

INCREASING IMPACT AND ENHANCING RETURNS:

Integrating Publicly Traded Water and Agribusiness
Equities into Impact Investor Portfolios

An **ImpactAssets** issue brief exploring
critical concepts in impact investing

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PRÉCIS

Impact investors have filled an important niche, providing capital to entrepreneurs and projects that might not otherwise receive financing. While impact investing is frequently associated with direct private equity and debt investing, the reality is that impact and financial returns may be enhanced by also investing in publicly traded companies providing solutions at scale. Investing in publicly traded companies addresses two of the biggest challenges impact investing has faced in its nascent stage— creating impact at scale and providing new sources of attractive opportunities for impact investor capital. The provision of water and food are central sustainability challenges that provide good examples of the complementary nature of private equity investments that provide focused solutions and publicly traded solution providers impacting the challenges at scale. We believe Impact investors structuring their investments in private and public equities in an integrated, holistic manner will increase overall impact and enhance total returns.

INTRODUCTION

Impact investing has begun to capture the attention of a growing segment of investors ranging from veterans in sustainable investing to traditional mainstream investors. Leadership in implementation is coming from foundations with a strong desire to ensure they are using all their assets to create blended value in line with their missions. Family offices seeking to pursue a vision of a just future while preserving a family trust for future generations are

also leading the growth of the impact investing arena. While they may sometimes differ in specific language and detail, impact investors are united in the belief that one can achieve strong financial and social/environmental performance.

From a capital markets perspective, impact investing has provided innovative vehicles that channel capital with precision to projects

or entrepreneurs that might otherwise have fallen through the cracks. This is perhaps one of impact investing's greatest contributions – providing essential financing that will make a distinct and measurable impact on the lives of individuals and underserved communities as well as on our planet. As such, many of those who identify as impact investors have initially focused nearly entirely on investing in private markets. A recent report by JP Morgan and the Global Impact Investing Network (GIIN) contained a survey of more than 2,200 impact investments representing a notional amount of approximately \$4.4 billion. Of that \$4.4 billion, 52% was invested in private debt and 38% in private equity. Public equity investment was a negligible \$10,000,000, or less than 0.25%.¹

We would argue this figure may have more to do with language than actual practice. Many who hear the term impact investing think of a specific asset class or type of direct investing; whereas, at the same time, many who invest for impact are also allocating portions—if not all—of their portfolios to public equity, sustainable investment options. It is the authors' position that impact investing is not an asset class per se, but rather a discipline of applying intent to achieve outcomes in the world with regard to a given thesis that can and should cross multiple asset classes including public stock and bond strategies.²

Many investors who have embraced impact investing within a blended value context may be taking impact into account in their

public equity allocation through traditional SRI screening or ESG integration. Traditional negative SRI screening would exclude a company with negative impact from an undesired activity beyond a certain threshold. In addition to negative screening, a responsible/sustainable approach to public equity investing can include integration that considers the impact of environmental, social and governance (ESG) characteristics of a company's risk/reward profile while also providing an indication of its impact on society. For example, in 2010 Dow Chemical announced it had taken measures that resulted in saving one billion gallons of water at a Texas plant that would reduce maintenance costs by at least \$4 million as well as reducing energy costs, water usage and GHG emissions.³ Additionally, in an advertisement trumpeting this accomplishment, it is noted that the water saved could sustain the needs of the town where the plant operates for three years or provide enough water for the daily use of 14.4 million people⁴—not small numbers in a region of the United States experiencing consistent drought over recent years.

Now that is clearly measurable impact!

Moreover, public equity managers increasingly have the tools to assess areas such as companies' carbon footprints, water usage and Base of the Pyramid (BOP) activities. While this is clearly a natural component of a blended value approach to asset allocation, we would state that by focusing explicitly on companies providing solutions to some of our most press-

ing sustainability challenges, impact investors may use public equity investing as a means to the end of creating impact.

Public equity investing does create meaningful impact on the lives of millions of people around the world—and also has obvious environmental value or destructive potential. The challenge is that many impact investors seek to create a “direct line” between their investment dollars and “impact”; therefore, they incorrectly view impact investing as not being inclusive of public equity investing which has many and complex layers between the investment of capital and the creation of impact at a community or bio-regional level. Rather than simply viewing impact investing strictly as

its own asset class (which, one may certainly consider it to be) we would promote a “both/and” approach to impact investing which affirms impact may be created both on a direct invest (private equity or debt) level as well as through strategic management of public equity investments. This “total portfolio” management approach is one which promises to maximize the overall impact potential of all assets under management.

The balance of this Brief promotes this understanding of public equity investing as having a rightful place in the impact community by exploring opportunities for investment in water and agribusiness.

A FRAMEWORK FOR INCREASED IMPACT

Focusing on publicly traded companies providing market-based solutions to the challenges of water and agriculture addresses two of the biggest challenges impact investing has faced in its nascent stage – creating impact at scale and providing new sources of attractive investment opportunities for impact capital. US and European companies often apply products, technologies and services at scale in global markets, having an impact in both domestic and developing markets. At the same time, a growing number of publicly traded companies in emerging markets provide essential solutions to meet their societies’ basic needs. While publicly traded solution providers are an attractive home for impact investor

capital, they should be viewed as a complementary source of investment capital and not a replacement for the essential role of capital provision to small projects and entrepreneurs that otherwise might not have found financing. The most exciting opportunity here is the potential for asset owners to structure capital on a total portfolio management basis—one which structures commercial, impact and philanthropic capital to maximize the overall impact of a portfolio.

Asset owners (whether family office, foundation or institutional investor) embracing impact investing have the opportunity to look at solutions in an integrated fashion, investing

for the broadest impact and earning strong long-term returns. Holistic evaluation of the potential for blended financial and social returns and impact yields:

- Opportunities to provide private debt and equity financing to projects/entrepreneurs that provide essential solutions to underserved communities;
- Opportunities to invest in publicly traded companies providing solutions in scale; and
- Opportunities to engage with companies to minimize or eliminate undesired environmental or social by-products of operating in scale and/or influence blended solutions across public and private markets.

Provision of vital resources such as food and water offers an excellent illustration of the potential power of such an integrated, holistic approach to wealth management. With demand growing from more than 7 billion people on the planet today to more than 9 billion by mid-century, provision of both these vital resources faces severe pressures. Solu-

tions to water scarcity and feeding the world are themselves interrelated and require solutions at scale, but there are also communities where scale solutions might not reach. For those communities and regions, more focused approaches are essential to meeting local food and water needs.

Any undesired environmental or social by-products that may be associated with companies operating at scale in the water and agribusiness sectors may be evaluated and addressed through engagement with company management—and this element of investor strategy has been a central part of most sustainable/responsible investing approaches for many years. To view such practices as distinct from an investor’s potential to have “impact” is to leave potential value on the table. The blended value focus of impact investors provides an excellent foundation for an integrated, holistic approach to these two vital issues of water and food, working to ensure a greater number of communities and markets receive new products and services.

THE CHALLENGE: WATER

Water is a finite resource for which there is no substitute. On a planet covered with water, less than 1% of the world’s water is available for use and this limited supply is increasingly threatened by pollution, particularly in emerging market countries as they grow and industrialize. Historically, water demand has grown at twice the rate of population growth and is

expected to grow by 41% by 2030.⁵ Water is essential for feeding the world with nearly 70% of water supply going to agriculture. Industrial use accounts for a little more than 20% of the water supply and further highlights its importance for economic growth.⁶ These uses far outstrip domestic water use of a little under 10%, but should not obscure the vital need to

provide domestic water as today nearly 800 million people do not have access to clean drinking water and 2.5 billion people lack access to basic sanitation.⁷

To exacerbate these challenges, what water we do have is not distributed equitably to the regions where it is needed most. For example, Asia has approximately 60% of the world's population, but only 36% of its water supply. This disparity is particularly acute in China, which has 20% of the world's population, yet only 7% of the world's water supply. There are also discrepancies within regions where certain parts of the population may not have adequate access to water. For example, the imbalance of water distribution in Africa is not nearly as pronounced in aggregate as in Asia, a region with 13% of the world's population and 11% of the water supply, yet in Africa there are large regional differences in water and many poor rural villages lack access to clean water while also experiencing severe drought.⁸

Meeting the Challenge

An estimated \$22 trillion investment will be required to meet the need for this precious resource through 2030,⁹ which will be the largest component of global infrastructure spending in the next 20 years. This capital will be deployed through companies working to provide solutions to ensure the demand for this most vital resource is met — and those companies offer impact investors significant opportunities for creating deep, sustainable impact with significant financial returns.

Impact at Scale- Public Equities

Companies providing solutions to water scarcity may be segmented into three sectors:

- Water and Waste Water Utilities - Companies managing infrastructure and delivery of water and/or treating waste water for reuse or safe remediation back into the environment.
- Water Infrastructure - Companies providing pipes, pumps, seals and valves as well as design, engineering and construction services.
- Water Technology - Companies providing filtration, disinfection, test and measurement products and metering.

Companies across each of these segments are contributing to creating water solutions at scale. For example, utilities in the developing world are treating wastewater to reduce pollution as well as providing potable water to larger portions of their populations. Over the last 15 years, Manila Water has doubled the number of people in Manila who can access clean water to 6.1 million while simultaneously reducing water lost in transport.¹⁰ Manila Water has also been commended for its business model in which they partner with poor communities in water distribution, providing these communities with improved access to clean water and an additional source of jobs and income.

Water infrastructure companies are providing pipes to transport water from their sources to industrial and domestic end users as well as constructing plants for wastewater treatment. In China, the South-North water transfer

project is bringing water from the South to the more heavily populated Northern Chinese cities where large percentages of the population exist. Companies such as Sound Global are designing and building waste water treatment plants to reduce the significant water pollution challenge China has developed as it has industrialized.

Water infrastructure in many parts of the world is aged, with a significant portion of water being lost in delivery. It is estimated that 7 billion gallons of water are lost to leaks annually in the US. In a number of larger European countries, the estimates of water lost in delivery can typically range from 25-30%, while it is significantly higher in the developing world with leakage in some countries in the 50-60% range.¹¹ This situation is compounded by under spending on water infrastructure rehabilitation and replacement, which means future growth in demand for water infrastructure as pipes and delivery systems must be replaced. The 75-100 year life of pipes does not match the current replacement rate of less than 0.4%, which equates to every 250-300 years.¹² Clearly pipes will eventually fail and need to be repaired or replaced. Companies such as Pure Technologies that provide infrastructure diagnostics help tackle this significant challenge. Pure Technologies uses advanced acoustics to map out a utility's pipe network, detecting where there are leaks and problems with structural integrity, allowing for cost efficient strategic repairs that could save significant amounts of water presently lost in delivery.

Improved methods of irrigation have the potential to save significant amounts of water in the largest market segment of use: agriculture. Currently, around the world, the majority of irrigation is done by flooding fields, an incredibly inefficient process where only 25%-40% of the water is used by the crops. It is estimated that sprinkler and drip irrigation can improve efficiency by 70%-80%.¹³ Jain Irrigation Systems is the largest provider of micro irrigation systems in India that include both sprinkler and drip irrigation processes. This activity has the potential to have a tremendous impact on water conservation efforts in India where as much as 90% of the water withdrawals¹⁴ go to agriculture and groundwater pumping has led to unsustainable aquifer draw downs.

Water technology companies play a large role in conservation efforts and ensuring water quality. Metering companies such as Itron and Elster provide tools to manage water consumption and as the old adage goes - you can't manage what you can't measure! (a sentiment that rings true for impact investors!). Metering has been mandated in the European Union, with comprehensive implementation to be completed by 2020, providing the opportunity for much more efficient use of water across Europe. It is estimated that smart metering combined with appropriate pricing can potentially reduce water use by 20%.¹⁵ Ultraviolet (UV) disinfection is a technology that has been increasingly used to kill bacteria and ensure quality drinking water. And this versatile application will have growing use in a new application - the treatment of ballast water.

Calgon Carbon and Danaher are UV providers who are developing products to retrofit cargo ships to ensure that when ballast water is discharged, bacteria and invasive species are not introduced into the local environment.

Managing Impact through Engagement

These examples provide some illustration of how impact investors may, in the future, earn strong returns from, and increase impact through, publicly traded companies providing solutions in scale. An integrated process should also utilize engagement to address any undesired activities or practices that may be associated with providing solutions at scale. In water, an important issue to monitor is pricing. Water has historically been priced in a manner that does not recognize its scarcity. Appropriate pricing is essential to conserving its use and funding the needed growth in infrastructure. However, with domestic use accounting for less than 10% of the water currently supplied, equitable pricing mechanisms are needed to ensure that basic human needs are met. Where water pricing threatens the provision of water to meet basic needs, investors can have impact by engaging utilities or policy makers supporting inequitable pricing structures to bring about changes to ensure that basic needs are met.

There is also the opportunity to manage impact in the broader equity portfolio by engaging with beverage, power, electronics and industrial companies that are large users of water and encouraging them to take measures

to use water more efficiently. The Carbon Disclosure Project (CDP) Water Disclosure Initiative encourages disclosure on company water use and its strategy for management of water use, providing both increased transparency and a tool to measure progress.

Integrating with Focused Solutions— Private Markets

New investment in publicly traded solution providers integrates well with pioneering, focused private investment solutions currently being implemented by impact investors. While scale solutions are having a major impact on water provision and conservation, rural communities in the developing world are often out of reach of these scale solutions. Private companies like WaterHealth International (WHI) are providing technologies to provide clean drinking water to rural villages. Backed by impact investors such as the Acumen Fund, WHI works in India, Ghana and the Philippines to use UV disinfection to provide clean water through community water systems. According to Acumen, WHI has provided 500 water systems serving 500,000 low-income individuals in developing world communities.¹⁶ Moreover, WHI's innovative model is being replicated throughout India and other countries in the developing world to provide clean water to other underserved, low-income communities. In this way, we see how direct, private investments in water companies may complement a public equity water investment strategy. And of course, today's private company may evolve to be tomorrow's public one.

THE CHALLENGE: AGRICULTURE

A growing global population along with increased affluence and changing diets in the developing world will continue to drive increased demand for food. Demand is expected to expand by 27% in 2030¹⁷, accelerating to an increase of at least 70% by mid century.¹⁸ With approximately 38%¹⁹ of the earth currently used for farming, the supply of arable land for farming is relatively fixed. In order to meet this significant resource scarcity challenge, crop yields for small, medium and large farms will need to dramatically increase. This change will require massive investment in machinery, precision agricultural technology and infrastructure to effectively develop and manage the required supply. The Food and Agricultural Organization (FAO) estimates that in the developing world alone, \$9.2 trillion in investment will be needed to meet agricultural needs through 2050.²⁰

While increasing yields is imperative, feeding the world may be our most complex and integrated sustainability challenge. We have already seen that agriculture uses 70% of the water supply, and this number is closer to 80%²¹ in the developing world. Environmental concerns are also great, as agriculture is the largest emitter of green house gases (GHGs), deforestation to increase farm land needs to cease and runoff from excessive use of fertilizers is a significant source of pollution of the water supply. From a social perspective,

there are also legitimate concerns that yield-enhancing technologies will be dominated by large agribusiness at the expense of optimal solutions for society and small and medium players.

Meeting the Challenge

Sustainably meeting the world's food needs will require an integrated approach that considers the need to increase crop yields while minimizing environmental impacts and ensuring equity across large and small players in the agricultural value chain. Meeting the anticipated 70% increase in demand for food by 2050 will require significant growth in production by both large and small farms. To achieve this lofty objective, large producers will have to increase crop yields by an estimated 20%-40% while small farms will need to increase yields three to four times above current levels of production.²² Impact investors employing an integrated portfolio approach can benefit from a comprehensive vision that best enables careful consideration of all the essential and sometimes competing objectives and concerns; consideration of investments and issues in their individual silos will not yield satisfactory solutions. For example, a portfolio approach allows the balancing of yield enhancing solutions, environmental concerns and small farmer equity issues at both the company and portfolio levels.

Impact at Scale- Public Equities in Agriculture

Companies providing agricultural solutions operate across 4 sectors:

- Agricultural Producers – Farmers who provide grains, vegetables and livestock.
- Agricultural Suppliers – Companies providing fertilizers, seeds, crop protection and machinery that enable the Producers to increase crop yields.
- Agricultural Services – Companies providing vital services to ensure quality and manage and transport increasing volumes.
- Agricultural Processors – Companies that take raw products and process them for delivery to consumers.

There is great opportunity to invest in producers working to increase yields in the developing world. For example, Continental Farmers Group is a diversified agricultural producer in Poland and the Ukraine that has successfully employed advanced agronomic practices and modern agricultural technology to increase crop yields. We believe it has the ability to take the current business model to a larger scale achieving further efficiencies and economies of scale. New Britain Palm Oil is a leader in the sustainable production of palm oil. Palm oil is a high yielding oil that supports developing economies and the diets of many people throughout the world. However there are concerns around its sustainable production and infringement on the rights of local communities. New Britain is working to manage these challenges, engaging with producers in New

Guinea to reduce local poverty while creating a transparent, sustainable supply chain.

Agricultural suppliers provide the tools for producers to increase crop yields. Danish biotechnology firm Novozymes has been developing products that are leading to more sustainable farming. It has undertaken initiatives to develop yield-enhancing products to make the application of phosphate fertilizers more efficient and use naturally occurring fungus to develop crop protection products. Novozymes has also teamed with CleanStar Ventures to found CleanStar Mozambique, a company working with small farmers in Sub Saharan Africa to implement sustainable farming and providing a foundation for sustainable communities in that part of the world.

With the supply of land for farming relatively fixed and arid regions being increasingly prone to drought, biotechnology can help grow crops on marginally productive land. Syngenta, a leading supplier of seeds, is developing solutions to help producers increase yields while using less water and operating in areas prone to drought. They have creatively combined their technologies in ways that enable producers to increase yields using less water and grow crops on more marginal land.

Fertilizers also have a role in helping grow produce more effectively, but implementation also leads to environmental concerns. Proper use of fertilizers can increase yields, yet over-use leads to runoff of nitrogen and phosphorous causing unwarranted pollution of water-

ways. In a November 2011 article in *Scientific American*, Jonathan Foley observed that in certain parts of the world (China, Northern India, US and Europe) fertilizer use can be reduced without impacting yields. Foley goes on to point out that the pollution from runoff is concentrated with only 10% of the world's farmland, accounting for 30% to 40% of the pollution.²³ Soil feasibility and content studies can help in optimizing usage of fertilizers. Additionally, increasing the adoption of more specialized value-added fertilizer products can help in reducing over-application of fertilizers, minimizing environmental impact. Fertilizer producer, Yara, has a product that allows for the application of a customized mix of nitrogen, phosphate and potash fertilizers along with secondary micronutrients that is most suitable for the particular soil. Yara's products also have consistent size and mass which makes accurate spreading easier, hence minimizing losses.

Agricultural service providers are essential to ensuring that food grown by producers makes it to market. An astonishing 30% of the food produced across the globe goes to waste. Lack of adequate infrastructure to handle and transport produce is a key constraint in both developing and developed regions. In the US, average distance to the closest grain elevator has increased from 12 miles in 1980s to 35 miles today. Rail is an essential method to ensure efficient transport of grains. In Russia, 70% of the rail cars will go out of service by 2015 putting further pressure on the already overburdened infrastructure.²⁴ Companies like GrainCorp provide grain handling and storage

services that work to protect quality produce. Operating in Australia, it has the capability to transport four million tons of grain each year with grain storage capacity of approximately 20 tons.²⁵

Managing Impact through Engagement

Publicly traded companies may be providing significant scale solutions, but as noted above, the sustainability challenges in meeting the demand for food are significant. An integrated portfolio approach to impact investing allows for evaluation of positive contributions of scale solutions at the company level along with consideration of any negative impacts or problematic activities. This will involve consideration of expected return, positive and negative impacts and how engagement may be a useful tool for mitigating an undesired activity. Examples include:

- Green House Gas (GHG) Emissions. Much of the activity needed to feed the world also detracts significantly from our efforts to mitigate climate change. While companies may be providing essential tools to increase food production, we need to encourage reduction of their carbon footprints. John Deere is the largest manufacturer/distributor of agricultural equipment globally, with a significant role in providing solutions in emerging markets that are helping producers increase yields. Recognizing the significance of its carbon footprint, John Deere has reduced its global GHG emissions by 63% per ton of production from 1972-2006 and has committed to further reduce its GHG emission by 25% per dollar of revenue by 2014.²⁶

- Palm Oil. As noted above, palm oil production has desirable attributes as a high yielding oil that supports developing country economies while providing cooking oil that reduces trans-fats. However, there are significant concerns regarding its production which include deforestation and infringement on the rights of local communities. The Roundtable on Sustainable Palm Oil (RSPO) has brought together palm oil producers and NGOs to develop standards for sustainable palm oil production, which investors can use to evaluate impact and target engagement.

Both of these challenges are also ripe opportunities for engagement - individually or in concert with coordinated efforts with other investors. The Carbon Disclosure Project (CDP), backed by many asset management and asset owner signatories, has been very successful in encouraging transnational companies to measure, manage and disclose both carbon footprints and water usage. The Forest Footprint Disclosure Project coordinates a similar effort that enables better evaluation of Palm Oil companies' management of their impact on deforestation.

Biotechnology is perhaps the most challenging and contentious issue, where agronomists and environmentalists have found little middle ground. Varying emphasis on the equally essential goals of feeding the world, reducing environmental impact and ensuring equitable solutions across farmers of all sizes have led to focus on "either/or" solutions. For some investors, finding a balanced solution in the context

of their particular mission may be very elusive (i.e. a mission focus on small farmers). For others, one must ask whether an acceptable framework might be developed that would include:

- Investing in companies with well-developed GMO technologies with the best potential to increase yields and minimize environmental impacts, i.e. drought resistant seeds.
- Avoiding or engaging with those companies that have products that might carry greater risk.
- Encouraging companies that are not providing equitable access to their technology to have greater collaboration with small farmers.

Focused Impact- Private Markets

Publicly traded equities are providing solutions in scale that integrate well with the focused, privately held solutions impact investors have provided in the developing world. While grain handlers like the aforementioned Grain Corp are working to ensure a higher percentage of farmers' produce reaches markets, much of the developing world lacks adequate infrastructure for handling and transport, leading to unacceptable levels of post-harvest loss. Focused private impact investment can help develop infrastructure across the agricultural value chain in developing countries. Solutions such as improved storage methods including hermetically sealed bags and metallic silos can also help preserve produce and develop technical skills and provide work for local craftsmen.

Similarly, looking at one's portfolio of investments on a geographic basis may also reveal other gaps where public markets are not meeting the needs for required solutions. Africa has suffered from famine and under-nourishment for many years, and the world's capital markets have failed to support sustainable solutions. Impact investors have been able to channel private capital to smaller farmers to help them increase their productivity, filling this breach with focused solutions. USAID, JP Morgan and the Gates, Gatsby and Rockefeller Foundations have collaborated to establish the African Agricultural Capital Fund, designed to invest in small and medium agribusiness companies in East Africa. The objective of the fund is to raise agricultural productivity while also increasing incomes of "at least a quarter million households."²⁷ Similarly, UK based Lion's Head Global Partners, the US based Calvert Foundation and the Nigerian Tony Elumelu Foundation invested in Mtanga Farms in Tanzania, enabling them to produce higher quality potatoes that resulted in higher

yielding seed materials for small farmers.

Finally, there have been some recent positive developments surrounding increased investments by publicly traded companies in African agricultural projects that present impact investors with both opportunities and challenges. US agricultural suppliers will be investing at least \$150 million in African agriculture over the next few years as part of a \$3 billion global effort by publicly traded companies to help increase agricultural productivity in Africa.²⁸ Clearly these efforts have the opportunity to provide scale solutions, but also create concerns that African farmers could be displaced. In essence, this developing situation in Africa is a microcosm (a rather large microcosm at that!) of the challenges covered here. Impact investors with their pioneering knowledge of focused solutions in Africa along with their collective potential clout through publicly traded companies they own, are in an outstanding position to help lead the direction and impact of solutions in Africa.

FINANCIAL AND SOCIAL IMPACT PERFORMANCE: STOCKS OF WATER AND AGRICULTURAL SOLUTION PROVIDERS

Investing in publicly traded solution providers to water and agricultural challenges has provided investors with strong returns over the last 10 years. Water, as represented by the S Network Water Index²⁹ and Agribusiness, by the Dax Global Agribusiness Index, both substantially outperformed the MSCI World Index. Given the focused nature of the strategies, one

would expect more volatility than the broad market, yet both strategies also outperformed the market on a risk-adjusted basis (see the Sharpe Ratios, a measure of risk adjusted performance, in the table below). As the chart below indicates, agribusiness is clearly more volatile than water largely due to spikes in commodity prices in recent years. Water is

remarkably consistent for a focused thematic strategy and this is largely attributable to the defensive growth nature of its opportunity set where lower beta, higher dividend water utilities can provide a more defensive complement to the higher growth technology and infrastructure sectors.

More importantly, the trends that drove this strong performance over the last decade are long term in nature and we believe they will continue to drive returns for many years to come. The simple fact that the world's population will grow by more than two billion by mid-century will put more stress on the world's already constrained water and food supply. Urbanization, increasing standards of living and economic growth will only strengthen this trend. Demand for food and water will continue to rise at a higher pace than population growth, while supply is naturally restricted. These two factors will drive greater opportunities for investment in solutions to manage and increase supply. One may only conclude that companies developing technologies, products and services that deliver more efficient provision and distribution of water and food have a bright future.

The interconnectedness between the investment thesis driving expected returns and the need to generate solutions providing impact at scale is clear. The need for solutions is attracting investment capital. Specialist active management can first identify and ensure that the companies are focused on providing solutions

and then identify those who will be most successful at execution over the long run.

The first step can be viewed both as an assurance that a company is significantly focused on providing water or agricultural solutions and ex ante assessment of potential impact of providing a solution to the need for food and water. Revenue thresholds provide a means of both evaluating exposure to the theme and assessing a company's focus on impact. We look primarily at investing in companies that receive a dominant component of their revenues (>50%) from water or agricultural solutions. A second category we would use to qualify a company for potential impact would be an industry leader in a particular water or agricultural solution that would earn a minimum of 10% of its revenues from that leading solution.

This first step will ensure exposure to the theme and should provide returns in line with passive indexes like the S Network Global Water Index and the Dax Global Agribusiness Index. However, winnowing the companies exposed to the theme to identify superior companies should position the portfolio for better returns and greater impact. In the next step, specialist active management can focus on those solution providers best positioned to deliver the strongest solutions. Through fundamental analysis of the companies and evaluation of their technologies and competitive advantages, specialist managers gain unique insights regarding who will best be able to successfully execute solutions at scale, providing both strong investment return and impact.

CUMULATIVE RETURN OVER THE LAST TEN YEARS

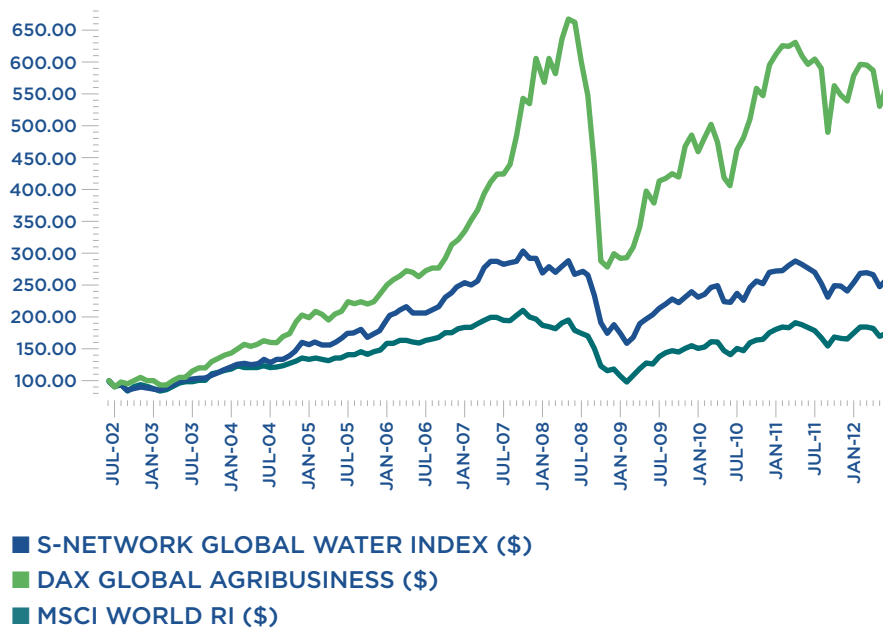


Chart generated by Explica

ANNUALIZED RETURNS, TEN YEARS ENDING JULY 2002-APRIL 2012

Horizon – 10 Years	Return	Sharpe Ratio
S-Network Global Water Index (\$)	9.88%	0.43
Dax Global Agribusiness \$	18.80%	0.68
MSCI World RI (\$)	5.74%	0.20

Source: Kleinwort Benson Investors and DataStream

From an ex post standpoint, as indicated in the water and agribusiness examples above, publicly traded companies can have impact at scale although the precision of impact measurement needs to be developed. In some companies like water utilities, defining impact should be rather straightforward. As implementers of solutions, statistics like connections, meters installed and improvements in water quality probably can be tracked. However, what about water infrastructure and water

technology companies that provide solutions to utilities, industry and agriculture? Can we track the ultimate impact of their products and services on water quality and conservation? For example, are the details of Dow’s water savings that Nalco products helped produce fully available across Nalco’s entire client base? Over time, as the CDP Water Disclosure continues to grow, there can be more comprehensive data to help with these efforts.

In addition to the positive impacts products may directly have on water and food provision, other positive benefits as well as negative impacts would also need to be accounted for. At a minimum, three questions come to mind:

- What positive or potentially negative impacts might a water utility or a large agricultural producer have on local communities and employment opportunities?
- Has a water utility been pricing water in a manner that is equitable for meeting the

basic needs of its poorest constituents?

- While agribusiness companies may be increasing the food supply, what is their carbon footprint and what are they doing to reduce their GHG emissions?

As discussed above in both the water and agribusiness examples, assessing negative impact can be both a component of a comprehensive assessment of company impact and also a basis for engagement and benchmarking improvement in an area of concern.

CONCLUSION

The innovative niche that impact investors have filled in capital provision to entrepreneurs and projects that might not otherwise get financing needs to remain a central focus of impact investing, but influence, impact and financial returns can be enhanced by investing in publicly traded companies that are providing impact solutions in scale. Publicly traded companies providing solutions address two of the biggest challenges impact investing has faced in its nascent stage— creating impact at scale and providing new sources of attractive opportunities for impact investor capital.

An integrated, holistic approach allows a comprehensive consideration of the investment returns and impacts from opportunities in both the private and public markets. It also provides the opportunity to evaluate larger company impacts and initiate engagement to change or reduce undesired by-products of operating

at scale. Strategies for corporate engagement may present some challenges in that they may be time and resource intensive, but creatively enlisting the expertise of program staff, collaborating with organizations with similar missions or relying on investment manager expertise are all tools that can be integrated into the process.

The provision of water and food are central sustainability challenges that many impact investors have directly embraced. They provide good examples of the complementary nature of private equity investments that provide focused solutions and publicly traded solution providers impacting the challenges at scale. There are other areas that warrant consideration including solution providers in the areas of clean and renewable energy, resource efficiency and healthcare. Additionally, the consideration of positive and negative impacts

of publicly traded companies also provides the foundation for integrating environmental, social and governance factors into broad public equity allocations.

Any framework focused on long-term performance cannot be prescriptive. Our intention in this paper is to demonstrate elements of a process that individual investors can imple-

ment within their own organization's mission and investment process. Individual organizational creativity, internally and in collaboration with other impact investors, can lead to directing capital to meet challenges through both focused and scale solutions. Such an approach implemented within the individual mission and creativity of various impact investors can indeed increase impact and enhance returns.

This Issue Brief is jointly authored by Jed Emerson, Chief Impact Strategist, ImpactAssets and Steve A. Falci, Head of Strategy Development Sustainable Investment, Kleinwort Benson Investors.

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FOOTNOTES

- ¹ JP Morgan, Global Impact Investing Network, Insight into the Impact Investment Market, 14 December 2011
- ² Author's Note: In truth, the long standing Social/Sustainable and Responsible Investment (SRI) and Environmental, Social and Governance (ESG) monikers and their adherents may well find that the definition of impact investing seems to describe quite well their intent and motivations. See <http://www.socialinvest.org> for more information on SRI/ESG framework and practitioners.
- ³ Dow Website; <http://www.dow.com/news/corporate/2010/20100128a.htm>
- ⁴ Wall Street Journal, January 28,2010 <http://www.nalco.com/static/images/Media/WallStreetAD.pdf>
- ⁵ McKinsey Global Institute, Resource Revolution: meeting the world's energy, materials, food, and water needs, November 2011
- ⁶ Jacobs Securities, Global Water Primer, April 2011
- ⁷ WHO and UNICEF, "Progress on Drinking Water and Sanitation," 2012
- ⁸ Jeffries, "Water Q&A: Secular Themes Tactical Opportunities," February 2012
- ⁹ Jacobs Securities, Global Water Primer, April 2011, referencing Booz Allen Hamilton
- ¹⁰ Credit Suisse, Investing for Impact, January 2012
- ¹¹ Jeffries, February 2012
- ¹² KBI Calculation based on data in, US EPA, "Distribution System Inventory, Integrity, Water Quality," 2007
- ¹³ Overture Capital Markets, "Water- A life sustaining resource with no substitute," November 2011
- ¹⁴ India Water Review, 13 May, 2012
- ¹⁵ Jeffries, February 2012
- ¹⁶ Acumen Fund , "Water Portfolio, WaterHealth International, Safe Drinking Water for the Poor," 2012
- ¹⁷ McKinsey Global Institute, Resource Revolution: meeting the world's energy, materials, food, and water needs, November 2011
- ¹⁸ Goldman Sachs, "Rain and grain, hard to sustain," Fortnightly Thoughts, 25 August 2011
- ¹⁹ Jonathan A. Foley, "Can we feed the world and sustain the planet?" Scientific American, November 2011
- ²⁰ FAO, Food Security and Agricultural Mitigation in Developing Countries: Options for Capturing Synergies, 2009
- ²¹ Jacobs Securities, Global Water Primer, April 2011
- ²² Goldman Sachs, "Rain and grain, hard to sustain," Fortnightly Thoughts, 25 August 2011
- ²³ Foley, Scientific American, November 2011
- ²⁴ Janney Capital Markets, "Global AgInvesting 2012:Key Conference Take Aways," April 2012
- ²⁵ GrainCorp, Corporate Brochure, ID87426
- ²⁶ John Deere website, http://www.deere.com/wps/dcom/en_INT/our_company/citizenship/environmental_stewardship/operations/operations.page
- ²⁷ GIIN, "USAID and Impact Investors Capitalize new Equity Fund for East African Agribusiness," 28 September 2011
- ²⁸ Thompson Reuters, "US Agriculture Companies Set Millions for Africa," 18 May 2012
- ²⁹ Formerly called the Janney Water index