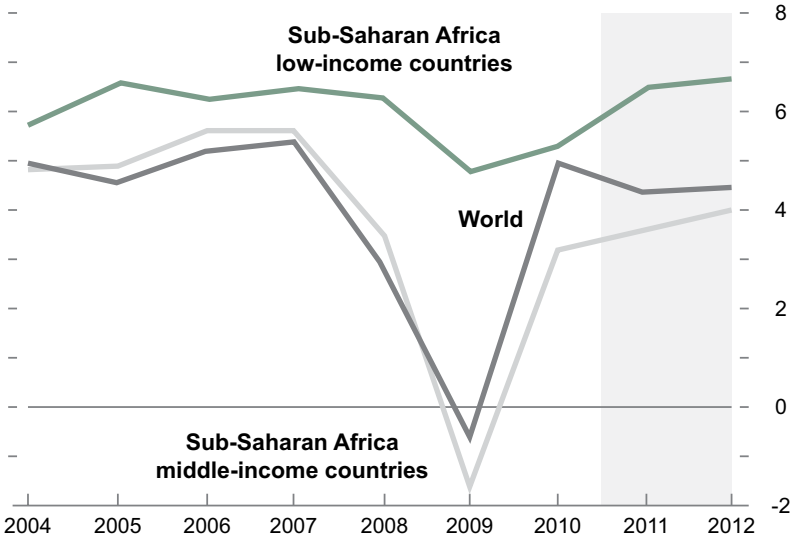
There are also industry-specific networks, such as the Singapore-based Asian Venture Philanthropy Network (AVPN), which seek to promote impact investing within a specific sub-section of the investing world, in this case private equity. Established last year, the AVPN aims to replicate the success of its predecessor and sister organisation, the European Venture Philanthropy Association, in both encouraging more individuals and organisations within the private equity industry to engage in philanthropic investment, and also establish a network between various philanthropy-focused funds.

Impact investments may be made across a variety of different sectors and geographies. Our research focused on diverse business models across Asia, the Middle East and Africa and over six different sectors: healthcare, nutrition, environment, microfinance, education and infrastructure. These sectors commonly represent the major channels used to generate impact.

MACROECONOMIC CONTEXT

Investing for impact can generate healthy financial returns for investors, while providing diversification from today's highly interdependent global markets. In addition, emerging and frontier markets (EFM) often show higher and more stable GDP growth projections than developed countries.[22] Moreover, investing in areas that address the intrinsic needs of mankind – nutrition, healthcare and education – is a partial guarantee of independence from market speculation.

Figure 13: GDP growth of Sub-Saharan Africa and World



Source: IMF

The higher attractiveness of EFM is also highlighted by the comparison of MSCI Equity Indexes for one-, three- and five-year time horizons. EFM Asia and Africa clearly showed a stronger performance than developed economies over the past three years (i.e. the years of the financial crisis). Interestingly, the trend seems not to be driven by the group of fastest advancing emerging economies: Brasil, Russia, India and China (BRIC). EMF of Asia and Africa scored a solid growth rate of 14 percent in the past year, while Europe, Australia and Far East (EAFE) and BRIC only grew 1.5 and 5.5 percent respectively. Over the past three years, EMF ASIA and EMF AFRICA grew 1.5 to 2 percent, while EAFE and BRIC filed a loss of 7 and 2 percent respectively.[23] Asia and Africa offer immense emerging market opportunities for traditional and impact investments.

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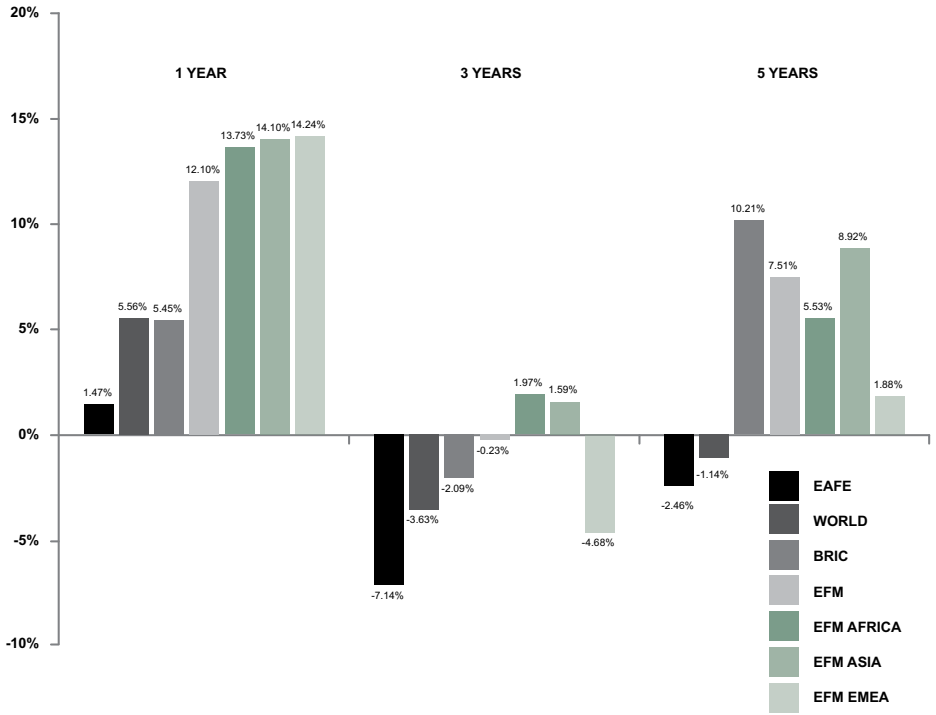
Figure 14: MSCI Equity Indices returns for one, three and five year time horizons



Source: MSCI Inc.

Impact investments share many characteristics with venture capital (VC) and private equity (PE) strategies. VC and PE activity in emerging and frontier markets has grown considerably in recent years. Moreover, impact ventures are very often non-public and in search of seed or growth capital to increase scale. VC/PE investors, when selecting which emerging/frontier market to invest in, often undertake specific country macro analysis to identify attractive opportunities.

The Venture Capital/Private Equity Attractiveness Index (VCPEAI), developed by IESE Business School, condenses the many key factors considered by the industry when selecting investments in emerging markets. Factors include growth prospects, level of taxation, capital market liquidity, the human and social context and the environment for entrepreneurial activity.

The 2009/2010 VCPEAI, filtered for this report's regions of focus, highlights some of the most interesting markets for VC/PE activity. In Asia, Malaysia, China and Thailand appear to be the most attractive. In Africa, Morocco, Egypt and South Africa lead the regional ranks. In the Middle East, the UAE, Saudi Arabia and Kuwait are the first countries for VC/PE attractiveness.[24]

Figure 15: The Venture Capital – Private Equity Attractiveness Index 2009/10

Selected Countries	2009/2010 VCPE Attractivness index
Malaysia	54.4
United Arab Emirates	49.5
China	48.5
Saudi Arabia	46.4
Thailand	41.4
India	40.9
Kuwait	40.1
South Africa	39.5
Oman	38.1
Indonesia	30.7
Morocco	30.3
Egypt	30.1
Vietnam	27.1
Philippines	26.1
Nigeria	24.4
Kenya	19.3

Source: http://vcpeindex.iese.us/

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OPPORTUNITIES FOR IMPACT

According to a recent publication by the Monitor Institute[25], given the volume of social and environmental investments today it is not hard to imagine that impact investments could come to represent at least one percent of the total global assets under management in a five- to ten-year time horizon. This would mean that the impact investment asset class would grow to $500 billion in size. Within this context, opportunities for impact in the social and environmental context are numerous and independent of a particular geographical location. Emerging and frontier economies constitute an especially attractive marketplace, as the number of target recipients there is considerably greater.

Social impact

A widely accepted tenet is that an investment can be defined as having 'impact' if it generates benefit at the bottom of the pyramid (BOP). If this is accepted as being a principal driver, then investments should be directed for greater efficacy towards the regions that are home to the largest number of people living below the poverty line. As data from the World Bank shows, South Asia and Sub-Saharan Africa are the most impacted areas, with 40.3 and 50.9 percent of the respective population living below $1.25 a day. South Asia and Sub-Saharan Africa also represent the most populated regions in the world. While poverty in the MENA region is not as severe, it still represents an area of greater potential impact when compared to Europe, Central Asia and North America.[26]

Figure 16: Percentage of population living in poverty by region

Geography	Percentage below $1.25 a day	Percentage below $2 a day
East Asia & Pacific	16.8	38.7
Europe and Central Asia	3.7	8.9
Latin America & Caribbean	8.2	17.1
Middle East & North Africa	3.6	16.9
South Asia	40.3	73.9
Sub-Saharan Africa	50.9	72.9

Source: World Bank

A closer look at Sub-Saharan Africa shows that Tanzania and Mozambique, with large population numbers and high poverty ratios, represent the countries that are most afflicted by poverty in Africa. Applying the same rationale to Asia, Bangladesh and Indonesia stand out as the poorest nations across the region.[27]

Figure 17: World's highest poverty rates by country

Country	Percentage below $1.25 a day	Percentage below $2 a day	Population (mm)
Africa			
Tanzania	88.5	96.6	43.7
Liberia	83.7	94.8	3.9
Burundi	81.3	93.5	8.3
Rwanda	76.6	90.3	10
Mozambique	74.7	90	22.9
Asia			
Nepal	55.1	77.6	29.3
Bangladesh	49.6	81.3	162.2
Uzbekistan	46.3	76.7	27.8
Indonesia	29.4	60	229.9
Cambodia	25.8	57.8	14.8

Source: World Bank

Poverty is one of the two drivers that restrict access to services such as healthcare, education and nutrition, the other being the lack of such services as provided by the public sector. Consequently, opportunities for private investors also exist among the lower middle-income segments of a population in areas not sufficiently served by public infrastructure. In this respect, J.P. Morgan estimated the potential profit opportunity arising from the provision of a number of services, such as affordable urban housing ($177bn-$648bn), clean water ($2.9bn-$7bn), maternal health ($0.1bn-$1bn) and primary education ($2.6bn-$11bn).

Figure 18: Potential invested capital to fund selected BOP businesses over the next ten years

Sector	Potential invested capital required USD bn	Potential profit opportunity USD bn
Housing: Affordable urban housing	$214-$786	$177-$648
Water: Clean water for rural communities	$5.4-$13	$2.9-$7
Health: Maternal Health	$0.4-$2	$0.1-$1
Education: Primary Education	$4.8-$10	$2.6-$11
Financial Services: Microfinance	$176	Not measured

Source: J.P. Morgan

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Environmental impact

Looking at the environment sector, the biggest opportunities for impact here may be found where the environmental damage is currently the greatest. Bad industrial and agricultural practices, water and air pollution, deforestation, improper waste management and non-renewable energy production are all factors that heavily degrade the Earth's environment.

A recent study by the University of Adelaide condensed all these phenomena into relative and absolute indicators, ranking countries for their negative environmental impact. The study used seven different indicators of environmental degradation to compute two distinct rankings: a proportional environmental index, where impact is measured against the total availability of resources, and an absolute environmental impact index, measuring degradation by comparing countries globally.[28]

Interestingly, the nine worst proportional performers fall in the geographical perimeter of this report. Singapore, Korea and Qatar stand out for their negative environmental impact. In terms of absolute negative impact, China, Indonesia and India are among the top ten.

Figure 19: Worst proportional (A) and absolute (B) environmental performers

A

Country	Ranking
Singapore	1
Korea	2
Qatar	3
Kuwait	4
Japan	5
Thailand	6
Bahrain	7
Malaysia	8
Philippines	9
Netherlands	10

B

Country	Ranking
Brazil	1
USA	2
China	3
Indonesia	4
Japan	5
Mexico	6
India	7
Russia	8
Australia	9
Peru	10

Source: University of Adelaide

IMPACT INVESTMENT FUNDS IN EMERGING MARKETS

In this section we provide a brief description of a number of funds operating in the impact investing field in emerging markets and illustrate the regions and sectors that these established and more recently formed funds serve.

Aavishkkar International, incorporated in Singapore in 2002, promotes entrepreneurship at the BOP in India by financing low income groups and primarily rural economic activities not covered by traditional financial institutions. To date, the company has engaged in 22 investments. The organisation's portfolio comprises companies operating in microfinance, energy, nutrition, healthcare, community development and education. In addition to capital, Aavishkkar also provides managerial support and advisory services to the investee companies. The firm generally makes equity and debt investments, and other funding structures are adopted for specific circumstances. The Aavishkaar India Micro Venture Capital Fund, the equity fund, intends to raise US$14 million for investment into micro and small enterprises. By 2008, the microfinance branch Aavishkaar Goodwell India Microfinance Development Company Ltd, had raised US$18 million for its fund dedicated to microfinance institutions.[29]

Bamboo Finance, based in Switzerland, focuses on debt and equity financing of social enterprises by raising capital for ventures that have a positive impact on society. The company advises the Oasis Capital fund (US$30 million) on investments that provide social impact as well as strong financial returns.[30] The portfolio companies focus on improving access to basic goods and services benefiting the BOP. The projects undertaken are across Africa (Kenya, Tanzania and Mozambique), Asia (Pakistan, India, Vietnam and Laos) and Central America.

Acumen Fund was first established in 2001 with seed capital from philanthropic organisations. The fund's mission is to serve the poor by focusing on the most critical goods and services needed at the BOP. It manages investments across five different sector portfolios: water (four investments, $4.4 million in value), health (15 investments, $21.3 million in value), housing (five investments, $3.7 million in value), energy (three investments, $3.1 million in value) and agriculture (five investments, $5.1 million in value). The investments are distributed across India (12), East and South Africa and Pakistan.[31]

Grassroots Business Fund invests $7.2 million in businesses that provide economic advantage for people at the BOP. Its main geographical presence is in Africa (49 percent), followed by Latin America (28 percent), South Asia (17 percent) and South East Asia (6 percent). The fund categorises its projects across the following

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three sectors: BOP services (36 percent), agribusiness (37 percent) and innovations in finance (26 percent). Grassroots makes equity, quasi equity and debt investments. The investments are in the range of $250,000 – $1,000,000 and typically have a time horizon of five years.[32]

WillowTree is a newly established impact investment fund based in the United Arab Emirates. It invests to support sustainable, scalable and profitable businesses that have a tangible positive impact on the communities and environments that they serve. The fund pursues mainly early stage private equity investments between US$1 and US$10 million in size. The fund focuses on the Middle East, Africa and South Asia. In terms of sectors covered, these are education, health, food and nutrition, community development, environment and energy and poverty alleviation.

It is expected that a number of specifically termed impact investing funds will form in the coming years as the attractiveness of the investment strategy and asset class are confirmed.

There exist a number of well-established impact investment funds in the developed European and US markets, serving their own geographies with impressive impact and financial results. These funds have not been studied in detail for the purposes of this report, although their success provides strong encouragement for the impact investing model.

PORTFOLIO DISTRIBUTION

We analysed the sector portfolio distribution for selected impact funds, to illustrate some of the current strategies in place. As far as impact funds are concerned, we compared the investment distribution by sector undertaken by four different players: Aavishkkar International, Bamboo Finance, Acumen Fund and Grassroots Business Fund. The aggregate data shows an uneven project distribution across sectors. Ventures operating in the areas of community development, healthcare and nutrition are the most represented categories (approximately 25 percent each), while the presence of companies operating in the energy and education sectors is only marginal. Of the total 85 portfolio ventures sampled, 15 companies operate in the financial services sector.

Figure 20: Number of portfolio companies by sector

Fund Name	Financial Services	Community Development	Healthcare	Nutrition	Energy	Education	Other
Aavishkkaar	7	6	4	2	1	1	21
Bamboo Finance	4	1	2	1	2	1	11
Acumen	0	5	15	9	3	0	32
GrassRoots	4	9	0	8	0	0	21
Total	15	21	21	20	6	2	85
Percentage	18%	25%	25%	24%	7%	2%	100%

Source: Aavishkkar, Bamboo Finance, Acumen and Grassroots websites

We also looked at the portfolio of financial institutions and international organisations active in the field. The project portfolio of institutions such as the African and Asian Development Banks indicate not only the sectors that undertake the most projects but also those that appear to be more scarcely covered. Data from the African Development Bank database shows a total number of 824 ongoing projects across different sectors. The figures show a greater concentration of projects in agriculture & agro-industries (26 percent), economic and financial governance (17 percent) and human and social development (17 percent).[33]

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Figure 21: Distribution of projects endorsed by the African Development Bank

Sector	Number of Ongoing Projects	%
Agriculture & Agroindustries	218	26
Economic and Financial Governance	140	17
Education	53	6
Energy and Power	54	7
Environment	19	2
Health	51	6
Human and Social Development	136	17
Infrastructure	3	0
Transport	88	11
Water supply and Sanitation	62	8
Total	824	100

Source: African Development Bank project database

A close look at the project distribution of the Asian Development Bank reveals a distinct sector concentration. Filtering for approved and classified projects over the last three years (2008 to 2010) yields a total of 828 projects, with the main focus on transport (18 percent), energy (16 percent) and agriculture & natural resources (13 percent).[34]

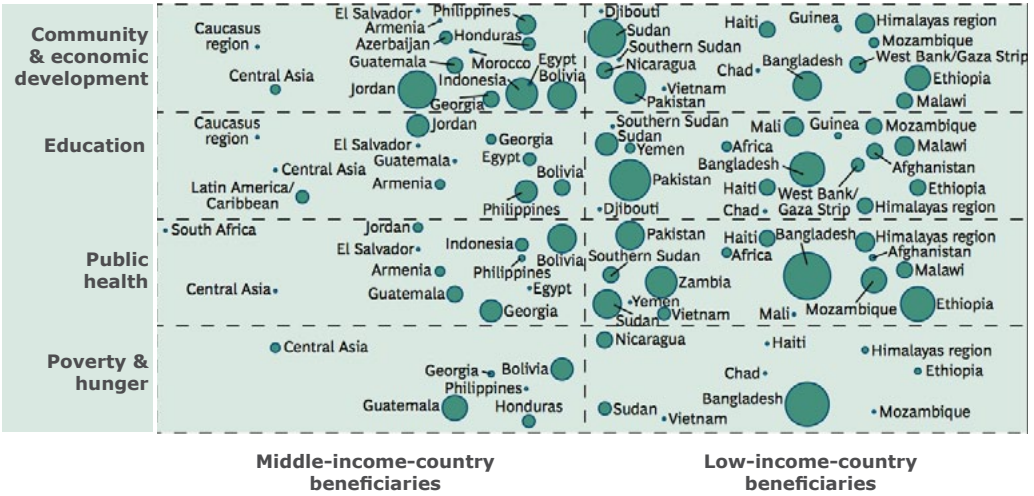
Figure 22: Distribution of projects approved by Asia Development Bank

Sector	Approved Projects 2008-2010	%
Agriculture & Natural Resources	110	13
Education	27	3
Energy	130	16
Finance	55	7
Health	25	3
Water	81	10
Industry and Trade	14	2
Transport	150	18
Public Sector	96	12
Multi sector	140	17
Total	828	100

Source: Asian Development Bank project database

As an additional data point, a recent study by The Boston Consulting Group gathered information on the geographical distribution and size of NGO projects. In low-income countries, education as well as public health appeared to have a greater concentration of projects than other sectors.

Figure 23: Distribution of NGO activities



Source: The Boston Consulting Group

Typical investment size

On average, impact investments globally tend to be smaller in size compared to traditional investments. An immature market may account for the smaller average investment size, but also highlights the opportunities presented by the existence of numerous new ventures in need of private capital to expand. A premature market may explain this distribution, as it may also highlight the existence of many new ventures that need private capital to expand. Smaller investment sizes can attract a wider pool of investors, but may also represent an obstacle to bigger investors with higher fixed costs.[35]

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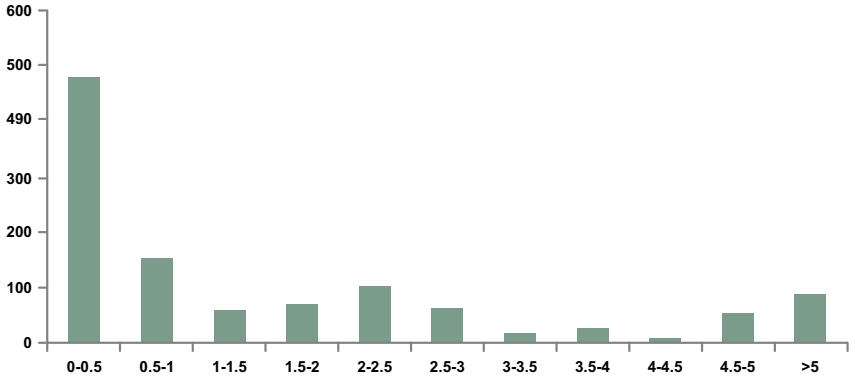
Figure 24: Global distribution of sample impact investments; bucket sizes shown in USD million



Source: J.P. Morgan. Data in the sample was collected from a survey conducted by the Global Impact Investing Network

In a 2010 study conducted for Gray Ghost Ventures, an impact investment fund, by Oxford Analytica only three out of 31 investment funds analysed were willing to invest start-up capital of less than $250,000. The same survey highlighted microfinance as the dominant investment sector, covering half of the total dollar amount under investment for impact. The study also showed that India received approximately 30 percent of the total capital invested for impact.[36]

Equally, our research revealed that the abundance or scarcity of social and environmental enterprises relates to specific geographies and sectors. Overall, the Middle East was the least represented geography, while infrastructure was identified as the least represented among the sectors analysed. This report will clarify and explain these observations.

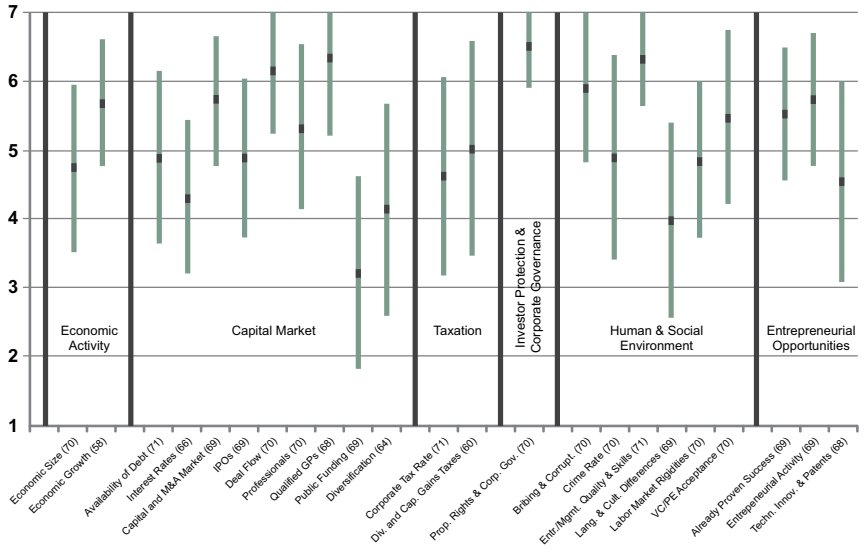
Impact investments in sectors such as education, nutrition and healthcare appeared to be the least capital-intensive, with shorter time-to-impact. Investments in environment, infrastructure and microfinance result instead in longer time-to-impact and require more capital to access. The opportunities and challenges described hereafter offer guidance for those seeking to achieve financial performance and impact, and help to reduce exposure to factors that could dampen the performance of a portfolio.

CHALLENGES OF INVESTING IN EMERGING MARKETS

When investing for impact in the developing world, there are country-specific challenges that can limit financial and impact returns. Complexity of regulations, corruption, political instability and poor communications networks are among the main factors to withstand in order to ensure the performance of an impact investment. However, countries that present the biggest barriers in these areas often offer the biggest opportunities for social and environmental impact. A comparative analysis of macro indicators for our target geographies can help assess the relative existing risks while selecting investments.

In a 2009 paper by Groh and Liechtenstein, the authors analyse surveyed PE investors on the importance of allocation criteria in emerging markets.[37] The survey collected data from over one thousand limited partners worldwide. The criteria have been classified into different groups: economic activity, capital markets, taxation, investor protection and corporate governance, human and social environment and entrepreneurial opportunities. The study indicated that investor protection and corporate governance criteria were the most important, while the availability of subsidies by the public sector were the least relevant for PE investors in emerging markets.

Figure 25: Importance of distinct criteria when investing in emerging markets



Source: Groh and Liechtenstein, 2009

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Ease of doing business

The International Finance Corporation (IFC) and the World Bank (WB) assess on a yearly basis the ease of commencing and running a venture in a particular country. Indices are computed by measuring the complexity of procedures necessary to open and run a business, i.e. the permits, licenses and related costs. In addition, IFC and WB compute the ease of credit access as well as the level of protection available to investors.[38]

The rankings offer an interesting insight and might explain some of the relative abundance of social enterprises in some regions encountered during our research. Nations that stand out for the ease of their business environment will generally favour the success of a social enterprise. However, many countries in the geographies that are in the scope of this report do not rank well, and this highlights an intrinsic challenge for investors in developing nations.

Figure 26: Ease of doing business rank 2011

Economy	Ease of Doing Business Rank	Starting a Business	Getting Credit	Protecting Investors
Singapore	1	4	6	2
Hong Kong SAR, China	2	6	2	3
Saudi Arabia	11	13	46	16
Thailand	19	95	72	12
Mauritius	20	12	89	12
Malaysia	21	113	1	4
Bahrain	28	78	89	59
Israel	29	36	6	5
Taiwan, China	33	24	72	74
South Africa	34	75	2	10
United Arab Emirates	40	46	72	120
Kyrgyz Republic	44	14	15	12
Armenia	48	22	46	93
Qatar	50	111	138	93
Botswana	52	90	46	44
Azerbaijan	54	15	46	20
Tunisia	55	48	89	74
Oman	57	76	128	93
Rwanda	58	9	32	28
Kazakhstan	59	47	72	44
Ghana	67	99	46	44
Belarus	68	7	89	109
Namibia	69	124	15	74
Mongolia	73	86	72	28
Kuwait	74	141	89	28
Zambia	76	57	6	74
Vietnam	78	100	15	173
China	79	151	65	93
Pakistan	83	85	65	28
Maldives	85	50	152	74

Source: http://www.doingbusiness.org

According to the IFC/WB economic rankings, Saudi Arabia (11), as well as Thailand (19) and Malaysia (21) offer the best conditions for running a business among developing countries of significant size, while Belarus (7), Rwanda (9) and again Saudi Arabia (13)

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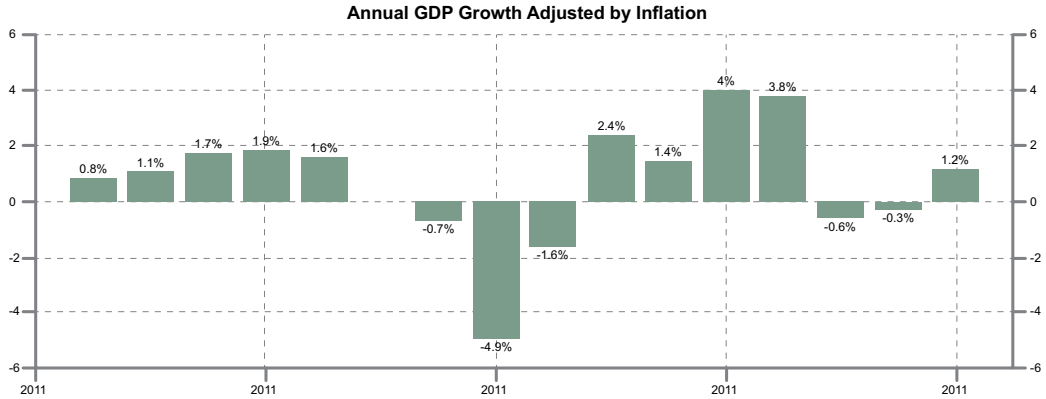
make it easier to start a business. Malaysia (1) is ranked first in the world for ease of obtaining credit, with South Africa (2), Israel (6) and Zambia (6) following closely. As far as investor protection is concerned, Malaysia (4) again scores high, as do Israel (5) and South Africa (10). The analysis also highlights the interesting contrasting features of some countries. Thailand and Malaysia, where it appears to be relatively easy to conduct a business, have major barriers to starting up a business (position 95 and 113 in the chart respectively).[39]

Political instability

The political instability typical of many developing nations may cause sudden change in market conditions and consequently affect the operation of a social venture. Thailand in 2010 and Egypt in 2011 are among the most recent examples. Among the most direct consequences of these events are diminished public security, a worsened social context for the local population and a shortage of foreign private investments. In the case of Thailand, the country lost all of its GDP growth shown in the last quarter of 2009 and first quarter of 2010 as a consequence of riots that only lasted a month. GDP growth for Q2 and Q3 of 2010 was recorded at -0.6 percent and -0.2 percent respectively, despite having reached 4 percent prior to the riots in Q4 2009 and Q1 2010. In relation to impact investments, it is justifiably difficult to quantify the harm of such events for this particular asset class. Nonetheless, given the nature of the sectors employed to achieve impact, the real harm might be considerably lower than losses suffered by traditional asset classes.[40]

Thai "Red Shirt Protestor", Source: www.guardian.co.uk

Figure 27: Thailand GDP growth rate



Source: TradingEconomics.com; NationalEconomic Development

Corruption

Public corruption can greatly affect economic activity in a developing nation, slowing progress and limiting financial returns. The Corruption Perception Index, issued yearly by Transparency International, is a comparative indicator of public corruption levels for countries. In 2010, the Middle East and North Africa region featured Qatar, the United Arab Emirates and Israel as the 'cleanest' countries in the region, with Iraq, Iran and Lebanon scoring the lowest positions. In Sub-Saharan Africa, Botswana, South Africa, Namibia and Ghana were recorded among the least corrupt countries, while Somalia, Sudan and Chad were the most corrupt. In developing Asia, Bhutan, Brunei and Malaysia were the least corrupt, while Myanmar, Afghanistan and Uzbekistan were the most corrupt.[41]

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Figure 28: Most corrupt countries in the world by region

Country	Corruption Index
Africa	
Somalia	1.1
Sudan	1.6
Chad	1.7
Burundi	1.8
Angola	1.9
Asia	
Myanmar	1.4
Afghanistan	1.4
Uzbekistan	1.6
Turkmenistan	1.6
Kyrgyzstan	2
Middle East	
Iraq	1.5
Iran	2.2
Lebanon	2.5

Source: Transparency International, 2010 Corruption Perception Index

Human capital

One further frequent constraint to investment in emerging markets is lack of business skill and experience among local entrepreneurs, and, in the lesser-developed countries, lower levels of education. However, there exists an encouraging trend of directing education to build practical, vocational and entrepreneurial skills, and supporting the burgeoning social entrepreneurship movements through resource networks, online platforms and industry associations. This is especially true in the Middle East and in the more developed South Asian and African economies. Online platforms promoting entrepreneurship, such as WAMDA in the Middle East, and teaching programmes, such as Injaaz, first initiated in Jordan, are well-established examples of this trend.

ISSUES FOR RESPONSIBLE INVESTORS

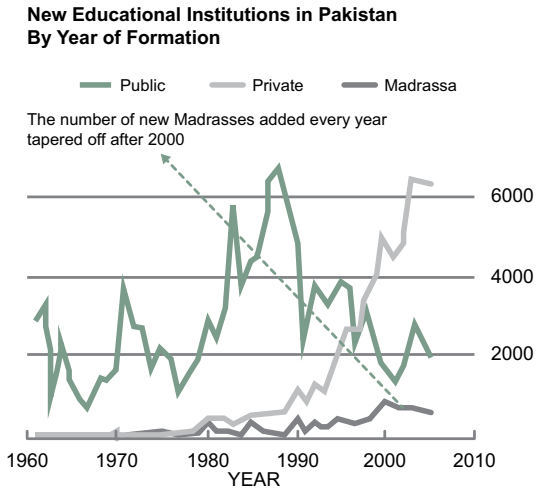
EDUCATION

Private schooling is the primary conduit for investment in education in the developing world. Low literacy levels and poor government services translate into significant opportunities for private capital to enter the education sector.

Contrary to common belief, a vast number of private schools do not rely on donations. Many are in fact opened by local entrepreneurs in their own communities. Private schools usually reduce costs by employing teachers from local communities. The teacher to student ratio is higher in private schools and there is less absenteeism.[42] Current business models vary from low-tuition to a combination of schooling and parallel business activity to generate profits for the maintenance of school operations and additional school facilities.

As is the case in most regions, but particularly in Africa, demand for education cannot be fully met by public services; therefore a rising demand for private education is being recorded. Data from the IFC shows that in 2004, 10 percent of the total number of enrolled students in Africa was in primary private education, while secondary private schools enrolled 14 percent.[43] In Pakistan meanwhile, the private education sector has grown steadily, from near non-existence in 1980 to over 6000 institutions in 2008. The number of new institutions in the public sector has, by contrast declined steadily over the same period.[44]

Figure 29: Private and public education trends in Pakistan



Source: UNESCO

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Despite the growth experienced by the sector, the finance structure for private educational institutions is still constrained. A number of international financial institutions provide financial support in the form of direct funding with lower eligibility criteria and risk-sharing financing structures to local banks that extend credit to ventures in education.

The IFC has directed a total amount of $481 million to 63 education projects in developing countries, an average of $7.3 million per project. In Kenya for example, 23 schools have accessed $300,000 in loans, while an additional 113 have received advisory support. The social impact is considerable: enrolment at the supported schools totals 31,000 students. In Rwanda, the IFC has given out $7.1 million in loans to 31 schools and provided advisory support to another 66, impacting a total student community of 34,000.[45]

The organisation Opportunity International has launched a funding program for 'edupreneurs' called Microschools. In 2007 the organisation established a new scheme for issuing microfinance school loans to entrepreneurs building or expanding private school ventures. The program, which started with a pilot project in Ghana, enabled the funding of schools with average enrolment of 200 students. The loan sizes granted to edupreneurs are higher than normal microfinance loans because investments in school facilities are generally more onerous.[46]

While primary education was the area of focus twenty years ago, investments now appear to be more directed towards secondary education. The growing population that attained a primary education generated consequent demand for institutions offering further specialisation and working skills training.

As data from the African Development Bank shows, the percentage of education projects undertaken in secondary education has grown from 5.9 percent in the seventies to 43.9 percent in the period 2000-2006.[47]

Figure 30: Percentage of education projects undertaken by the African Development Bank by sector

Sub-sector/Components	Percentage			
	1975-85	**1986-99**	**2000-06**	**Total**
Secondary TVET	60.8	28.4	15.3	30.5
Secondary General Education	5.9	23.7	43.9	26.0
Primary Education	8.6	27.9	17.0	21.6
Higher Education	15.3	8.3	7.2	9.2
Non-Formal Education		1.1	2.5	1.3
Pre-primary Education		0.8		0.4
Institutional Development	4.2	4.0	9.1	5.4
Project Management	3.8	4.0	4.6	4.1
Studies	1.4	1.9	0.4	1.4
Total	100	100	100	100
Average annual Approvals (UA million)	**40.8**	**100.7**	**104.7**	**75.5**

Source: African Development Bank

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Case study: TeamLease tackles the employability gap in India through education

India's TeamLease Services was founded in 2002 as a supplier of temporary workers and human resources outsourcing to the Indian business community.

Despite the success of this model – according to its website it is India's largest human resources services provider, with over 1000 clients and 75,000 employees in more than 800 locations across India – its founders realised there was a fundamental gap in the employee-employer supply chain.

In a recent interview, TeamLease co-founder Manish Sabharwal explained: "We've hired somebody every five minutes for the past five years, but we've only hired 5 percent of the people who came to us for a job. And it became clear [to us] that unemployability was a bigger problem than unemployment."[48]

Following INR500 million ($11 million) in investment from Indian private equity firm Gaja Capital in 2009, the company expanded into the education and vocational training sector with the acquisition of the Indian Institute of Job Training in March 2010. This gave it 150 centers offering short diploma-based vocational courses to students.

In January this year, the company followed that acquisition with the launch of TeamLease University, a venture designed to fill what Sabharwal describes as a missing "mezzanine layer in the Indian ecosystem": that of community colleges. The franchise's community colleges will aim to offer two-year vocational associate degree courses closely aligned with the needs of real-world employers.

In the initial rollout stage, TeamLease will set up 22 of these community colleges in India's Gujarat state over a period of 36 months, having signed an agreement with Gujarat state government. The first ten are expected to be operational within 18 months.[49] However, the company eventually plans to develop a network of such institutes across the country.

Sabharwal put the total costs of its nationwide ambitions for TeamLease University at $22.2 million across three phased expansion stages.[50] The company received that amount earlier this year in a second round of funding from two private equity firms, Gaja Capital and India-focused ICICI Ventures.[51]

The benefit of using a for-profit model in an education provider lies in its ability to keep the business growing, says Sabharwal.[52]

ISSUES FOR RESPONSIBLE INVESTORS

HEALTHCARE

Investments in healthcare in developing countries are mostly directed towards private hospitals and medical facilities, medication and hygiene products as well as innovative medical equipment and healthcare provision.

Africa represents the region most debilitated by a healthcare deficit. In a ranking by the World Bank assessing the percentage of population with access to improved sanitation facilities, several African countries present the most severe situations. In particular, Niger, Ethiopia and Ghana rank last in terms of accessibility. While the situation in Asia and the Middle East is not as dire, several countries in those regions have significant portions of their populations living without access to improved sanitation facilities. This is true of Cambodia, India and Nepal in Asia and Iraq in the Middle East.[53]

In Africa, there exists a great need for healthcare services, due to the prevalence of major diseases, poor hygiene and lack of proper nutrition. Despite the high levels of poverty, some healthcare ventures have managed to expand and become profitable, while being of benefit to local communities.

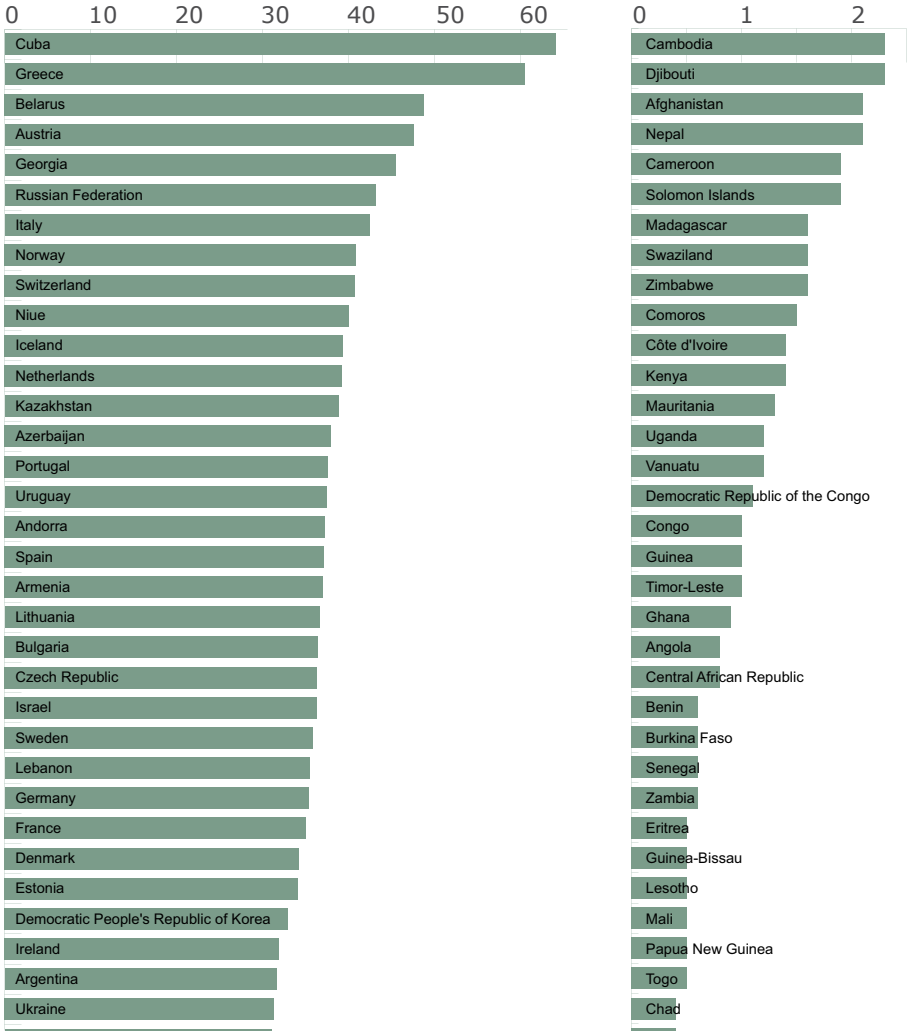
Figure 31: Percentage of population with access to improved sanitation facilities for selected countries

Selected Countries	Access to improved sanitation facilities (% of population)
Africa	
Niger	9
Ethiopia	12
Ghana	13
Mozambique	17
Congo	30
Asia	
Cambodia	29
India	31
Nepal	31
Middle East	
Iraq	73

Source: World Bank

Another indicator used to assess the level of healthcare services provided in developing countries is to calculate the number of doctors per inhabitants. In this respect, the figures provided by the World Health Organization are alarming[54], even more so if one considers how inaccessible these scarce medical practitioners are to isolated rural communities. Countries like Indonesia, Kenya and Zambia have but one doctor for every 100,000 inhabitants. These figures compare for example with 21 doctors every 100,000 people in Japan, 23 in the United Kingdom and 26 in the United States.

Figure 32: Number of doctors per 100,000 inhabitants



Source: World Health Organisation, World Health Statistics 2011

Some of the differences in medical services observed among developing countries are not necessarily the result of tangible

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investments by the local governments, nor are they the direct outcome of earlier impact investments. In countries such as Thailand and India for example, the phenomenon of medical tourism, by which patients from Europe and North America travel to seek more affordable treatment in developing countries, has favoured the improvement of national healthcare infrastructure. This highly profitable, albeit not impact oriented, industry has generated some benefit to the local population in need.

Acumen Fund has a portfolio of 15 investments in the healthcare sector. By looking closely at the investee companies, it was possible to separate the ventures into three distinct categories: services (4), products (6) and medical facilities (5). Acumen's investment portfolio clearly shows a wide variety of viable healthcare business practices for social impact.[55]

Figure 33: Companies held by Acumen Fund in the healthcare sector

Portfolio company	Activity
A to Z Textile Mills	Long-lasting anti-malaria bednets
Books of Hope	Speaking books for healthcare education
DART	Inseticide-treated wall lining for homes around the world
First Micro Insurance Agency Pakistan	Micro insurance for families in Pakistan
LifeSpring	Hospitals for maternal and pediatric care
Sustainable Healthcare Foundation (SHF)	Micro-franchise drug distribution
VisionSpring	Affordable reading glasses for the poor
Ziqitza Healthcare: 1298 Ambulances	1298 ambulances offering services to all
AyurVAID	Comprehensive care for chronic diseases
Botanical Extracts EPZ Limited (BEEPZ)	Local artemisinin production to fight Malaria
Drihtee	Rural last-mile distribution network
Insta Products	Micronutrient-rich breakfast for millions of Kenyans
PVRI	Advanced eye care for all in India
UHEAL	Eye care for the poor in Kenya
Voxiva	Remote healthcare communications

Source: Acumen Fund website

Medical equipment and basic sanitary tools are in great need in the developing world; and there exist opportunities for innovative and potentially revolutionary products to generate positive impact at the BOP. Embrace, an organisation that recently began marketing a low-cost infant incubator, exemplifies this type of opportunity and is outlined in the case studies. Also outlined in the case studies section are LifeSpring, a hospital chain in India focused on providing maternity services to women with a range of income levels, and AFRIpads, a social business in Uganda which provides African schoolgirls and women with affordable reusable sanitary protection.

CASE STUDY: Embrace launches a low-cost infant incubator for the developing world

Embrace is a start-up NGO registered in the United States with its main operations in India.

The mission of the organisation is to provide affordable technology that addresses healthcare problems for the BOP. It plans to launch a new product for the BOP every year.

Embrace is currently a not-for-profit organisation, but its business model follows that of a financially sustainable business. The company has so far raised US$2 million in investment, mainly from foundations and private donors.

The company's first project is to market a low-cost infant incubator to the developing world. The infant incubator aims to help the 20 million low birth weight and premature babies born every year around the world, primarily in developing countries. Unlike traditional incubators that cost up to $20,000, the Embrace Infant Warmer costs less than 1 percent of this price, and works without a constant supply of electricity.

The incubator was due for launch in India in March 2011. Embrace plans to sell the product among doctors, clinics and households, by means of traditional marketing and distribution and has recently partnered with GE Healthcare on the marketing side.

It aims to sell 16,800 warmers in the first year; that number could potentially save 100,000 infants and prevent illness in another 800,000 by 2013. After Embrace rolls out the product in India, it intends to focus on South Asia and Africa by year three. The company expects constant growth, with revenues amounting to $40 million in year five.

Following a needs-based approach, Embrace designed the infant incubator to work with its target population: it does not require electricity, is highly portable and allows for closer mother-child bonding by allowing the mother to cradle the baby directly.

The product prototype was initially conceived at Stanford University and is currently being manufactured in India, China, and the United States. Despite not being required to by Indian law, Embrace also conducted several clinical tests to certify the benefits of the incubator before its rollout to the public.

Embrace has already identified another healthcare need for which it is currently developing a second product. The organisation currently staffs 20 employees but a rapid expansion is already underway.

Source: Company interview

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CASE STUDY: LifeSpring maternity hospitals deliver quality healthcare and steady growth[56]

LifeSpring Hospitals Private Limited is a network of hospitals in India that provide high-quality maternity healthcare to lower-income women.

LifeSpring operates a chain of small (25 bed) ISO-certified hospitals that specialise in maternity services: deliveries, caesarean sections and hysterectomies. The hospital network is a 50-50 equity partnership between HLL Lifecare Limited (a government of India enterprise) and the Acumen Fund, a U.S.-based global venture philanthropy fund. After an initial investment of $1.9 million, LifeSpring formed into a private limited company in February 2008.

The business model follows a market-based strategy through a cross-subsidy model of tiered pricing for in-patient care: women can choose to give birth in a general ward (at less than 30 to 50 percent of market rates), a semi-private room, or a private room (at market rates). The hospitals reduce costs by specialising in the niche of maternal healthcare and emphasising standardised, no-frills processes. The cost-effective model enables LifeSpring to provide deliveries for families with household incomes of between US$2 to $5 per day without compromising healthcare quality or financial sustainability.

Maternal mortality and morbidity levels in India remain among the highest in the world; more than 100,000 Indian women die every year from pregnancy-related causes. Only 43 percent of Indian women receive professional care during birth. To date, LifeSpring has treated more than 70,000 patients in Andhra Pradesh, Maharashtra and Karnataka and has delivered more than 7,000 healthy babies.

The company currently operates nine hospitals and has ambitious plans for expansion including to employ a total staff of 4,500 and to scale upward to 150 hospitals over the next few years.

CASE STUDY: Reusable feminine hygiene pads help women in Africa[57]

Girls in Uganda face numerous hardships managing their academic attendance with monthly menstruation. Due to the significant absenteeism (four days a month, up to 50 days of class/year), many girls will drop out of school entirely and thus decrease their future career and economic opportunities.

In early 2009, the founders of AFRIpads identified a potential solution: manufacture and sell a low-cost, reusable cloth sanitary pad.

After a pilot project, Ugandan girls quickly embraced the AFRIpads product. Likewise, investors supported the hygiene product as an environmental, practical, and cost-effective solution.

AFRIpads Ltd is a now a registered Ugandan company. The company's founding entrepreneurs are 30 percent shareholders, while the parent company, Netherlands-based AFRIpads bv, has 70 percent ownership distributed across shareholders. AFRIpads bv financed the company's start-up and now seeks new investors to fund their efforts to expand AFRIpads (Uganda) Ltd into other regions in East Africa.

In accordance with local economic development efforts, AFRIpads strives to generate a reasonable ROI within the context of its social objectives. Company profits fund the growth of the business; 80 percent of the dividend is reinvested into the company and the remaining 20 percent is used to reward employees and shareholders. AFRIpads Foundation, a non-profit organisation founded in 2010, funds the supply of free menstrual kits to girls that cannot afford the low-cost products at all.

AFRIpads is a village-based and female-led company. By locating its workshops in rural areas, AFRIpads provides employment for women with limited formal education. Their training programs enable rural women to achieve financial independence and acquire practical and vocational skills. The manufacturing process is also eco-friendly, and the founders of AFRIpads intend to be a model for environmental responsibility in the region.

AFRIpads Ltd partnered with UNICEF's Water, Sanitation and Hygiene Department to bring AFRIpads to schoolgirls in post-conflict Northern Uganda to ensure they attend school during their primary leaving exams (PLEs). The company has also partnered with several NGOs and private organisations to increase education and access to hygiene projects among young women in Africa. One project with BRAC Uganda enables community health volunteers to earn a small profit through the sales of AFRIpads in rural areas.

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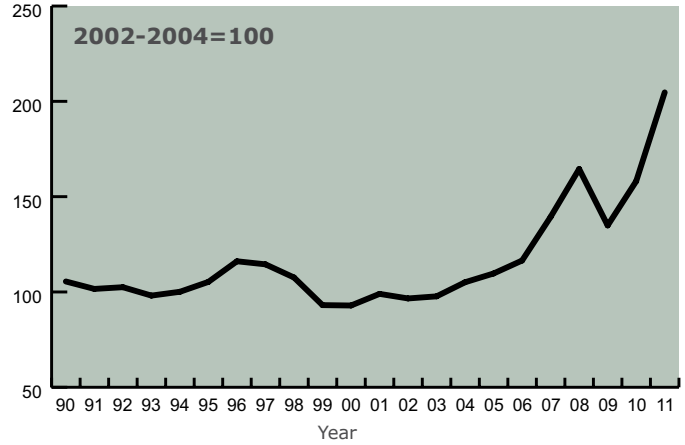
ISSUES FOR RESPONSIBLE INVESTORS

NUTRITION

The rapidly growing human population exerts enormous pressure on food production worldwide. Investing in food and nutrition at the BOP for increased social and environmental sustainability is at the centre of human survival and development. The cost of food, closely monitored by the FAO Food Price Index, has been growing rapidly over the past years. The Index shows an upward trend since 2002 and extreme volatility during the recent financial crisis. Today, food prices are at record high levels.[58] The International Monetary Fund (IMF) explains the recent phenomenon as driven by a combination of factors: strong demand from emerging economies as they reach the consumption levels of more developed countries, rising biofuel production, drought situations in many high crop producing regions (e.g. Australia) and higher input costs (e.g. fertilizers, energy).[59]

Figure 34: FAO Food Price Index



Source: FAO

The implications for the BOP in emerging and frontier economies are severe, especially for low-income communities living in urban areas. Some countries in Africa, such as Cameroon, Burkina Faso and Niger have already recently experienced food-related riots. In Asia, there have been protests over the shortage of soybeans in Indonesia.[60]

The FAO estimates that net investments of US $83 million a year need to be made in order to feed the projected 9.1 billion people that will populate the world in 2050.

As public investment has decreased for many years, private investments are needed in order to fill the gap. FAO estimates

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a need for private investment totalling US $20 billion for crop production and $13 billion for livestock production. An additional $50 billion is estimated to be required for downstream services to reach the global expansion target in output.[61] The majority of this investment money will have to come from private investors.

Investments in efficient and sustainable food production and distribution in developing countries can offer interesting commercial and impact returns by meeting the high BOP demand locally while also raising sustainability efforts in the global marketplace. For example, the rising awareness towards 'organic' and 'fair trade' food products in the developed world offers producers in some developing countries the opportunity to fight out of poverty.

Organic food sales in the United States have risen steadily in recent years, progressively increasing their share in total food sales. Data from the Organic Trade Association shows that "organic" grew from representing 1.2 percent of total food sales in 2000 to 3.7 percent in 2010.[62] This trend offers a good indication of the potential success of investments in sustainable agricultural and fishing practices that are eligible for eco-labelling by internationally recognised standards, such as the EU Organic certification or the Marine Stewardship Council program (MSC).

Figure 35: Organic food sales growth in the United States

U.S. Organic Food vs. Total Food Sales, Growth and Penetration, 2000-2009

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Organic Food	6,100	7,360	8,635	10,381	12,002	14,223	17,221	20,410	23,607	24,803
Growth	21.0%	20.7%	17.3%	20.2%	15.6%	18.5%	21.1%	18.5%	15.7%	5.1%
Total Food	498,380	521,830	530,612	535,406	544,141	566,791	598,136	628,219	659,012	669,556
Growth	5.0%	4.7%	1.7%	0.9%	1.6%	4.2%	5.5%	5.0%	4.9%	1.6%
Organic as % Total	1.2%	1.4%	1.6%	1.9%	2.2%	2.5%	2.9%	3.2%	3.6%	3.7%

Source: Organic Trade Association

Organic farming does represent an attractive opportunity, but it must be noted that, in emerging and frontier economies, and in areas of greater population expansion, techniques for efficient and sustainable food production are less present and more difficult to implement. On the other hand, some regions offer vast land availability and climatic conditions favourable to cultivation. In this report, we cover the two most basic subsectors related to sustainable food production: agriculture and aquaculture.

AGRICULTURE

The agricultural sector in developing countries lacks the capacity and efficiency to meet local and global demand in a sustainable manner. Even where crop yields are high, these are often lost due to poor storage techniques and facilities. In addition, many of the farming techniques used are unsustainable as they contribute to the degradation of the environment and exploit rather than provide benefit to local communities.

Impact investments in agriculture can be directed towards innovative farming methods and practices to improve yield, reduce harm to the environment and alleviate poverty among local communities.

The FAO recently analysed the portfolio distribution of select agricultural funds operating in developing countries. The funds analysed appeared to have a particular focus on Sub-Saharan Africa, with 28 out of a total of 65 projects based in the region. Moreover, the activity focus appeared to be mostly on agro-industries and agribusiness operations (22 projects).[63]

Figure 36: Distribution of projects in select agricultural investment funds per region and activity

Investment sector
Agriculture and agribusiness

	Agro-industries/ agri-business	Food/ beverage	Seed/fertilizer companies	Smallholders/ co-operatives	Horticulture/ fruits	Grains/pulses	Livestock and dairy	Rural/agri-infrastructure
Sub-Saharan Africa	10	0	3	1	3	3	3	5
Eastern Europe and Central Asia	3	3	0	0	0	0	1	0
Other regions of the World	5	5	0	2	1	0	0	2
Global	4	2	0	3	3	1	1	1
Total	22	10	3	6	7	4	5	8

Source: FAO

African Agricultural Capital (AAC) is a fund that invests in the form of equity, quasi-equity and debt across Uganda, Kenya and Tanzania. The firm comprises a portfolio of 15 different ventures evenly split across the three countries and an initial committed capital of $8 million. The fund targets businesses that are focused on input, service provision or increased market opportunities for local farmers.[64]

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Figure 37: Portfolio companies of African Agricultural Capital

Portfolio company	Activity	Location
Bee Natural Uganda	Processing, packaging & sale of honey across the East Africa	Uganda
Biyinzika Enterprises	Production of broiler & layer chickens and specific food products for the WFP	Uganda
Coetzee Natural Products	Organic agricultural processing and trading, primarily organic vanilla	Uganda
NASECO	Production and trade of hybrid rice & maize seeds among others to stockist & NGOs	Uganda
Victoria Seeds	Processing and distribution of seeds to smallholder farmers and organisations	Uganda
AfriCert	Only African-owned and managed agricultural certification company	Kenya
Earthoil	Production and export of cold pressed oils to major EU / North American markets	Kenya
Lachlan	Major distributor of agro-chemical inputs to the agriculture sector in East Africa	Kenya
Real IPM	Provides Integrated Pest Management (IPM) products and advice to the commercial horticulture sector	Kenya
Sandstorm International	Manufacturing of high quality branded safari style canvas & leather bags	Kenya
Western Seed	Production & distribution of medium / low altitude hybrid seed maize	Kenya
Africado	Growing of Haas avocados for export to the EU, benefiting small scale farmers	Tanzania
East Africa Food Network	Dehydration and export of vegetables from the East Africa region	Tanzania
FICA SEEDS	Production and processing of seeds, mainly open pollinated & hybrid maize	Tanzania
Agrica	Growing of food crops, e.g. rice and oil palms	Tanzania

Source: African Agricultural Capital website

CASE STUDY: NATOIL promotes jojoba as an alternative crop for adverse climatic regions in Egypt

The Egyptian Natural Oil Company (NATOIL), established in 1996, produces and sells jojoba seeds as a crop for Egypt and the Arab world. Jojoba is grown commercially for its waxy oil, which is used primarily in food and cosmetics.

NATOIL, with an invested capital of 1 million EGP (US$ 170,000), plans to further promote the use of the crop in the Arab region, develop and market new products, and plant vast areas for jojoba biofuel production using treated wastewater to irrigate the crop.[65]

The crop's ability to thrive in the desert makes it a strong agricultural commodity for the water-scarce MENA region. However, investors should note that large-scale plantation of jojoba as a biofuel remains a controversial topic due to the necessary use of arable land to reach scale.

NATOIL provides training and support for the development of small and large jojoba farms. The company also supports research towards the use of jojoba to combat desertification, the use of wastewater for irrigation, and for the development of new products.

NATOIL studies the potential use of jojoba not only in the food sector, but also for possible applications in pharmaceuticals and energy production as a biofuel.

CASE STUDY: Souk El Tayeb safeguards natural heritage and rural livelihood in Lebanon

Souk el Tayeb impacts local communities throughout Lebanon by hosting opportunities for small-scale farmers to market their products.

The company has two platforms, a for-profit farmers' kitchen called Tawlet and a non-profit farmers' market, Souk al Tayeb. Both help preserve Lebanese market traditions and stimulate tourism, while also supporting local agriculture and local cuisine.

Tawlet, the farmers' kitchen, required an initial investment of US$50,000 and has earned 32 percent profit so far. Souk El Tayeb, the non-profit arm, is self-sustaining through the cost sharing of the farmers and producers selling at the market. The company founder, Kamal Mouzawak, hopes to secure a permanent location

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for an "eco market" to host all of the commercial activities and educational events, which will require about US$1 million in capital.

Souk el Tayeb measures impact by looking at the increase in the number of producers participating in the different markets, kitchens, and festivals each year. The company management considers social KPIs such as sourcing for small-scale local farmers, providing employment and recognition to local women cooks and sourcing organic products.

The company provides a green space and a clean product in an urban area and encourages awareness among citizens on nutrition and the natural environment. Both organisations hope to expand regionally while keeping a healthy growth and providing more income to farmers, cooks, and small-scale producers.

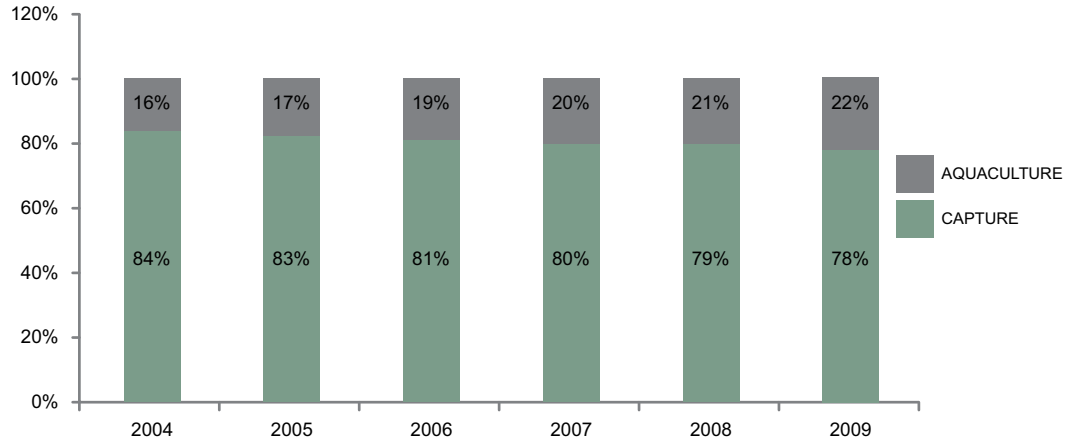
Source: Company interview

Producers from Zgharta, North Lebanon, selling kebbeh and other cooked food products at Souk el Tayeb, in the Saifi district of Beirut. Source: Souk el Tayeb

AQUACULTURE

The aquaculture business has been a growing sector for many years. Data from the FAO World Review of Fisheries and Aquaculture shows the rising contribution of aquaculture fish to total world production. The percentage contribution of aquaculture has risen steadily in recent years, from 16 percent in 2004 to 22 percent in 2009.[66]

Figure 38: World fish production by channel in the period 2004/2009



Source: FAO

For many years, overfishing has contributed to significant resource depletion in seas around the world. Aquaculture offers a partial solution by providing a viable alternative to meet rising global demand. Nonetheless, the practice should not be considered sustainable by definition, as it can at times also generate harm to the environment by altering the concentration of fish species and thus causing dramatic changes to local ecosystems. Great care must be taken in aquaculture projects to properly adapt them for a particular environment, as well as to ensure the sustainability of the various inputs and outputs to the process (e.g. fuel, nutrients, wastes).

Aquaculture production can be divided into three main segments: freshwater, seawater and brackish water. While freshwater aquaculture remains dominant, its per ton dollar contribution to total value is less than that from certain seawater and brackish water productions. The latter two can return a variety of high-value fish products, particularly crustaceans and fin fishes.

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China, India and South East Asia contribute greatly to the world's captured fish and total aquaculture production. The FAO World Review of Fisheries and Aquaculture lists China, India, Vietnam, Indonesia and Thailand as the world's top aquaculture producers.[67]

Investing in aquaculture can generate social and environmental returns but there exist challenges to reach profitability: efficacy of techniques used, volatile costs of inputs used in the process and varying fish prices on the market.

Aquaculture of Tilapia in Ghana. Source: FAO

In South Asia, an unprofitable aquaculture investment recently attracted negative press. The Penang Development Corporation in Malaysia divested from PDC Aquaculture Sdn Bhd, by selling its 60 percent stake. PDC aquaculture was first established in 2005 and commenced activities in early 2006 on a 69 acre site in Batu Kawan. The site was owned by PDC and leased to PDC Aquaculture on a three-year term with instalments of RM 3,307.79 (US $945.17), starting January 2007. PDCA has been incurring losses ever since, reporting at end of December 2008 losses of RM 761,333 (US $217,551) with net tangible assets of RM 0.56 (US $0.16) per share. This led PDC to sell off its stake to GST, which subsequently changed the name of the aquaculture business into GST Aquaculture Sdn Bhd. PDC continues to lease the land to GST.[68]

In a report by the South East Asian Fisheries Development Centre, strategies and interventions for sustainability of aquaculture have been identified, such as adoption of low input technologies, integrated Agriculture-Aquaculture systems and development of water resources to be leased to poor households.[69]

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ISSUES FOR RESPONSIBLE INVESTORS

ENVIRONMENT

Since the industrial revolution, society has unquestionably caused great harm to the Earth's environment. Carbon-emitting human activities as well as the heavy utilisation of natural resources cannot continue indefinitely. The main challenge for civilisation is now to effectively push for sustainable practices for forestry operations, energy production, waste management and the reduction of human activities that cause harm to the environment.

The Global Environment Fund (GEF), established in 1990, actively invests in ventures that provide solutions to energy and environmental challenges. In emerging markets, the fund aims to address the environmental harm caused by rapid and ongoing industrialisation and urbanisation. Filtering for the regions of scope in this report, we recorded a number of investments in China and India. In addition, the fund has also pursued sustainable forestry projects in Malaysia, Swaziland and Mozambique.[70]

Figure 39: Selected investments from the Global Environment Fund

Portfolio company	Activity	Location
DQY	Eco farm chicken and egg production	China
Greenko Group	Clean energy production (biomass and hydro)	India
Saisudhir Infrastructures Ltd.	Water supply and sanitiation, irrigation and electricity distribution	India
Hijauan Bengkoka Group of Companies	Sustainable forestry (FSC certified)	Malaysia
Peak Timbers	Pine and eucalyptus plantations (FSC certified)	Swaziland
Pemba Sun	Low-volume high value processing of hardwoods	Mozambique

Source: GEF website

In this report we focus on the areas of sustainable forestry, energy production and waste management. The ventures sampled are Real Housing in Israel and ecoWise in Singapore. Real Housing builds renewable energy dependent houses. The waste management company ecoWise converts industrial and urban waste to renewable energy, organic compost for agriculture, and recycled materials.

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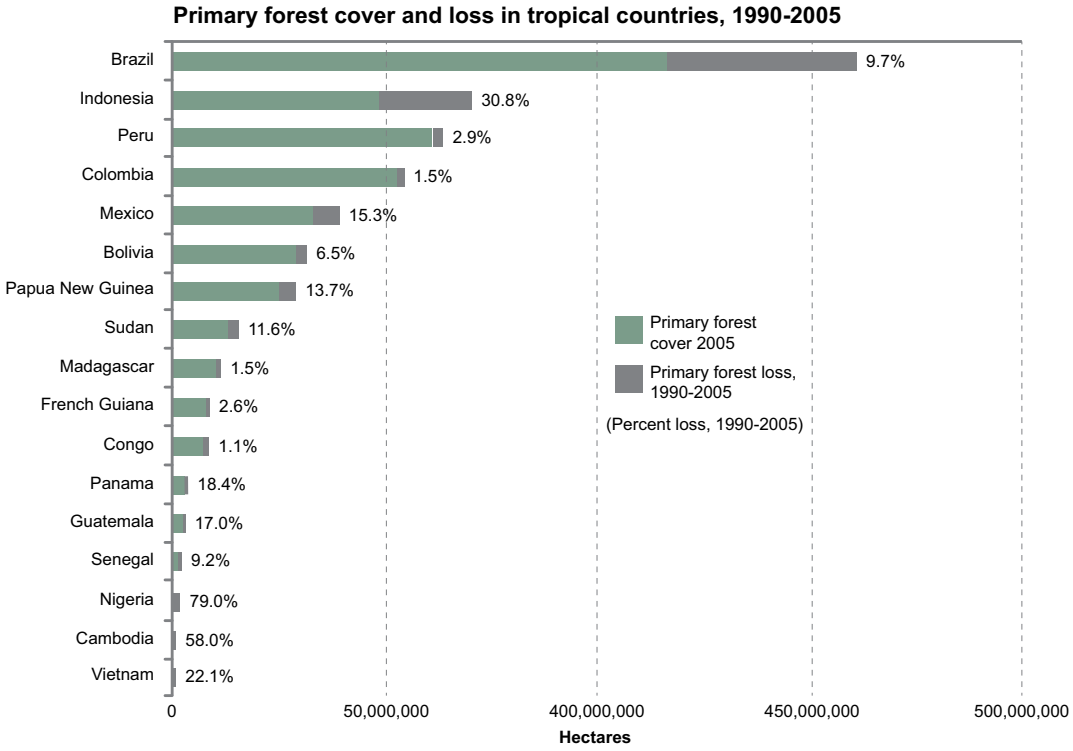
FORESTRY

The heavy deforestation practices pursued in developing countries have caused great harm to the local and global ecosystems. Data from FAO shows that countries like Indonesia (31 percent), Nigeria (79 percent) and Cambodia (58 percent) have all lost a major percentage of their respective forests over the 15-year period 1990-2005.

Figure 40: The extent of deforestation for selected countries

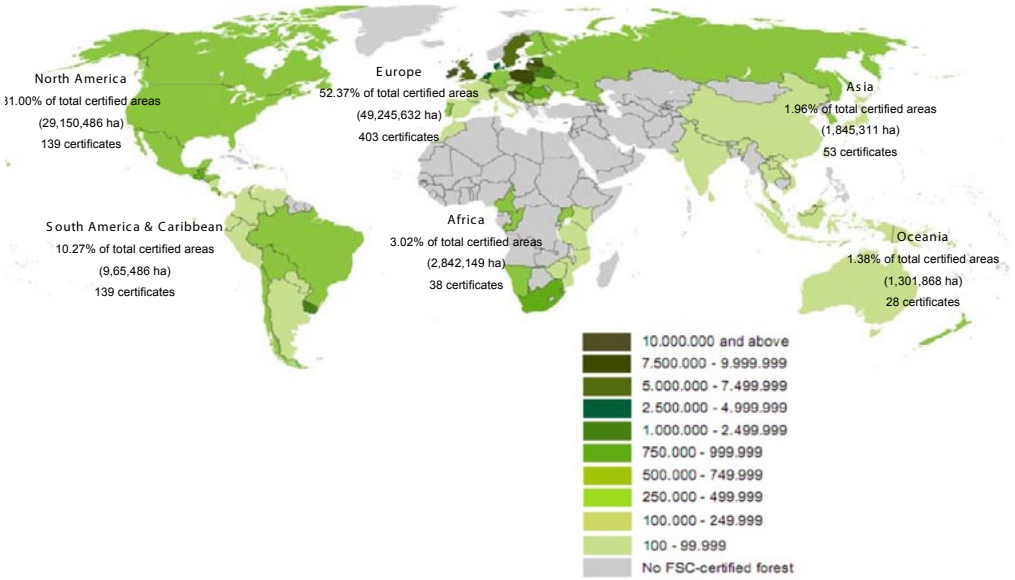


Source: FAO, www.mongabay.com

Fortunately, the development of a sustainable forestry industry has accelerated in recent years, driven by rising awareness and demand for 'certified' wood. The Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC) are non-profit organisations active in providing recognised forestry certification standards.

The FSC label has in recent years acquired high international recognition and can be easily noticed on wood products of common use such as paper. The FSC poses numerous and strict requirements for a forestry operation to become certified, such as rigorous re-plantation plans, as well as respect and consultation of local indigenous communities. Today, over 94 million ha are FSC certified in 78 different countries. This equates to 7 percent of forests worldwide dedicated to wood production purposes.[71]

Figure 41: FSC certified forest area by region



Source: FSC website

By leveraging sustainable forestry on international markets increasingly receptive of innovative certification standards, these operations are becoming more profitable and can play an important role in preserving the environment and communities. An example is the Malua BioBank project promoted by the organisation NewForests. NewForests manages investments in sustainable forestry and associated environmental markets, such as carbon, biodiversity and water, for institutional and private equity clients.[72]

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CASE STUDY: The Malua BioBank conservation project[73]

The Malua Wildlife Habitat Conservation Bank (Malua Biobank) is a conservation project located in the Malaysian state of Sabah. The project goals are multiple: to restore and protect populations of endangered and protected species in the reserve; to restore a functioning lowland dipterocarp ecosystem in the reserve; to create a new model for rainforest conservation using private finance and to pair agricultural commodity production with the expansion of forest conservation through the sale and purchase of biodiversity credits.

The Malua BioBank remains an active investment of the Eco Products Fund (EPF). EPF initially invested $10 million into the Malua BioBank and has deployed about $1 million of that to-date. The fund will require a further $5-10 million to complete its restoration program and market development activities. New Forests, an impact investment manager specialising in sustainable forestry and biodiversity markets, expects that commercial returns of the Malua BioBank will endow the Malua Trust with sufficient funds to pay for perpetual future conservation management. According to New Forests, the best outcome for the continued development of the project would involve the entrance of a patient capital co-investor and EPF exiting from the fund within the next few years.

The primary investment opportunity with the Malua Biobank is linked to the Roundtable on Sustainable Palm Oil (RSPO) to develop an offset program for deforestation linked to the establishment of sustainable oil palm estates. The model holds palm oil producers accountable for conservation efforts and uses they revenue generated from the sale of palm oil to pay for forest restoration: they purchase one hectare of rainforest for every hectare of forest converted to palm oil plantation. New Forests has been working with the program, WWF and others to support this initiative.

The current BioBank product is the sale of Biodiversity Conservation Certificates (BCC), which cover the restoration and protection of 100 sq meters of the Malua Forest Reserve per certificate. Businesses purchase the BCCs to offset their business operations' impact on rainforests, integrate conservation efforts into their supply chain, and develop long-term sustainability sourcing strategies. The cost of a BCC includes the investment required to restore a section of the Malua rainforest as well as the expenses of long-term conservation. To date, the company has sold over $300,000 worth of credits.

New Forests expects Malua Biobank to generate a much higher rate of return as the cost of conserving ecosystems is increasingly

incorporated into the pricing of sustainably produced goods and services. The sale of carbon credits from the Malua BioBank alone could provide approximately $5 million in annual revenue.

In some cases consumer product companies have established direct linkage between the sale of their products and conservation credits. For example, the Malua Biobank is currently engaged in a pilot program to sell biodiversity certificates through Tetley tea customers. Tetley packages invite customers to redeem a purchase of tea to protect one square meter – approximately one large tree – of the Malua BioBank Forest reserve.[74]

The Malua Biobank protects 34,000 ha of rainforest rich in endangered orangutan, elephant, and rhinoceros species in Sabah. The predominant vegetation type is lowland dipterocarp forest, which has historically been logged for high value commercial timber species. Malaysia and Indonesia are the largest producers and exporters of palm oil in the world, which is used in a large number of food items, personal care products and increasingly as a feedstock for biofuels. The production of palm oil in Malaysia and Indonesia has increased significantly in recent years. A significant portion of palm oil estates have been planted on lands converted from rainforest to plantation. The conversion of rainforest to plantation has had significant environmental effects, including loss of habitat for endangered species, destruction of biodiversity and emissions of carbon dioxide from forest destruction.

The Malua project serves as a pilot for conservation practices and ultimately an investigation in the commercial viability of the biobank model. To the extent that environmental conservation grows increasingly valuable in the long term, New Forests expects that offset credits will no longer rely on philanthropic interest, but rather attract financially sustainable models and sizable investment. If the BioBank proves scalability, it could potentially be a platform for financing large-scale conservation efforts in Indonesia and in rainforests throughout Southeast Asia.

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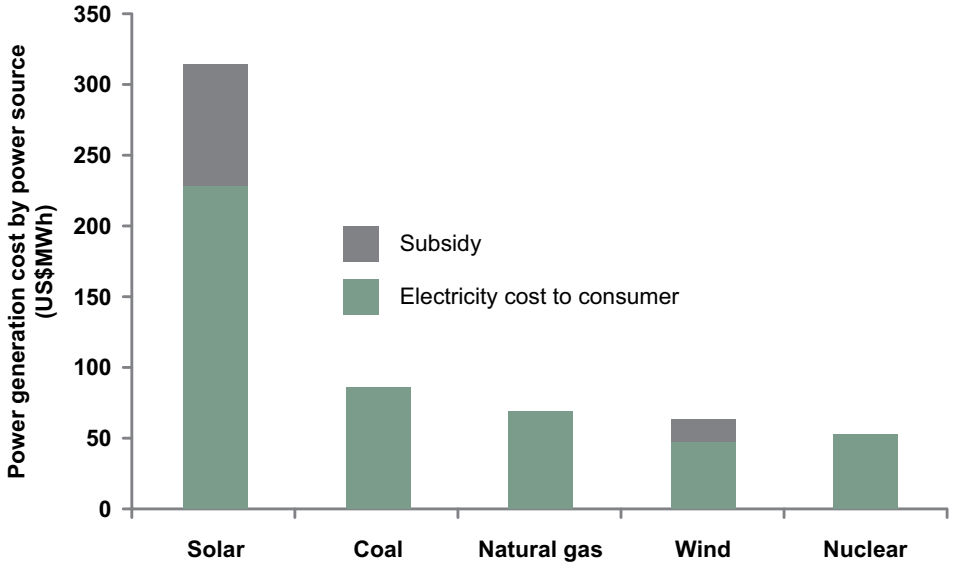
Pygmy elephants in MaluaSource: New Forests Inc.

RENEWABLE ENERGY

Investments in renewable energy may be directed, among other production methods, towards solar and wind power. The high solar irradiation of countries in the Middle East and Central African regions makes this energy source more attractive as yields there are high. For some of these countries, diversification from oil production is a necessary energy strategy as oil fields become gradually depleted.

Solar power technology has greatly improved in the past years, therefore bringing down its costs. However it still represents a costly and unpredictable energy resource compared to traditional and other renewable means. Given the rapid development of technology, investment plans in solar power are difficult to project and can become quickly obsolete. In some cases, however, the rapid evolution of solar technology can be fortunate. For example, the government of Abu Dhabi witnessed a dramatic cost reduction on construction plans for the country's first utility scale solar power project when initial cost estimates for the 100MW plant were halved in later computations. The plant, now expected to cost US$500-700 million, will be the largest of its kind in the world, able to generate power for more than 60,000 homes and displace over 175,000 tonnes of CO2 each year.[75]

Figure 42: Power generation cost by source (US$/MWh), 2010



Source: Data Monitor, Business Insight

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CASE STUDY: REAL Housing in Israel builds environmentally sustainable houses

Renewable Energy for Affordable Living (REAL) Housing Ltd. is an Israeli company with a focus on building affordable and environmentally sustainable housing, while lowering future energy costs and consumption. REAL Housing constructs two or four Kilowatt solar-powered houses (the roof is a solar panel) in different sizes across the country.

The company has been operational for three years, has a turnover of ILS 24,000,000 (US$7 million) and is profitable. Ten percent of the REAL Housing profits go to the employees, and 10 percent go to charity.[76] REAL's main shareholder is Professor Chaim Brown, the company Founder and CEO.

The company is currently building 12 private, custom homes that cost about 15 percent less than comparable housing on the market. The houses are marketed as affordable, sustainable and earthquake-resistant to kibbutzim, moshavim, military, and interested private buyers.

The houses are constructed in an assembly area in Yerucham, allowing reduced labour costs, increased quality control and building efficiency. They are then built into a concrete foundation at the actual site and are ready for occupancy within three weeks of delivery. About 90 percent of the materials are made in Israel, providing more local jobs.

The REAL Prototype homes won international competitions for the Best Solar and Sustainable House in the World (Solar Decathlon 2002 and 2005). The design and technology integrates all relevant housing systems (e.g. heating/cooling equipment, photovoltaic cells, insulation, air/vapour barriers, roofing) through the "green-building system approach". Higher energy efficiency is achieved through insulation that is claimed to be 3.5 times Israeli standards.

Additionally, energy efficient appliances, such as the refrigerator, cook top, oven, dishwasher, clothes washer, dryer, and microwave are included with the house. The kitchens are provided by Regba kitchens, the only sustainable kitchen manufacturer in Israel based on European standards.

Energy consumption is settled through a monthly feed-in-tariff rebate from the electric company due to the extra solar energy returned to the grid, which not only benefits the homeowner but also decreases Israel's overall dependence on fossil fuels.

REAL Housing homes offer a potential of at least 60 percent savings on heating and cooling costs over comparable homes, as the temperature is more consistent and evenly distributed throughout the house. Furthermore, due to the use of Structural Insulated Panels, houses are stronger and can withstand earthquakes of 9.2 and winds of 320 kph. Also, houses meet with fire ratings of four times the standard required by the Israel Standards Board.[77]

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WASTE MANAGEMENT

The rapidly developing and highly populated countries of China and South East Asia are undoubtedly some of the greatest waste producers. Consequently, they are also in great need of sustainable waste management practices. Nowadays, technologies exist to achieve complete recycling of wastes, while at the same time producing energy and other products that can constitute positive revenue streams.

CASE STUDY: ecoWise converts industrial waste into clean energy and profit

ecoWise Holdings is a resource and waste recovery, renewable energy and integrated environmental solutions provider based in Singapore.

The ecoWise Group was listed on SGX-SESDAQ in 2003 and moved to the SGX Mainboard on 9 May 2008. It became a constituent stock in the FTSE ST Small Cap Index effective from 22 September 2009.

Since 2004, the company has initiated renewable energy projects that yield environmental, social, and economic benefit to local operating communities by improving the environmental management of industrial processes and wastes, operating biomass co-generation plants, preventing resource extraction through recycling technology, and by researching and developing environmentally friendly products derived from recycled organic waste. The growth strategy targets regions with high potential and need for sustainable energy, including China and Southeast Asia.

The ecoWise business model generates impact by reducing the health and environmental costs of industrial pollution through cleaner waste management and renewable energy production. Their expansion reflects confidence that shareholder value and positive environmental impact can be complementary.

Four years after the company listed on SGX, the company reported a gross profit of SGD 12.1 million (US$9.8 million) for FY2007. In July 2010, the Group acquired 70 percent of Sunrich Integrated Sdn Bhd, a Malaysian rubber compound manufacturer, with the aim of improving the recyclability of tyre tread and reducing the amount of rubber extracted from the environment. The Group also entered China's electrical and electronic waste recycling business through a 15 percent investment in Chongqing Zhongtian Electronic Waste Co. Ltd to eliminate the dumping of hazardous and toxic e-waste in China.

According to its 2010 financial report, ecoWise gained a 20.3 percent increase in revenue to SGD 37.59 million (US$30.45 million) but suffered a loss of SGD1.35 million (US $1.09 million) due to the Group's recent acquisition of Sunrich – an expansion expected to spearhead international growth. In terms of total assets, Ecowise Holdings is valued at SGD $91.025 million (US$73.72 million).[78]

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ISSUES FOR RESPONSIBLE INVESTORS

INFRASTRUCTURE

Infrastructure is essential to create room for economic growth in the less developed world. Greater access to electricity has raised non-farm income by 61 percent in Tanzania, while women who used to travel long distances for water have recuperated four hours a day due to improved access. A better road network in Ghana has reduced transportation costs by one-third.[79]

Despite the historically public and unattractive nature of the infrastructure sector, given the longer investment horizon and greater amounts of capital needed, data from the World Bank shows that substantial opportunities exist for the private sector. The infrastructure-financing gap forecast for the developing world could be as high as $270 billion, while $110 billion of private investments could be delayed and $70 billion could be at risk of loss. If not appropriately addressed, the financing deficit could heavily dampen the economic development of poorer nations.[80]

Much needs to be done to encourage private participation in infrastructure investment, in the form of risk mitigation, improved access to funding and schemes for sustainable revenue streams. Some institutions, such as the IFC and the Asian Development Bank offer facilitated funding programs, while some private organisations contribute to mitigating the operational risks associated with a particular project.

The motivation behind the establishment of InfraCo Africa, and the more recent InfraCo Asia, is to attract greater private investment in infrastructure. The organisations address the coordination problems and mitigate the associated costs and risks of investments in developing countries.

InfraCo directly approaches an infrastructure investment opportunity with its own capital. Once the investment is assembled, it may sell a stake in the project to other private investors. Operating in this manner, InfraCo widens the pool of private capital available and contributes significantly to reducing the financing gaps.

It focuses on projects that generate impact in the areas of new job creation, improved community services and preservation of the environment. The company was established in 2005 and it is funded through the private infrastructure development group (PIDG), constituted among others by the World Bank and the UK's Department for International Development (DFID). The current project portfolio of InfraCo Africa involves areas such as water, energy and transportation, ranges from small investment sizes to as much $300 million and spans nine different countries in Africa.[81]

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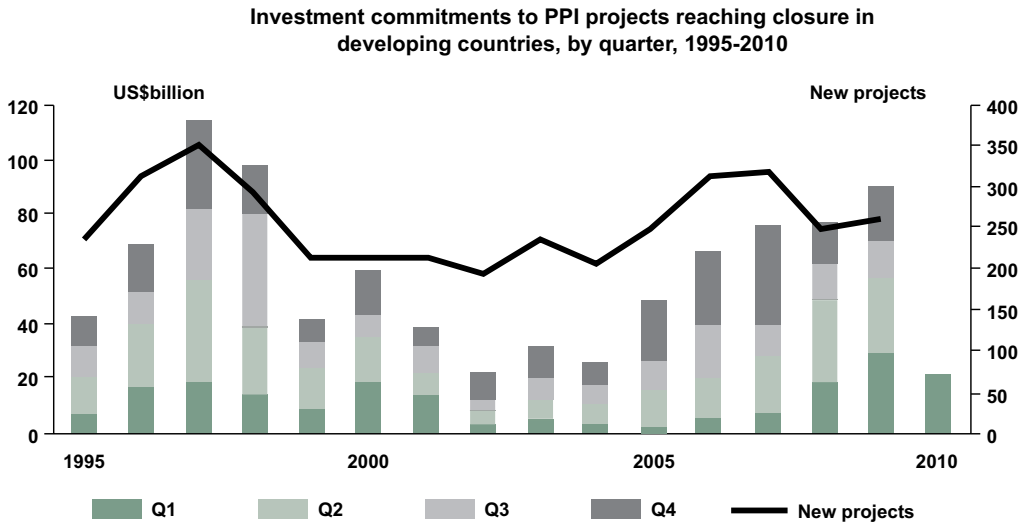
Despite the existing shortfall threat, investment commitments in the form of public-private participation in developing countries are on the rise since early 2000 as data from the Private Participation database of the World Bank indicates. While the number of new projects for the 15-year period 1995-2010 has only fluctuated around an average value, the dollar value of projects has steadily increased and reflected little correlation with the global financial crisis of 2008/2009.[82]

Figure 43: Infrastructure commitments to Private Participation in Infrastructure (PPI) projects



Source: World Bank

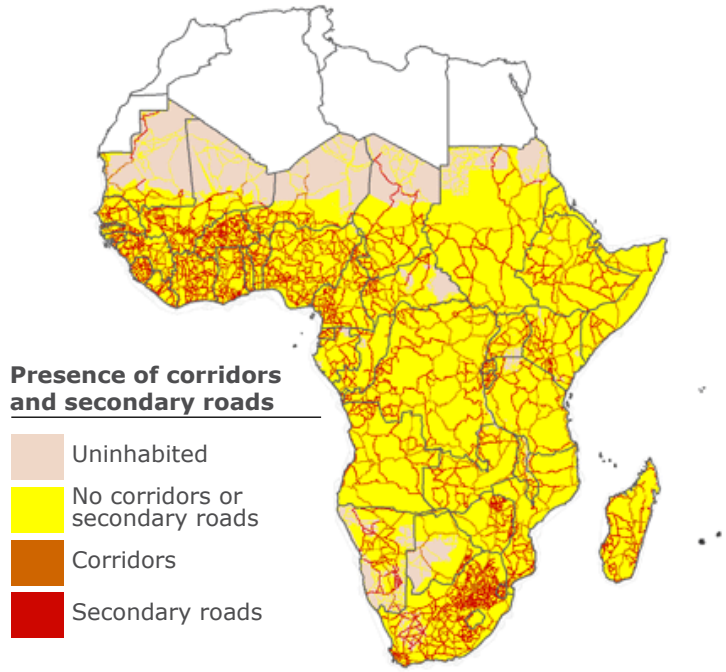
In this report we introduce and present sample impact ventures for four major areas of infrastructure: transportation, water, energy and telecommunications.

TRANSPORTATION

Transportation can represent an effective tool to generate impact by stimulating trade and access to community services. Where transportation means are scarce, rail and aerial access are usually absent, as they require large capital investments and several years to break even. The road network, as the most basic mode of transport, constitutes a basic investment opportunity to generate impact in a much shorter timeframe.

The road network in Africa is the poorest in the world, yet almost the only means of transport available within the continent. Inefficient road infrastructure heavily dampens African trade, pushing up costs and causing loss in competitiveness. Moreover, communities suffer from difficult access to basic services such as medical assistance, food and water. The debt-laden governments of Africa cannot make significant improvements to maintain the road network and invest in new construction. Here private players have the opportunity to step in and cooperate with the public sector to facilitate the development of the road infrastructure.[83]

Figure 44: Road network development in Africa



Source: http://12.000.scripts.mit.edu/mission2014/

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There exist different frames of operation that constitute a public-private partnership, yet enable the private contractor to recover the invested capital in a relatively short period. Some examples are the Build, Operate and Transfer (BOT) model, the Operate and Maintain model (O&M) and simple maintenance contracts.

The main revenue stream from road construction and maintenance arises from tolls, which can experience a high level of volatility. In order to fight this uncertainty and encourage investment by private parties, public authorities have designed systems to reduce the effect of traffic volume on revenues, such as 'minimum traffic guarantees' and 'setting and adjusting toll rates'.[84]

The Maputo Toll Road, stretching for 400km between Witbank in South Africa and Maputo in Mozambique, was commissioned in 1996 under a BOT scheme for the amount of Rand 3 billion (US$1.03 million). The contractor, a consortium of private companies, partly financed and materially realised the construction and was given operation and maintenance concession for a period of 30 years. After this time the road's operations will be transferred back to the government.[85]

The project was financed with 20 percent equity and 80 percent debt. The three constructing companies contributed Rand 331 million (US$49 million) worth of equity while the SA Infrastructure Fund provided the rest. The debt portion was instead supported by a number of regional banks. The toll scheme designed for the completed road was adjusted according to the users' ability to pay. Wealthier South African users contribute through higher tariffs to the road's revenue streams, while the more underprivileged Mozambican users are given substantial discounts.

The impact results of the investment were also accomplished through effective coordination with other infrastructure projects in the region, such as the restructuring of the port and improvement of the rail connection between Maputo and the border. Projects like the Maputo toll road represent a milestone in their ability to leverage private capital for infrastructure projects in Africa. On a smaller scale, the application of the Maputo model could attract an even wider pool of private investors.

Road construction and maintenance should not only address the developed urban areas, but also the rural ones. Improving the road network in rural regions can increase productivity and boost the size of the market for agricultural products. In a 2010 study by the World Bank titled 'Crop Production and Road Connectivity in Sub-Saharan Africa', the authors analysed how better road networks can result in higher crop production. The average travel time to the nearest city with 100,000 inhabitants was computed together with population and crop production data. The exercise yielded the total crop production divided by a region's potential.[86]

Figure 45: Travel time, population and crop production in Sub-Saharan Africa

Travel time decile	Average travel time (hrs)	Total population (mns)	Total crop production (mn$)	Share of high-input/ rain-fed production	Total crop production / potential
1	1.7	213.9	12,469.3	0.174	0.411
2	3.0	69.3	10,167.9	0.184	0.456
3	4.1	52.6	7,822.9	0.188	0.466
4	5.1	46.5	6,958.5	0.188	0.332
5	6.3	38.3	4,593.6	0.186	0.202
6	7.6	30.8	3,478.9	0.180	0.163
7	9.3	23.8	2,580.3	0.180	0.082
8	11.7	18.3	2,010.6	0.179	0.059
9	15.4	14.2	1,315.8	0.177	0.047
10	24.8	8.4	1,404.5	0.66	0.029
Total/average	**4.6**	**516.1**	**52,822.3**	**0.182**	**0.191**

Source: World Bank

The ratio of actual to potential production observed for the last four deciles falls much below the highest ratio observed, suggesting enormous untapped potential for increase of agricultural input in the less connected regions of the African continent.

In the same study, the effect of a road infrastructure investment on agricultural output was assessed for Mozambique. Two different scenarios were analysed: an investment in the five major national corridor roads in the north and an additional upgrading of all existing rural and feeder road networks to good-condition surfaces. The analysis yielded an effect on agriculture equal to a 24 percent rise in production. Interestingly, the additional investments in the rural feeder roads yielded a 131 percent increase.

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Figure 46: Simulated impacts of road improvement on crop production: Mozambique

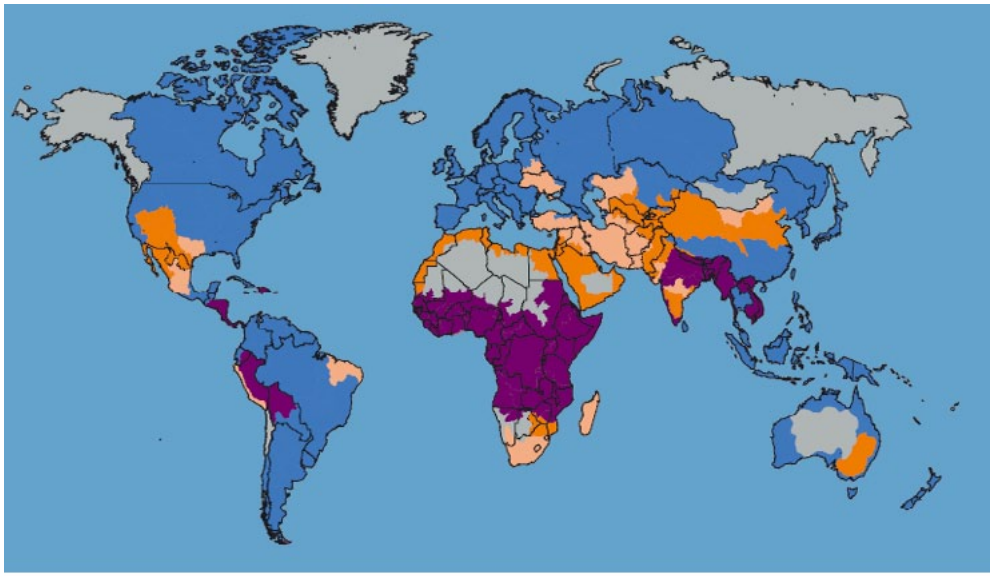
	(a) Baseline (mn$)	(b) Scenario 1: Improving northern corridors to 80 km/hr (mn$)	(c) Scenario 2: Improving all rural roads to 60 km/hr (mn$)	(b) vs (a) % change	(c) vs (a) % change
Total crops					
All systems	1,506	1,869	3,486	24	131
High-input	169	204	356	20	110
Low-input and subsistence	1,246	1,549	2,896	24	132
Irrigated	91	104	176	15	95
Cereals	338	441	886	31	162
Cash crops	266	364	708	37	167
Maize	222	295	546	33	146

Source: World Bank

WATER

With around 1.1 billion people without access to improved water supply sources, stimulating investment in this area is also vital to generating social impact. A map from the International Water Management institute depicts the Middle East, the Sahara African region as well as central Asia as the regions where water is most scarce.

Figure 47: World map of water scarcity



Little or no water scarcity | Approaching physical water scarcity | Not estimated
Physical water scarcity | Economic water scarcity

Orange: Physical water scarcity. More than 75 percent of the river flows are allocated to agriculture, industries or domestic purposes (accounting for recycling of return flows). This definition of scarcity—relating water availability to water demand—implies that dry areas are not necessarily water-scarce. For example, Mauritania is dry but not physically water-scarce because demand is low.

Light Orange: Approaching physical water scarcity. More than 60 percent of river flows are allocated. These basins will experience physical water scarcity in the near future.

Purple: Economic water scarcity. Water resources are abundant relative to water use, with less than 25 percent of water from rivers withdrawn for human purposes, but malnutrition exists. These areas could benefit by development of additional blue and green water, but human and financial capacity are limiting.

Blue: Little or no water scarcity. Water resources are abundant relative to use: less than 25 percent of water from rivers is withdrawn for human purposes.

Source: International Water Management Institute

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The Middle East is a region of great water scarcity, which as a direct consequence inhibits agricultural yields with a dampening effect on the development of local communities. The process of desalination represents a possible solution if undertaken with efforts to limit the environmental impact of higher salinity, particularly in partially closed seas such as the Red Sea and Persian Gulf, damage to marine ecosystems and the flushing of desalinating chemicals back into the ocean. Desalinated water already represents a central resource of potable water for the Middle East. For example, the government of Saudi Arabia accounts for 18 percent of the global desalinated water production.

Unfortunately, desalination-processing costs are high due to the large amount of energy employed in the process. Nonetheless, there exist new operational models that can combine renewable energy generation with clean water generation.

IBM and Saudi Arabia's King Abdulaziz City for Science and Technology (KACST) recently designed a desalination facility powered with renewable energy. Based in the city of Al-Khafji, the plant is designed to reach production of 7.9 million gallons of water a day, able to provide water to 100,000 people. The project uses a readily available resource typical of water-scarce regions: high solar irradiation. The Saudi Arabian plant is an example of a multi-impact investment, able to generate social as well as environmental benefits in a region where water scarcity, environmental damage, and the depleting oil reserves are a prevailing problem.[87]

Oasys Water, which stands for Osmotic Application Systems, is an American technology start-up centering on a patented water treatment technology called Engineered Osmosis. The company, based in Boston, received in 2009 $10 million in funding from venture capital firms Flagship Ventures, Advanced Technology Ventures, and Draper Fisher Jurvetson. The process, conceived by Oasys' current chief technology officer, is an osmosis system requiring only 10 percent of the power needed by regular osmosis systems used in desalinisation plants today.[88]

ENERGY

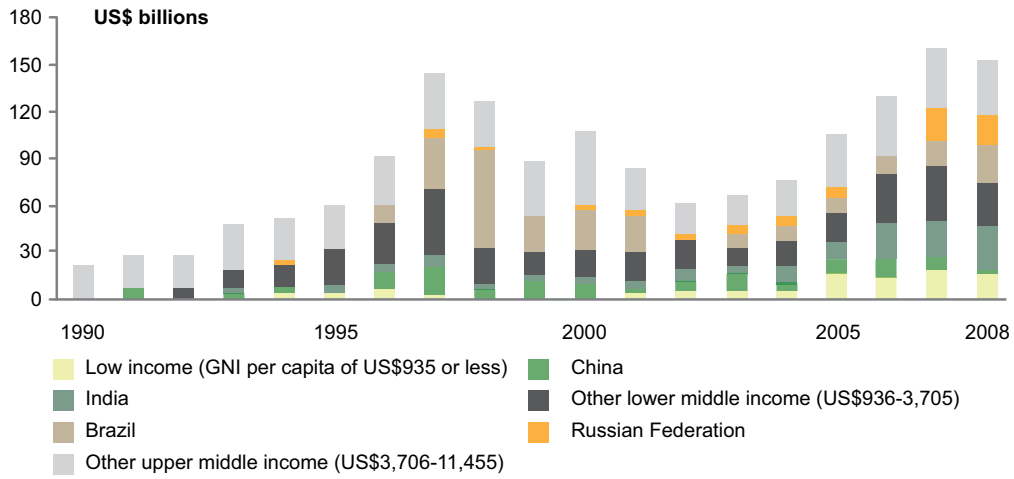
Investments in renewable energy, as well as in projects aimed at easing access to energy for rural communities can generate positive social and environmental impact. Energy can improve the efficiency of agricultural activities and enhance the living conditions of communities in the developing world.

Despite its environmental benefit, renewable energy still does not offer the attractive financial returns seen in conventional energy production. Moreover, technologies are in continuous development and usually result in unstable business plans.

Nonetheless, current government subsidies can indeed support the financial performance of the investment, offering acceptable returns while at the same time being of benefit to the environment.[89] National regulations towards sustainable energy production can also play an important role in reducing risk for private investors, and therefore attract new capital.

Data from the Private Participation in Infrastructure database shows an upward trend in the past few years for private participation in energy projects in developing countries. Countries representing all GDP and income levels have received increased private investment.[90]

Figure 48: Private participation in infrastructure energy projects, by country income group, 1990-2008



Source: World Bank and PPIAF, PPI Project Database

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Small energy production devices can overcome the current short reach and high costs of energy infrastructure in developing countries. For increased efficacy, such instruments need to be coupled with financing and business support services, in order to facilitate access to the product by the people at the BOP.

CASE STUDY: Zara Solar provides the model for solar success in Tanzania

Tanzania has one of the lowest electrification levels in Africa. Only 14 percent of the population overall has access to electricity, a figure which drops to 2 to 3 percent in rural areas.[91]

This shortfall presented a compelling business opportunity for Mohamedrafik Parpia, the founder of Zara Solar, who saw the potential for high volume, low margin sales of small solar photovoltaic systems to the large rural community.

Zara Solar began life as an offshoot from a general electrical goods store Parpia ran alongside his brother. In 2001, Parpia teamed with energy-focused impact investor E+Co to develop a specific solar PV-focused business plan. The company received the first of three loans from energy-focused impact investor E+Co, worth US$50,000, in 2002 to put the business model into action.

With most households among his target customer base spending between US$5 and $15 a month on kerosene fuel in the absence of electricity, a 14 Watt PV system, priced at $200, was a viable economic alternative.[92] Parpia also introduced a micro-credit initiative to enable customers to spread the cost of the system over a couple of years.

In 2004, Zara Solar was officially established as a separate business entity and received a further $100,000 loan from E+Co. In total, E+Co has invested a total of $350,000 in the company, with the final loan instalment happening in 2006.[93]

Financial data disclosed in an E+Co investment proposal document in the run-up to its 2006 investment showed that Zara was already profitable on a gross and net basis at that time.[94] Data contained within a USAID EnergyAccess case study on Zara Solar puts revenues for 2008 in the region of $1.7 million, with net income of around $260,000.[95]

Between the 2006 loan instalment from E+Co and November 2010, Zara sold a total of 33,834 PV systems to household users, who made up 70 percent of the client base, and business users. In terms of environmental impact, this equates to an offset of 1,826 tons of carbon and the displacement of over 254,300 liters of kerosene.[96]

Zara Solar's growth was speeded by its coincidence with a United Nations' Development Programme under the Global Environment Facility, which gave solar PV technical training to a number of electricians in Zara Solar's target region in Tanzania. This allowed the company to plug into a widespread network of external expertise for the installation and maintenance of its systems. It also meant there was already greater awareness of solar power in the region.

Zara Solar's success has led to international recognition, most of it focused on the company's social and environmental impact. In 2007, it won an Ashden Award for Sustainable Energy, while in 2008 it won the World Bank's Lighting Africa Award.

Success has also helped spawn a number of similar business models in Tanzania. In fact, as of November 2010, E+Co had 13 active investments in solar PV businesses in Tanzania.[97]

A solar panel installed on a villager's home in Africa Source: http://www.ashdenawards.org/winners/zara

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TELECOMMUNICATIONS

The market for telecommunication services in developing countries faces a number of challenges. Poor public infrastructure, especially in remote areas, slows community development. Private investments in the telecommunications sector have largely contributed to development in rich countries and represent the way forward in emerging and frontier markets, given the extremely scarce resources of governments. Private participation in telecom infrastructure projects would contribute to raising revenues for local governments, which could then in turn reinvest in community services.

Private investments of smaller scale could be directed towards the provision of services facilitating communication for trade and aid. Internet and mobile phone communications are two fundamental tools to empower the poor and help them access a global market otherwise out of reach.

Data from the World Bank confirms the very low penetration rates of Internet use in developing countries: the 63.2 percent of internet users in OECD countries heavily compares with the 16.2 percent of the Arab World, the 6.5 of Sub-Saharan Africa and the shocking 2.2 percent of the least developed countries globally.[98]

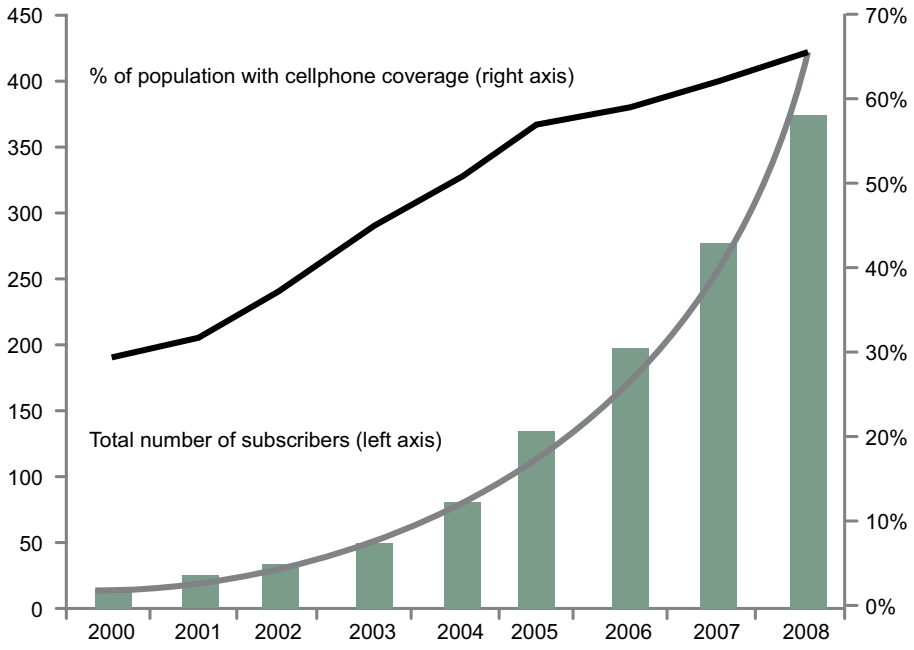
Figure 49: Number of Internet users per 100 people by region

Region	Internet users (per 100 people)
Arab World	16.2
East Asia & Pacific	19.4
Euro Area	62.6
European Union	61.8
Europe & Central Asia	26.4
Latin America & Caribbean	29
Least developed countries: UN classification	2.2
Middle East & North Africa	18.9
OECD members	63.2
South Asia	4.7
Sub-Saharan Africa	6.5
World	23.9

Source: World Bank

While the use of the Internet appears to remain very limited, mobile phone usage has boomed in developing countries in recent years. For example, in Africa the number of mobile phone subscribers increased from 16 to 376 million over the period 2000-2008, equivalent to covering approximately 60 percent of the total population, as analysed in a 2010 research paper published by the Journal of Economic Perspectives.[99]

Figure 50: Number of cell phone subscribers and cell phone coverage in Sub-Saharan Africa 2000-2008



Source: Journal of Economic Perspectives

However, high mobile phone diffusion does not correlate with community development if not associated with the right services. A number of social ventures have explored models to effectively empower the poor by means of a mobile phone. For example, in Africa as well as Asia, mobile phones have been used to facilitate trade among farmers. In India, Nokia successfully partnered with SKS Microfinance to develop a mobile phone functionality for the rural poor. Farmers can access agricultural information and education resources that support new business opportunities and development.[100]

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CASE STUDY: Souktel in Palestine develops mobile phone services to help the community

Souktel, established in the United States in 2006, provides a mobile software service that helps connect low-income communities in Palestine with job opportunities and aid organisations.

Souktel, a privately held company, is profitable and has an estimated turnover of US$500,000 per annum. The company currently has ten employees and its clients include international aid agencies and HR recruitment firms that use the phone-based software services to match job-seekers with employers. In 2010, Souktel estimated their total outreach to be 200,000 mobile subscribers in six countries, with about 10,000 active daily users of mobile job information services.

Souktel also offers two main software services for aid organisations: AidLink Alerts and AidLink Surveys. AidLink allows aid organisations to send text messages with important information to large numbers of residents from a basic mobile phone. AidLink Surveys quickly processes answers to SMS queries sent to communities allowing for a fast reaction by the relevant authorities.[101]

In Palestine the service has also helped people living in the Gaza strip to coordinate community services. Community leaders can reach out to deliver information or recruit volunteers for immediate need.

A mobile-based aid communication system by UNICEF Source: http://mobileactive.org/

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ISSUES FOR RESPONSIBLE INVESTORS

MICROFINANCE

Microfinance, almost certainly the most developed among the sectors analysed in this report, aims to stimulate economic growth and improve living conditions by providing credit to low-income households and entrepreneurs in developing countries. However, in some instances, poor lending practices have exacerbated the indebtedness of borrowers. Not all microfinance models are coupled with the right advisory services to equip small entrepreneurs with the business skills necessary to make the most of the funds received.

Recent news reported how a large number of borrowers in the Indian state of Andhra Pradesh stopped repaying their loans. SKS Microfinance, India's largest and only listed microfinance institution, has experienced a considerable depreciation of its stock given allegations from state government officials that microfinance institutions were making abnormally high returns from the disbursed loans. This case illustrates some of the current criticism around the industry, especially in those countries where the practice is most developed.[102]

Nonetheless, if deployed in the right way, microfinance is an important tool to empower people to fight out of poverty. Private investments into a combination of microcredit and other services to micro entrepreneurs can yield higher financial and social returns.

We believe regulation can play an important and positive role in tightening the operating models of microfinance institutions in developing countries. In Morrocco for example, microfinance institutions are limited by law to exist as microcredit associations that are only entitled to issue microloans and not allowed to perform other banking activities. Capital requirements could also play an important role to limit the overdevelopment of the industry, as recently proposed in India.

The market for microfinance loans in developing countries is far greater than what has been explored so far, as estimated in a study by Treetops Capital. Microcredit borrowers have grown at a rate of 25 percent in recent years, while the number of potential borrowers is estimated to be 2.5 billion and the current base served is only 155 million.[103]

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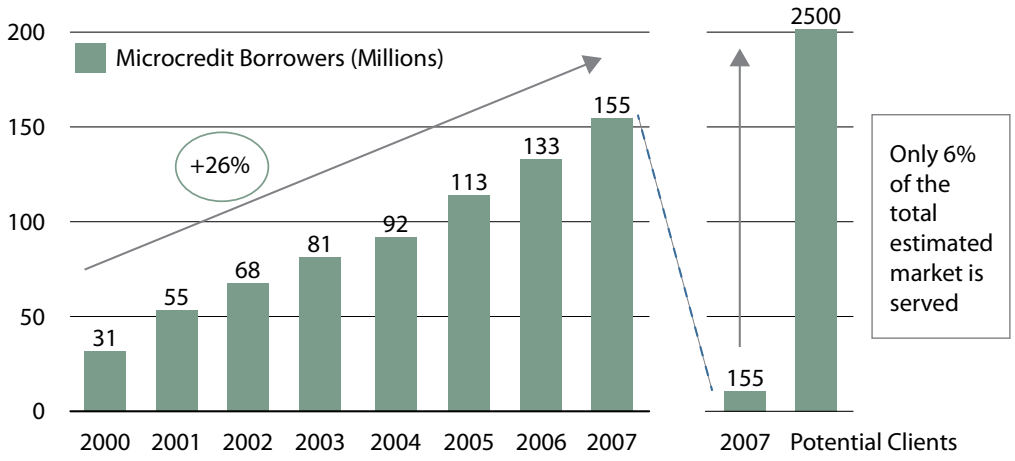
Figure 51: Growth and market opportunity for microcredit borrowers



Source: Treetops Capital

The development of the microfinance industry has happened at varying speeds in different countries. India and Morocco are two countries where microfinance experienced the greatest development. Forbes magazine recently ranked the top 50 Microfinance institutions globally. A staggering seven companies represented Bangladesh and India respectively, followed by four in Morocco. The Middle East was represented by only two entries in the chart: INECO Bank (Armenia) and Development and Employment Fund (Jordan). Although the size of the institutions engaged might tell little about the impact of microfinance operations in different countries, it is certainly an indicator of development in a particular sector and country.[104]

Globally, women are seen to represent the majority of the micro borrower population. Improving the framework for development of microfinance institutions in the Middle East could help women fight out of intrinsic social constraints and participate more actively in the regional economy. In addition microfinance could aid the creation of new regional employment opportunities.

CASE STUDY: CBIRD Microfinance contributes to rural development in Cambodia[105]

The Cambodian Business Integrated in Rural Development (CBIRD) organisation allows poor Cambodians to access funding for business activities.

The organisation was established in 2000 and received a permanent license for operation as a microfinance institution in 2008. To date, CBIRD employs 64 staff and has given 972 group loans and 1,116 individual loans.

As of 2009, the loans outstanding amounted to US $1.2 million with an average loan size of US$500. The privately held company's turnover in retained earnings totals US$173,000.

Individual loans can range from KHR 200,000 (US$50) to KHR 40 million (US$10,000), with an interest rate of between two and four percent. Group loans, which may be accessed by two to five people, can grant up to KHR 4 million (US$1,000) to each individual with an interest rate between three and four percent. As a requirement, the borrower must deposit five percent of the amount granted at time of disbursement.

For example, Mrs. Hoa Mary, a 30-year-old villager, successfully applied to CBIRD for a loan of KHR 3,000,000 (US$750). CBIRD granted Mrs. Hoa the loan under the so-called 'balloon repayment scheme', through which she paid interest monthly and returned capital on the maturity date. The loan allowed her to increase her small retail business by expanding her inventory, therefore attracting new customers. The move generated an extra monthly cash flow of KHR 400,000 (US$100).

CBIRD advises its clients to reduce their debts and reach financial sustainability through a program called 'Savings Mobilisation Program'. The institution strives to provide an alternative to urban migration through the creation of opportunities in rural areas. CBIRD covers 351 villages through five regional branches.

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Figure 52: Operational data of CBIRD Microfinance

	31-Dec-09	31-Dec-08	31-Dec-07	31-Dec-06
Number of Branches	5	5	5	5
Number of Districts	20	18	16	15
Number of Communes	85	79	77	74
Number of Villages	351	340	308	293
Amount of Loans Disbursed				
Amount of Loans Disbursed	1,832,321	1,644,316	1,505,288	1,418,452
Number of Loans Disbursed	2,525	2,469	2,086	2,301
Amount of Loans Outstanding				
Amount of Loans Outstanding	1,255,580	1,018,303	869,311	845,43
Clients with Loans	2,308	2,037	1,668	1,697
Average Outstanding Loan Size	551	500	521	498
Amount of Savings Balance				
Amount of Savings Deposit	123,365	123,687	140,656	113,862
Number of Savings Accounts	2,595	2,480	2,301	2,170
Repayment Rate	97.19%	99.10%	99.20%	98.98%
Number of Borrowers	2,308	2,037	1,668	1,697
Number of Borrowers per CO	127	146	128	113
Loan Outstanding/Credit Officer	69,754	72,736	66,870	56,362
Amount of PAR > 30 Day	35,323	10,052	6,913	8,661
PAR > 30 Day	2.81%	0.99%	0.80%	1.02%
Write-Off Rate	0.38%	0.49%	0.76%	0.64

Source: CBIRD Microfinance website

CASE STUDY: India's microfinance industry

The Indian microfinance industry is the largest and among the fastest-growing in the world. The untapped market potential is staggering – one estimate pegs the credit demand from the underserved 120 million Indian households at US$260 billion.[106] By March 2010, the gross loans outstanding of the micro-credit industry in the country were estimated at US$10 billion (40 percent of this was from private sector MFIs and the remaining amount was from government-led programmes).[107]

Private sector MFIs in the country have attracted tremendous investor interest because of their profitability and growth prospects. While MFIs have primarily secured funding through bank borrowings (approximately 80 percent), equity funding has increased in the recent past.[108,109] Private equity (PE) investors have shown much interest. Between January 2007 and March 2009, 14 deals related to the Indian microfinance sector worth a total of US$ 230 million had been completed.[110] India accounted for 35 and 25 percent of the global microfinance sector PE deals in 2008 and 2009, respectively.[111]

MFI profitability in India can be estimated from the fact that of the 70 institutions that reported profits/losses to a global database, 62 reported a positive Return on Assets (RoA), of which 20 had RoAs of over 4 percent in 2009-10. This compares favourably with that of Indian banks, which registered a highest RoA of only 2 percent in that sector in the same year.[112] In early 2010, a sector expert had predicted that microfinance lending in India could surge by around 40 percent annually over the next few years.[113]

While the long-term fundamentals of this industry make a compelling case for investment, Indian MFIs have recently found themselves in a middle of a crisis. MFI activity was brought to a near standstill in the southern Indian state of Andhra Pradesh (the largest market for Indian MFIs) in the second half of 2010. This followed state government intervention in response to a series of suicides among MFI clients, amidst allegations of irresponsible lending. At the same time, SKS Microfinance Ltd, the largest MFI in the country, had recently become the first Indian MFI to successfully list on the Indian Stock Exchange, creating huge wealth for its founders and shareholders.

While this served as a trigger to the crisis, concerns had already been growing over several issues seen in the industry. Among these was the reluctance of several large Indian MFIs to reduce lending

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rates despite increasingly benefitting from economies of scale; reports of coercive debt recovery methods, multiple-lending and growing indebtedness among customers; lending to cover previous debts rather than for entrepreneurial activities; and the lack of regulation around the industry.

In response, the Reserve Bank of India (RBI) set up a high-powered committee to provide remedial solutions for the industry. Since then, the committee has put out draft recommendations that are now under final consideration by the RBI.[114] Should the committee's recommendations, particularly those related to caps on lending rates, margins, minimum net worth requirements, and capital adequacy ratio norms, be adopted, the largest MFIs will be less impacted than smaller ones. In fact, the industry may witness consolidation and closure of some smaller MFIs.

The gravity of the current circumstances in Andhra Pradesh is made clearer from the fact that Spandana Sphoorty Financial, the country's second largest MFI, had reported year-on-year growth of over 100 percent for the past eight years, but recently declared it only had cash available until the end of February or early March 2011 and that if collections did not improve, it would be forced to shut down. Smaller MFIs operating in the state were even more susceptible to bankruptcy.[115]

With this in mind, the industry is likely to grow more slowly than previously projected, but may also adopt better corporate governance standards, as recommended by the RBI.

In fact, large MFIs that are not overly focused on southern Indian states, which have high penetration rates, may stand to benefit from industry reform. Owing to this, credit ratings agency CRISIL removed a negative ratings watch from MFIs that primarily operated outside Andhra Pradesh.[116] Among these, Equitas Microfinance India Private Ltd and Ujjivan Financial Services Private Ltd, two of the largest MFIs in India, are less likely to be impacted by the RBI Committee's recommendations because of their economies of scale.

ISSUES FOR RESPONSIBLE INVESTORS

CONCLUSIONS

Impact investment is a new and emerging asset class. The numerous efforts undertaken by international organisations, foundations and investors to develop the field are positioned to pay off in the near future. New impact funds are created and driven by increased interest from the private sector in deploying capital for a greater good.

Increasingly the trade-off between impact and financial returns is becoming a moot point. Though many impact investment funds may choose to position themselves as non-profit organisations, there is compelling evidence within this report to suggest that market-competitive financial performance can be achieved by impact investment managers.

The ventures illustrated in this report represent examples of organisations that have the potential to achieve both financial and impact results. Africa, Asia and the Middle East offer a vast market for impact investments, supported by the tremendous amount of people living at the BOP and the record negative environmental performance of many countries.

The macro indicators described provide a basis for the geographic composition of an impact portfolio, being mindful of the relative obstacles to economic activity in developing countries. Moreover, the strategies and models undertaken by impact funds and social entrepreneurs can illuminate the opportunities available for new investors.

The need for a sustainable economic environment has become clearer in the aftermath of the recent global financial crisis and social unrest throughout the Middle East in particular. Business models that go against social inequality and exploit natural resources are proving ineffective as channels for future economic progress. Impact investments represent an attractive, available, and urgently needed alternative for sustainable development.

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