Doing well by doing good

Impact investing

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Doing well by doing good

I believe that companies are, above all, agents of transformation.

Guilherme Leal, businessman (1950–)

Mark Haefele

Stephen Freedman

Dear readers,

The way businesses operate has a profound effect on society and the environment. This impact has become an increasing focus for UBS stakeholders, from clients and employees, to shareholders and the nations where we do business. Around the world, there is a growing interest in market solutions to ensure that companies have a positive impact, and more investors are incorporating environmental, social, and governance factors into their investment decisions. As a result, sustainable investing is becoming a force to be reckoned with, and we expect the financial community to play an ever more important role in contributing to a more renewable society.

To help clients better appreciate and navigate this growing area, we launched our educational report series on sustainable investing last year. So far we have covered two of the three basic approaches to sustainable investing, namely exclusion and integration (see *To integrate or to exclude: approaches to sustainable investing*, July 2015).

In this report, we turn to the third approach, impact investing, which explicitly aims to achieve a positive impact on society or the environment in addition to a financial return. While still comparatively small, the impact investing industry is growing fast, and is currently one of the most innovative and vibrant segments of the financial markets. This report sheds light on the what, why, and how of impact investing. We believe UBS is a global leader in this fast-growing area, and invite you to dig deeper into this topic with us.

Mark Haefele
Global Chief Investment Officer
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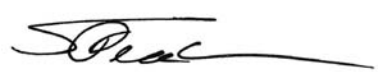


Stephen Freedman
Head of US Thematic and Sustainable
Investing Strategy

Impact investing in the broader sustainable investing landscape

It's easy to make a buck. It's a lot tougher to make a difference.
Tom Brokaw, TV journalist (1940–)

UBS CIO defines sustainable investing as a set of investment strategies that incorporate material environmental, social and governance (ESG) considerations into investment decisions. Sustainable investment strategies usually seek to fulfill one or more of the following objectives:

1) achieve a positive environmental or social impact alongside financial returns;

2) align investments with personal values; and

3) improve portfolio risk/return characteristics.

Assets managed according to sustainable investing criteria are growing more quickly than the financial industry at large. A key driver is society's changing attitudes regarding the sustainability and transparency of business models, particularly in the wake of the 2008 financial crisis. An emerging view that the private sector, not just governments or philanthropic organizations, can and should contribute to solving global challenges has underpinned this growth. The attitudes of consumers, investors and civil society at large are changing perceptibly, with many now demanding more accountability from the recipients of their invested capital.

In a 2014 survey of 30,000 respondents across 60 countries, consumer research firm Nielsen found that 55% of participants are willing to pay extra for products and services from companies that are committed to positive social and environmental impact, and 67% would prefer to work for a socially responsible company.

These same trends are underpinning greater investor interest in approaches that incorporate sustainability into the investment process. Interestingly, the drivers behind this growth are not only the desire to make a difference or to sleep well at night. Investors are also recognizing that performance and an overall more robust investment process can be achieved by focusing thoughtfully on sustainability-related trends, risks and opportunities.

However, despite growing popularity, there has been industry-wide ambiguity on sustainable investing generally and impact investing more specifically. We view impact investing as one of three specific approaches within the broader umbrella of sustainable investing (see Fig. 1, p. 6).

Exclusion: This traditional and still most commonly used approach involves excluding individual companies or entire industries from portfolios if their areas of activity conflict with an investor's personal values. This process, called exclusionary or negative screening, can rely either on standard sets of exclusion criteria or be tailored to investor preferences. For instance, investors may wish to exclude companies with 5% of sales or more generated from alcohol, weapons, tobacco, adult entertainment or gambling – so-called "sin stocks." Exclusion is generally applied through publicly listed stocks and bonds. It is often criticized for reducing the investable universe.

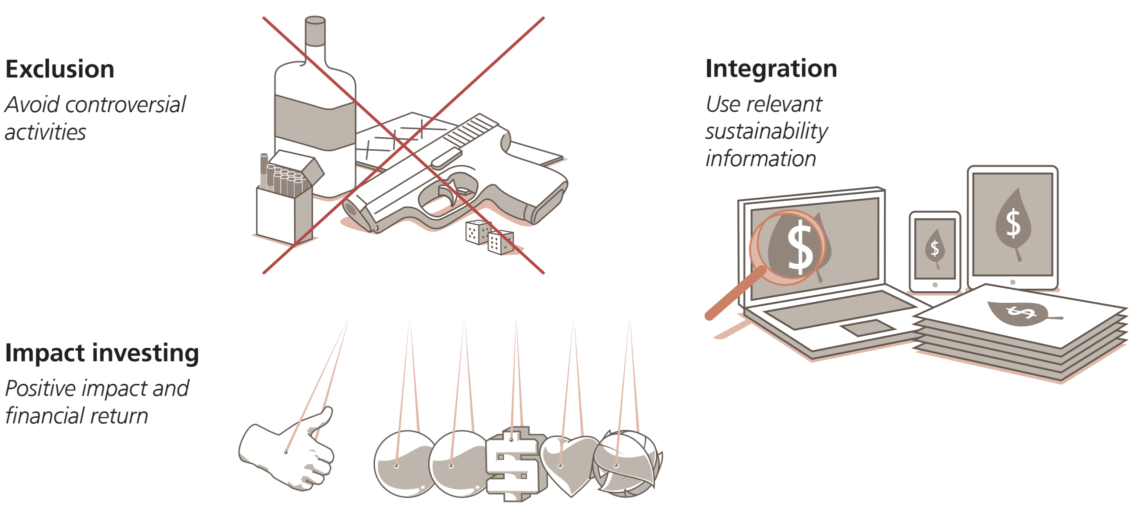
Integration: This approach encompasses techniques that combine environmental, social and governance (ESG) factors with traditional financial considerations to make investment decisions. Having gained traction in recent years, it is based on the premise that additional ESG information not covered by traditional financial analysis has an impact on the long-term financial performance of a company. Integration involves understanding how companies handle environmental, social and governance risks that could entail significant costs or damage their reputations. It also involves assessing whether firms are well positioned to capture opportunities arising from major sustainability-related themes and trends, which might give them a competitive edge. Integration is generally applied through publicly listed stocks and bonds, and can answer some of the shortcomings of exclusion screening.

Impact investing: This strategy differs from the previous two in its explicit intention. While exclusion removes companies which do not comply with investors' values, and integration applies ESG considerations to security selection, impact investing explicitly aims to make a measurable positive environmental or social impact through the capital invested. Impact investing engages directly with companies and/or funds, generally through private market solutions, that intend to create measurable positive social or environmental outcomes alongside financial returns, the latter being of utmost importance.

In the next section, we address in detail what we believe impact investing is – and is not – as well as dispel common misconceptions.

Fig. 1: Approaches to sustainable investing

Three basic pillars can be combined



Source: UBS

What is impact investing?

The only limit to your impact is your imagination and commitment.
Tony Robbins, motivational speaker (1960–)

Impact investing seeks to generate a positive social or environmental impact alongside a financial return. This explicit strategy spans asset classes. Whether investing venture capital in an application that provides educational material for under-resourced schools, or funding a social impact bond that aims to reduce recidivism among juvenile offenders, this approach seeks commercial solutions to social and/or environmental challenges.

At UBS CIO, we define impact investments as those that finance companies, organizations, and funds with the intention of generating social or environmental impact alongside a financial return. As illustrated in Fig. 2, impact investing adds a third dimension to traditional investing, namely the inclusion of non-financial criteria in evaluating opportunities. In practice, we consider three criteria alongside the generation of desirable financial returns to delineate what qualifies as impact investing.

a. Impact investing criteria

- First, we explore intent. We require that the parties structuring the investment solution have a stated and explicit intention to generate positive social and/or environmental impact, in addition to sustainable financial performance.

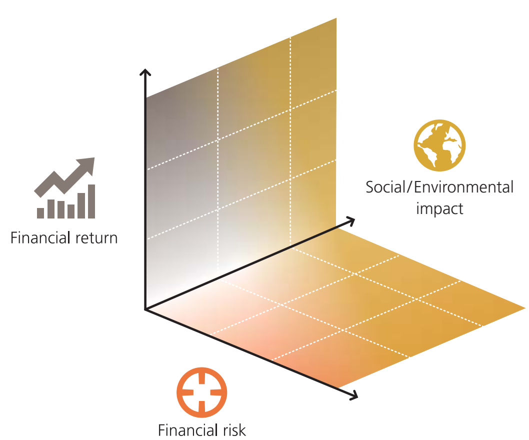
- Next, we consider impact measurement. It is important that the outcomes of the investment be tied to specific metrics, and measured against a base case or benchmark. Examples of specific metrics might be the number of jobs created or liters of water purified.

- Last, we require verification. This means establishing proof that the invested capital itself is positively correlated with the intended outcome. Proof of verification requires scientific and/or statistical tests linking impact to outcome. For example, if the stated benefit is cleaner drinking water, and measurement includes the number of liters of available clean water, supporting data showing proof that the investment made (i.e. in better quality pipes) led to this outcome, would be important.

b. Impact investing by asset class

At present, impact investing is predominantly found in illiquid asset classes such as private equity and private debt, which comprise our focus. Although there is a trend in the marketplace toward including impact investing in public equities and debt markets, this remains controversial. In particular, such investments do not necessarily fulfill our three criteria and risk watering down the concept of impact investing. For instance, unless the investment in a public equity is significant in size, activist in nature, and the company itself is smaller and more malleable, verification is not possible.

Fig. 2: Adding a third dimension to investing



Source: UBS

Private markets funds have established themselves as a preferred financial structure for impact investing, with fund managers adapting their existing lens to pursue and report impact goals. Such private markets structures, i.e. private equity funds, are well suited to impact investing through their ability to direct and verify impact on the privately held business or project with the capital invested and the active management of the investment. Other benefits of private market opportunities are the long-term nature and structure aligning the goals of investors (i.e. private clients) and those employing the capital (i.e. fund managers) to create benefits for society and/or the environment.

1) *Private equity*: Private equity, including venture capital, is a common investment instrument used by impact investment funds. Approximately 17% of all impact investing assets are invested via private equity, as per a 2016 GIIN study.

2) *Private debt*: With a significant portion of AUM from impact investing coming from micro- and small- and medium-size enterprise (SME) debt financing, private debt is a large driver of the impact landscape, with approximately 35% of global impact assets. Selective debt investments in private enterprises can range from working capital loans to larger private debt financing.

3) *Real assets*: Impact investments exist within real assets, whose value is derived from physical properties, managed to produce long-term value to society and the environment, such as sustainable housing, infrastructure assets including cold storage facilities, and clean energy assets.

4) *Innovative financial structures:* See following section for more information.

Private markets investing basics

Private markets (PM) offer a number of ways to engage in impact investing. These strategies include private equity, private debt and private real assets. They principally involve making unlisted equity and debt investments in private businesses or assets. Investments are typically made through commingled funds managed by third-party fund managers. Noteworthy features of PM vehicles are:

Legal structure
PM vehicles are usually structured as limited partnerships, whereby a general partner (GP), the fund manager, can invest its own funds as well as funds raised from investors, the limited partners (LP).

Illiquidity
PM structures involve significant invested capital lockup. Terms typically range from 5–15 years. These investments are illiquid in nature and are most appropriate for investors with a long time horizon and no foreseeable need for the committed capital.

Capital commitment
Funds are not raised and invested all at once. Instead, during a defined investment period, as investment opportunities arise, the fund manager can call on the investors to transfer successive fractions of their committed capital. These so-called capital calls require careful cash management on the part of the investor.

Asset class-specific features
Private equity (PE) investments usually involve varying degrees of operational and strategic influence by the GP on the companies in which positions are taken. The most typical forms of PE in impact investing are venture capital – to finance startups – and growth capital – to fund rapidly growing businesses. Private debt involves non-traded debt investments in listed or unlisted businesses. Private real assets include private real estate, infrastructure, farmland, timberland and natural resources.

c. Innovation in impact investing

Impact investing often requires a high degree of financial innovation, as conventional investment solutions are typically structured such that positive impact is at best a byproduct of the investment process rather than a targeted outcome. Examples of innovations that have emerged within impact investing include:

Blended finance structures: combining private, financial return-oriented sources of capital with either public sector or philanthropic funds, whereby the latter often assume a more junior, loss-absorbing or credit-enhancing position in the capital structure in order to entice more participation of the former

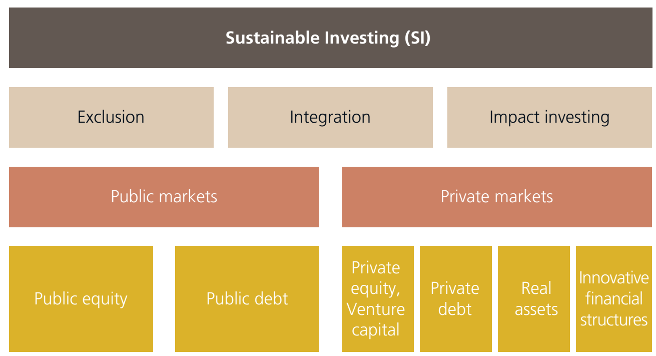
Social impact bonds (SIBs): addressing societal issues in a cost-effective manner for governments by relying on private funding (see box)

Impact investing aimed at funding new, untested business models: supporting new products or funds which due to their nature have risk characteristics that are less well understood by industry professionals, thereby pushing the boundaries of the market

To further describe this rapidly evolving segment of the financial industry, we find it helpful to further divide impact investments into "mainstream" and "catalytic" categories based on the scope and scale of the opportunity.

Catalytic opportunities are often untested and complex in structure, incorporating non-conventional investment relationships between seemingly disparate stakeholders, for example, governments, banks, charities and private investors, under one structure built to deliver different outcomes (i.e. revenue stream for investors, social benefits to governments and charities, etc.). Also, catalytic opportunities are often more narrow in their target, seeking to effect change with respect to a focused region or issue. These characteristics can

Fig. 3: Sustainable investing approaches and implementation options



Source: UBS

Innovative finance

Impact investing is an approach that invites the development of innovative financial structures to meet the requirements of investors and demands of investees with disparate needs and in sectors where private financing has previously not ventured, for example in health, education, conservation and human rights.

Social impact bonds (SIBs) are innovative financial instruments designed to raise private capital for prevention programs addressing areas of pressing social need. Investors are only repaid if and when improved social/environmental outcomes are achieved. SIBs are often structured as public-private partnerships, where savings to the governing body are used to repay this investment. For example, a problem such as diabetes, which is preventable but costly to government services with each patient, can be addressed through an SIB that funds a health intervention program, and the government entities remunerate investors based on the number of successfully prevented cases.

iStock/borgogniels

make catalytic investments less straightforward to replicate and scale as compared with mainstream investments.

Mainstream investment opportunities generally operate within common fund structures (e.g. GP-LP private equity structures), and are often sizable in terms of invested assets. Mainstream impact investments offer investors the opportunity to create a larger magnitude of social and/or environmental change while also providing returns commensurate with comparable investments. Mainstream investments are generally linked to larger global opportunities, whereas catalytic investments are more often linked to localized opportunities driven by geography, demography, societal and/or environmental issues.

Both have an important role to play in the future of impact investing. Mainstream opportunities draw capital from a broader investor base, and create awareness of impact investing as a viable solution for those seeking financial returns and benefits to society and/or the environment. Meanwhile, catalytic impact investing opportunities require innovative financial structures that operate outside the norm and push the boundaries of traditional investment solutions. Catalytic impact investment opportunities, given their innovative nature, act as powerful enablers of transformational change. Over time, as they are repeated, they can be replicated more efficiently, and gain recognition, evolving into mainstream impact investment opportunities.

d. Common misconceptions about impact investing

Impact investing is a relatively new segment within the financial industry. As such it is subject to a number of misconceptions that can dampen its growth and are worth dispelling.

Portfolio profits and impact are mutually exclusive – some individuals and institutions view their investment portfolios in two distinct buckets: one dedicated to returns and one to philanthropy, the former subsidizing the latter. Impact investing offers an investment approach which seeks to deliver both desirable returns and a defined social impact, negating the binary "make impact or make profit" mentality.

Impact investing is philanthropy – Impact investing is investing with an inherent expectation of financial return. It is not giving money away to solve social or environmental problems. It is neither philanthropy, nor based on grant-making. It is also not dedicated to funding public sector projects. However, it can cater to different risk-return preferences within the same structure and draw investors from both the public and private sectors (blended finance) to catalyze innovation.

Impact investing implies financial sacrifices – Impact investing need not entail sacrificing financial returns for social or environmental benefits. A range of expected financial returns, from market-rate to concessionary, can be targeted depending on the particular investment and predicated on the investors' requirements, as discussed in section titled *Market development and financial performance* (starting on page 13).

High returns imply low impact – Higher financial returns need not have a negative effect on the quality of the impact investment. For example, a 2011 study by Grabenwarter and Liechtenstein found that it cannot be implied that financial returns are inversely correlated with impact generation. Conversely, it is often argued that more sustainable business models generating more goods or services positively benefiting a growing set of clients will outperform, implying a positive correlation between the social/environmental impact and financial returns. While indeed compelling, there is not yet statistically relevant data to fully substantiate this claim.

Impact investing is only in poor countries – While poverty is more glaring in rural Sub-Saharan Africa than in Western Europe, developed countries also have challenges that impact investing can address. For example, the financial crisis resulted in high rates of youth unemployment in parts of Europe, cut off capital to small businesses, and reduced investing in critical infrastructure. There are also significant environmental challenges in developed markets around the world. These problems are often less visible than contaminated water supplies in India or slum dwellings in Brazil, but impact investing can focus on any social or environmental problem/market efficiency regardless of geography.

Impact investing – why now?

Nothing is as powerful as an idea whose time has come.
Victor Hugo, author (1802–1885)

a. What attracts investors and industry to this field?

The term "impact investing" was coined by the Rockefeller Foundation in 2007 referring to "a worldwide industry for investing for social and environmental impact" (Rockefeller Foundation 2012).

Impact investing is emerging at a time when aggregate private wealth has never been so high: in 2013, total global financial assets grew to USD 225 trillion, triple the world's GDP (McKinsey Global Institute 2014). Global high net worth wealth reached a peak of USD 52.6 trillion in 2014, and a Capgemini study found that contributing to social impact is important for 92% of high-net-worth individuals, led by younger investors (under 40 years) and by those in emerging markets.

Changing demographic trends
The rising influence of the Millennial generation – those born between the early 1980s and early 2000s – and their sustainability and impact-motivated beliefs are helping drive a shift in societal expectations, and in the way capital is directed. Having grown up in a digital age with a constant flow of easily accessible information and increased transparency, Millennials' expectations of public and private organizations are higher than previous generations'. Younger wealth holders are more socially and environmentally conscious, and expect others to act accordingly. A 2014 Deloitte Millennial survey reports that nearly 30% of Millennials believe the number one priority of business should be to improve society. They believe business can do more to address society's challenges of resource scarcity (56%), climate change (55%) and income inequality (49%). A recent headline-grabbing example of this shifting mindset is Facebook founder Mark Zuckerberg's 2015 announcement to distribute the majority of his fortune, currently around USD 45 billion, to have a positive impact on the world. Unlike Zuckerberg, most Millennials do not yet control a large share of investable assets, but they are forecast to inherit USD 30 trillion over the next several decades from parents and grandparents in North America alone, and believe in their potential to transform the world (Accenture 2012). This is confirmed by Deloitte's data that shows nearly 40% of GenX/Y millionaires give more than USD 30,000 annually to charity, versus 6% of their predecessors, the baby boomers. Impact investing is expected to be but one manifestation of Millennials' endeavor to leverage their wealth in new and innovative ways.

Public and private sector
Driven not just by consumers and private investors, impact investing is also increasingly recognized within the policy agenda of governments and international organizations. In 2013, the G8 established a dedicated taskforce for impact investing. At the same time, the World Economic Forum launched an initiative to build the ecosystem of the industry by contributing to knowledge and sharing best practices.

In addition to public policy developments, impact investing is also gaining traction among global financial institutions, including UBS, as well as J.P. Morgan, Credit Suisse and others. In 2008, in the wake of the financial crisis, the Rockefeller Foundation launched the Global Impact Investing Network (GIIN), an industry-leading, nonprofit, knowledge-sharing network to further develop this sector, which in 2014 counted almost 200 members. UBS was among the first global financial institutions to become a member of this thought leadership platform.

b. Market development and financial performance

Not surprisingly, against the backdrop of growing investor demand, the size of the impact investing industry has been growing. Assets under management (AUM) are expected to continue rising as investors become increasingly familiar and comfortable with the investment approach. In terms of market size, a recent 2016 GIIN survey of 158 investors reported USD 77bn of impact investment raised. In 2013, this figure was just USD 10.3bn. Survey participants were required to have a minimum USD 10m deal size and at least five impact investing transactions. While based on self-reported data and representing only rough estimates, these figures can provide a broad indication of market size (i.e. volumes), and growth potential (volume delta).

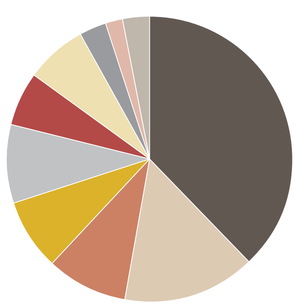
- While microfinance used to be the dominant sector for impact investing allocations, today microfinance represents 14% of AUM, behind housing. This reflects how impact investing has matured and continues to diversify across sectors.

- Invested capital is diversified across regions, with about half invested in developing markets and half in developed. North America dominates developed market AUM, while Sub-Saharan Africa dominates as the target market for developing market impact investing.

- In terms of instruments, private debt, real assets and private equity are the most prominent instruments, accounting for 35%, 25% and 17% of assets under management, respectively.

Return expectations, requirements, and financial performance
As defined earlier, impact investments are made with the explicit intention of generating a positive impact alongside a financial return. That said, the question of financial performance still generates debate, largely due to the lack of robust research-based evidence. From this perspective, the creation of the Impact Investment Benchmark by Cambridge Associates and GIIN in 2015, the first comprehensive analysis of impact investment funds, is a step toward advancing the industry.

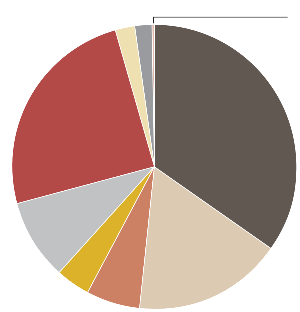
Fig. 4: Impact investing by geography
Percent of total assets under management by target region



- North America
- Sub-Saharan Africa
- Latin America and Caribbean
- Eastern Europe, Russia & Central Asia
- Western, Northern & Southern Europe
- East & Southeast Asia
- South Asia
- Other
- Middle East and North Africa
- Oceania

Source: GIIN, as of 2016

Fig. 5: Impact investing across asset classes
Percent of total assets under management by instrument



- Private debt
- Private equity
- Equity-like debt
- Public debt
- Public equity
- Real assets
- Other
- Deposits & cash equivalents
- Pay-for-performance instruments (e.g. social impact bonds)

Source: GIIN, as of 2016

Impact investment funds can achieve financial returns in line with traditional funds without impact objectives.

According to the GIIN, there can be a range of return expectations, from below market (sometimes called concessionary) to risk-adjusted market rates, depending on the asset class and type of impact investment in question. Assuming that most investors are seeking market rate returns for comparable investments in the same universe, we focus the following analysis on funds at the market-return end of the spectrum, namely private debt, venture capital and private equity.

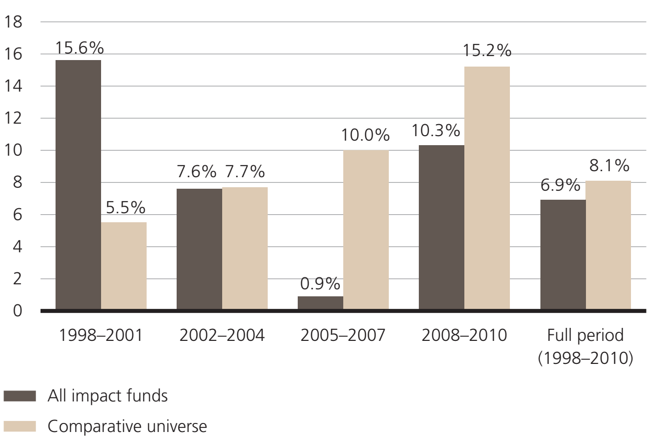
Considering private equity and venture capital, we highlight the results from the 2015 Cambridge Associates-GIIN study, which broadly confirms that impact investment funds can achieve financial returns in line with traditional funds without impact objectives. The study considered a sample of 50 private equity impact funds launched after 1998 with a stated social impact objective. It found that those impact investment funds launched between 1998 and 2004, for which returns are largely realized, outperformed funds in a comparable universe of conventional private investment funds. However, for funds launched between 2005 and 2010, for which returns are not realized, impact investments underperformed their peer group. For the full sample, impact investments underperformed their peer group by an amount that would not appear to be statistically significant given the large performance variability across funds, fund types and time periods.

Separately, in October 2015, the Wharton School of the University of Pennsylvania released a report showing that 53 private equity impact funds achieved returns in line with their targets and executed successful, mission-aligned exits.

Overall, we interpret these different results as evidence that private equity impact investment funds that set out to achieve market returns can and do, on average, broadly succeed in meeting this goal. An important takeaway, though, is that thorough manager due diligence and selection is key in determining financial performance, more so than whether or not the manager has a social impact objective.

Fig. 6: Impact investing performance

Impact funds versus the comparative universe by vintage year, in %



Note: The impact funds only include private equity and venture capital funds with a social focus.
Source: GIIN, Cambridge Associates, as of 2015

Assessing and measuring impact investments

I have been struck again and again by how important measurement is to improving the human condition.
Bill Gates, businessman and philanthropist (1955–)

Part of what makes impact investing unique and compelling is what happens when investors "look under the hood," e.g. actually measure and report on the achieved impacts. At UBS CIO, we believe that the following model can be relied on to evaluate the quality of impact investment ideas, typically in the form of funds. This "Impact Compass" can be used to gauge the alignment of impact investing opportunities with our impact criteria, ensuring that investments are appropriately evaluated and compared objectively and systematically. We propose a set of six factors against which impact investments can be evaluated: three are based on our definition of impact investing (intention, measurement, and verification), while three others capture broader features of impact investments – additionality, financial robustness, and manager experience – that we deem important to the assessment of quality. Each factor can be scored on a scale of 0–3. The higher the score, the better the investment aligns with our criteria. This gives us the following spider web diagram (Fig. 7 with sample inputs for demonstration) that can be used to guide impact investing decisions, as well as an average score that can be compared across a set of alternatives or portfolios. This qualitative framework can help investors identify the most suitable projects for "impact" depending on their values and financial goals.

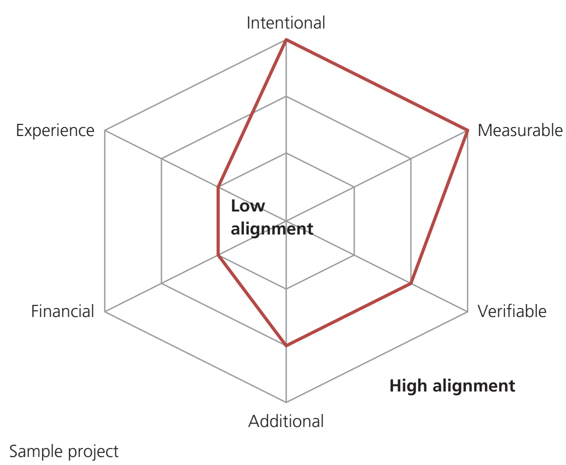
Intent: Does the investment manager have the stated intention to generate positive non-financial benefits? This is a subjective criterion, evaluated according to the investment fund's management team, and how impact has been articulated in marketing and communications, for example, in setting impact outcome objectives ex-ante.

Measurement: Is the impact measurable? A test of this is whether or not quantitative metrics can be assigned. What will be measured, and how, and according to which metrics (i.e. number of jobs created or liters of water purified)?

Verification: This factor tests the correlation between investment and impact. Can the opportunity show causality (statistically, scientifically) between the invested capital and a positive impact? Is it auditable? In other words, is there a transparent, proven and auditable correlation between inputs and outputs (i.e. investor activities and impact outcomes)?

Additionality: Measured against a business-as-usual or base case scenario, would the capital have been allocated, or the social/environmental

Fig. 7: Impact Compass measures impact alignment



Source: UBS


iStock/Peeter Viisimaa

impact created regardless of the impact investment? This can also be established if the proposed project is the first of its kind; or if there are minimal or no alternatives to the project outside of the impact investment.

Financially sound: The return expectations of the investment are analyzed to ensure that they are realistic. Is the financial thesis sound? Can one test the assumptions against the macro and micro trends informing the potential investment?

Manager experience: How much experience does the impact investment manager have? Is this the manager's first impact fund? Or does the manager have a long-standing record of implementing and executing impact transactions? Given the rising number of first-time fund managers and mainstream managers entering the area, we believe it is important to incorporate specific impact fund management experience into our assessment.

At UBS CIO, we view measurement (and subsequent reporting) as an important pillar of impact investing. Thoughtfully chosen and meaningful metrics are critical to measuring and managing social and environmental performance, and for cataloging impact. While this broad topic is too comprehensive to address here, a follow-up publication will be dedicated to impact measurement and reporting.

Global impact investing opportunities

Sustainable development is the pathway to the future we want for all. It offers a framework to generate economic growth, achieve social justice, exercise environmental stewardship and strengthen governance.
Ban Ki-moon, UN Secretary General, (1944–)

As we know by now, impact investing has two goals: to generate financial returns and create positive social or environmental impacts. Operating primarily in the private markets, it identifies investible solutions to global challenges informed by macro trends. Most suitable for investors willing and able to ignore the market's daily mood swings, impact investing is an attractive way to allocate capital profitably into uncrowded strategies that benefit from long-term trends, source innovation, earn an illiquidity premium and seek to do good.

The mega trends of population growth, aging, and increased urbanization can be evaluated using an impact investing lens to identify compelling global opportunities. The drivers of this analysis can include:

- assessing big-picture demographic, market, and environmental long-term trends to identify areas of potential growth;
- identifying market inefficiencies through undercapitalized and uncrowded investment sectors and geographic regions;
- collecting and evaluating market data on where and how global impact investors (including institutional investors, family offices, foundations, investment funds, and governments) are actively investing;
- analyzing investment models and structures to assess viability for successful financial and social performance;
- assessing capacity and robustness of opportunity set, e.g. number of investable opportunities and potential deal sizes.

Using this investment process, UBS CIO seeks to identify a variety of compelling impact investment opportunities, for example emerging market healthcare and protein alternatives, on the basis of their potential to deliver attractive risk-adjusted financial performance while benefiting society and mitigating pressure on the environment.

In addition to macro and industry-level analysis, alignment of impact investing opportunities to the UN's Sustainable Development Goals (SDGs) makes sense because this logically links UBS wealth management clients to worldwide development opportunities. The SDGs, adopted by the UN General Assembly last September, provide a backdrop that unites a global audience – public and private sectors, investors and start-ups, NGOs and philanthropists – behind a quantifiable set of development objectives to achieve in the next 15 years. The SDGs are unique in that they set out universal goals that UN member states pledge to use to frame their agendas and policies during the 2015–2030 period.

As we laid out in our report *In challenge lies opportunity: investing for sustainable development,* September 2015, national governments and multilateral organizations cannot possibly expect to meet the SDGs without involving private sources of capital. The funding gap is simply too large to bridge with public funds alone. We therefore expect to see a wave of initiatives aimed at mobilizing private funding, which should create a growing universe of attractive opportunities for impact investors.

As a result, impact investment objectives naturally tend to be aligned with achieving development outcomes of the SDGs, be it the desire to end poverty, fight inequality and gender bias, promote education and healthcare, or the need to tackle climate change challenges.

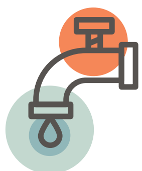
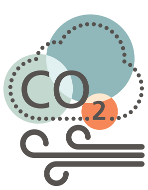
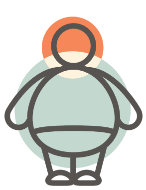
By embracing the UN's SDGs as a key consideration in UBS CIO's impact investment strategy, we hope to set an industry standard, capable of creating transparency around an investment's alignment to this global initiative, thereby truly integrating people, planet, and profit.

Impact investing is rooted in long-term trends, focused on global phenomena that pose societal and environmental challenges – such as water scarcity, obesity, or carbon reduction, to name a few. In the table below, we present a number of such long-term thematic trends and provide an impact investing angle for each one. We also link each theme to the SDGs with which it is associated.

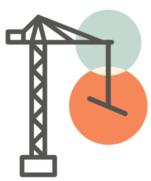
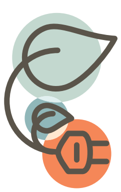
Fig. 8: UN Sustainable Development Goals

Source: UN

Fig. 9: CIO Long-Term Investment themes with impact investing angle and associated SDGs

Long-term investment theme	Associated SDGs	Impact investing angle
Water scarcity 	2, 6	Impact investing offers a variety of solutions to mitigate the global problem of water scarcity and access a market valued at USD 500–600bn annually. The incidence of drought is increasing due to industrial agriculture and climate change. But even more pressing is the fact that agriculture currently accounts for 70% of global fresh water demand, highlighting the opportunity of more efficient water use and management alternatives. Impact investments can help identify solutions that save water and benefit particularly smallholder agriculture communities – a growing part of developing market populations often lacking access to technologies like precision irrigation or techniques for the successful growth of water-efficient but nutrient-rich plants, like legumes. Impact investing can be used to improve access to water in drought-prone and water-scarce regions – for example by drilling wells, or implementing cost-efficient solutions for water transportation to reduce the time spent collecting water. Most impact investment opportunities address water scarcity in developing countries. A lack of infrastructure is a major factor in places like India or Sub-Saharan Africa, where creating regional WASH (water, sanitation, and hygiene) centers combining access to clean water, wastewater treatment and recycling facilities are becoming well-known, with clear extra-financial benefits. This theme can be accessed from other angles as well – for example insurance. Reducing insurance costs against water scarcity risks by recognizing the value of community resilience projects and encouraging drought adaptation techniques through resilience bonds offer impact investing possibilities in developed and developing countries. In developed countries, impact investing opportunities in technology, such as low-flow toilets and water metering for financial savings and resource preservation, also exist.
Clean air and carbon reduction 	3, 11, 13	The cumulative investment opportunity in clean air and carbon reduction is approximately USD 36trn by 2030, based on individual country commitments submitted ahead of COP21. Not surprisingly, the impact investing opportunity in clean air and carbon reduction is significant in developed and developing countries alike, as heavy CO_2 emitters explore cleaner fuels in developed markets and agree to support the developing world with technology transfer to support a lower-carbon global footprint. Impact investing can be achieved through investments into clean energy solutions, replacing dirtier alternatives with renewable energy (such as hydro or wind), biomass fuelled co-generation (for heat and electricity), and more energy-efficient consumer alternatives (such as improved cook stoves). Looking at investments beyond technology and infrastructure, just preserving, rather than improving, healthy ecosystems on land and in water will require USD 300–400bn per year in new investments. Investing in land use, land-use change and forestry is a real approach that can generate significant environmental impact and has the potential for attractive returns uncorrelated with financial markets. A small but active market for emissions reduction credits also exists, sourced primarily from emissions-reducing projects in developing countries, and with the highest value per credit from projects targeting "base of the pyramid" communities.
Obesity 	2, 3	While previously seen as a "first world problem," obesity and the non-communicable diseases linked to it – like diabetes – are steeply on the rise in the emerging markets of Latin America, and throughout the Middle East and North Africa. Impact investing can offer solutions to combat obesity, driving capital into the markets with the biggest gaps in awareness, prevention and treatment, which are most pervasive in developing countries. For example, education opportunities include: training of health professionals and raising awareness of at-risk populations; making sure children have opportunities for physical activity at school and in after-school programs; and raising the standards of school meals and snacks. Impact investing into medtech which is low cost, efficient, and mobile (like laboratories on wheels that can reach communities directly, or portable equipment for difficult-to-access areas) is another potential approach. More traditional but highly impactful investments in these markets target start-ups offering nutritious alternatives to unhealthy snacks, apps for tracking health, and services promoting wellness through consultations and physical activity. Impact investors have driven the creation of innovative financial structures like social impact bonds that link improvements to health outcomes to investor returns, such as reducing the incidence of diabetes in adults and obesity in children. Such innovations go beyond a more traditional private equity or debt structures and entail behavioral change as part of the economic driver (output measure) of the instrument, embedding social impact into the financial outcome.

Long-term investment theme	Associated SDGs	Impact investing angle
Agricultural yield 	2, 15	People affected by undernourishment have remained fairly constant in number since 1969 at 780m – 920m, as defined by the World Food Program. With a globally rising population, not just more food must be produced from less land per capita, but more nutritious food to combat undernourishment. Impact investing helps identify solutions to meet this demand in a sustainable way, focusing on emerging markets where populations and incomes are growing the fastest, and demand is most pronounced. One example of impact investing is to finance improved farming inputs that help increase yields but are also better for the environment, like drought-resistant seeds and organic fertilizers. Many poorer populations or "base of the pyramid" communities are involved in subsistence agriculture. Impact investing can improve subsistence farmers' capacity to grow, through education and cooperative farming, supplying better raw materials and equipment and enhancing efficient irrigation techniques to boost yields and reduce food insecurity. Financing along the value chain, improving smallholder farmers' ability to produce more goods and then bring those goods to market will improve livelihoods. Impact investments have also gone beyond financing inputs alone, to creating mobile apps that bring information on weather and pricing for farmers (to know what to grow and when to grow it), as well as training programs and technical assistance to improve growing methods – all of which can boost yields.
Emerging market healthcare 	3, 10	Emerging markets (EM) have a dearth of affordable, accessible healthcare options for both care and prevention – 80% of those with chronic diseases and close to 90% of those with infectious diseases live in EM. The healthcare spending in EM is growing rapidly. In fact, from 1995–2012, EM healthcare expenditure grew 5.9x, from USD 0.2trn to 1.3trn. However, the historical underinvestment in healthcare infrastructure, human resources and insurance in these regions has led to a significant lack of quality care. Available care, even suboptimal, is not without its costs: private healthcare spending is more than 50% of annual income of low income populations. Impact investing can address many of these issues in a targeted way, by identifying the regions or communities with the greatest unmet demand for both physical infrastructure and local capacity, and targeting them with quality improvements. Impact investment opportunities exist in both healthcare delivery and services. Providing access to insurance, hospitals, pharmacy chains, diagnostics centers, training facilities, ambulance and emergency services, hospital or laboratory equipment and medtech are a few examples. Satisfying the (rapidly growing) demand for affordable high quality healthcare in frontier and emerging markets would have a clear impact in improving lives of patients and families by providing these basic and yet crucial services.
Education services 	1, 4, 10	Recent estimates have shown that declining aid to support basic education services for all children and adults has increased the funding gap from USD 16 billion to USD 26 billion. The diminished ability of the public sector to meet growing demand means the market for private education will grow even faster than the projected double-digit growth of the sector at large. Impact investing education opportunities have emerged to address this by backing institutions and technologies focused on this problem, most visibly in developing countries where public coffers are increasingly strained. Student financing, namely providing loans to low income students to attend specialized schools and higher learning academies without taking on unsustainable levels of debt is one way of approaching the theme from an impact angle. Other impact investment opportunities include identifying companies building standardized learning models that bring replicable curricula across regions and countries (i.e. "school in a box" models), or investing in companies offering online courses and other ed-tech services through computers, tablets, and other mobile devices. The ed-tech market is projected to be a USD 220 billion opportunity by 2017.

Long-term investment theme	Associated SDGs	Impact investing angle
Frontier markets 	1, 3, 6, 8, 9	Frontier markets comprise 4% of the world's GDP. Comprising 2.2 billion people with a rising working-age population (expected to be 66% of the population by 2040), frontier market demographics are such that impact investment opportunities can span many sectors, from educating the youth to providing food security for families, financing growing businesses, and building efficient infrastructure for telecomms, healthcare and energy sectors. Indeed, with 77% of frontier markets' population living in urban areas by 2050, from 67% today, investments will be needed to ensure healthy, safe, and productive livelihoods. This can mean investing in physical infrastructure, like energy assets or hospitals, both historically underprovided, and targeting services like professional training courses and e-learning apps. SME financing to support the multitude of new businesses created in frontier markets is already a well-understood impact investing approach. This microfinance activity increases access for large populations to products and services, improves socially responsible business practices, and generates additional revenues for businesses and governments. Impact investments can also be explored through other financial service offerings, such as insurance (including life, mobile, crop, health, motor) which are still underprovided but have clear positive social (and financial) impacts on livelihoods.
EM Infrastructure 	6, 9, 11	The rise in urban migration in emerging markets leads to higher population densities in increasingly crowded cities and necessitates new housing, telecommunications, water supplies, waste management and sanitation services, and transportation solutions. Due to these burgeoning needs, emerging markets (EM) are forecast to account for almost two-thirds of global infrastructure spending by 2025 – totaling USD 5.5trn. Impact investing can address these infrastructure requirements, targeting communities with affordable, accessible and sustainable options. The upwardly mobile middle class will have increasing purchasing power – as the IMF forecasts 7% GDP per capita growth in emerging markets over the next five years, driven by the middle class – while lower-income EM communities will need solutions catering to their financial capacity. From an impact investing perspective, there is potential to invest to create efficiencies and have impact through clean energy solutions, as power production costs are higher in EM due to the shortage of infrastructure. In Europe's emerging markets, the build-out of renewable power driven by utility divestment programs, replacement of aging coal and nuclear projects are also opportunities. Here, impact investors often take a long-term focus for investing in EM infrastructure through greenfield build-operate-transfer projects.
Energy efficiency 	7, 12, 13	According to scenarios from the International Energy Agency, energy efficiency increases are required to mitigate climate change. These increases could account for more than 40% of the reductions needed to keep the increasing global average temperature within two degrees Celsius by the end of the century. USD 560 billion in financing to achieve efficiency objectives are already pledged by major economies around the world, leaving a significant opportunity to tap these commitments by identifying and co-investing in implementation. Impact investing opportunities can be found in direct deals supporting commercial banks in making loans for energy efficiency projects, new technologies reducing energy consumption commercially, industrially and residentially, and energy service companies that identify and perform retrofits or new project, as well as innovative materials companies. From a project finance perspective, impact and financial returns can be achieved by working with technology providers to retrofit commercial and private buildings and public infrastructure, and funding upfront project costs which are paid back via energy performance contracts with the building's owner.
Protein consumption 	2, 12, 14, 15	Global protein consumption will reach 934 million metric tons (MMT) by 2054, growing 1.7% annually from the current 473 MMT. Meat, dairy, and soya are very energy, water, and land intensive to produce and with demand for these protein sources rising, more sustainable alternatives are needed to meet the demand. The mix of protein consumed is changing due to consumer health and transparency preferences, environment impact, and declining wild fish stocks: developed markets' consumption of animal proteins is slowing in favor of fish and plant proteins, while increasing disposable income in EM means people are eating both substantially more meat and fish. The impact investing opportunity is to meet protein demand in a way that conserves natural resources and finds efficiencies in food and feed production. Impact can be further leveraged by providing nutritious options, for example, by improving access to high quality plant proteins besides soya in developed markets and by investing in local aquaculture for fish consumption in developing countries. Fish contains important micronutrients and omega-3 fatty acids that are often deficient in the diets of the poor. Fish and other non-red meat alternatives provide protein without necessarily adding unwanted cholesterol, fat, and sugars. In addition, a shift of 20% of future global beef consumption to other meats, fish, or dairy would spare hundreds of millions of carbon storage hectares and other ecosystem services, which could be used to help meet the world's demand for food crops.

Conclusion

We're here to put a dent in the universe. Otherwise why else even be here?
Steve Jobs, businessman (1955–2011)

The quest for opportunities that allow investors to do well while doing good is not a pipe dream. A growing interest in impact investing has spurred the development of a new field that is evolving toward integration into the mainstream of investment strategies.

The funding of innovative and forward-looking business models is increasingly being facilitated by new financial structures developed to enable a triple bottom line with results for people, planet, and profit.

Together with other approaches to sustainable investing, such as exclusion and integration, introduced in prior reports, impact investing can enable individuals and institutions to align their investment goals with the global development and sustainability priorities of the international community. The UN's Sustainable Development Goals, through their scope and variety, present an array of potential areas for impact investors.

In conclusion, we appear to be at the beginning of an "opportune" time for impact investing, as more private investors seek to make meaningful differences alongside profit in their portfolios, and public sectors increasingly seek to plug funding gaps for crucial social, environmental and development problems. As the industry matures, we believe that UBS stakeholders, specifically clients, will have a plethora of innovative and effective options to make a difference in an increasingly satisfying and fulfilling manner.

Glossary

CIO: UBS's Chief Investment Office

ESG: Environmental, social and governance

GDP: Gross domestic product

GIIN: Global Impact Investing Network

GP-LP: general partner and limited partner structure typical of private markets funds

II: Impact Investing

PM: Private markets

SDG: Sustainable Development Goals, approved by the United Nations in 2015

SI: Sustainable investing

SIB: Social Impact Bond

UN: United Nations

Bibliography

Abdel-Hay, K., Blomquist, E., Clark, A., Heath, P., Mak, G., Nelko, R. (2015) "Wealth and Asset Management Services, Point of View. The "Greater" Wealth Transfer – Capitalizing on the Intergenerational Shift in Wealth." Accenture.

Deloitte (2014) "Big Demands and High Expectations – The Deloitte Millennial Survey."

E.T. Jackson and Associates Ltd. (2012) "Achievements, Challenges and What's Next in Building the Impact Investing Industry." Rockefeller Foundation, New York.

Grabenwarter, U. and Liechtenstein, H. (2011) "In Search of Gamma – An Unconventional Perspective on Impact Investing." IESE Business School and Family Office Circle Foundation.

Gray, J., Ashburn, N., Douglas, H., Jeffers, J., Musto, D., Geczy, C. (2015) "Mission Preservation and Financial Performance in Impact Investing." Wharton School, University of Pennsylvania, Social Impact Initiative.

Lund, S., Daruvala, T., Dobbs, R., Härle, P., Kwek, K., and Falcón, F. (2013) "Financial globalization: Retreat or reset?" McKinsey Global Institute.

Lees, A., Lewis, M. (2015) "World Wealth Report 2015." Capgemini and RBC Wealth Management.

Matthews, J., Sternlicht, D., Bouri, A., Mudaliar, A., Schiff, H. (2015) "Introducing the Impact Investing Benchmark." Cambridge Associates, LLC and Global Impact Investing Network.

Mudaliar, A. et al. (2016) "Annual Impact Investor Survey 2016." Global Impact Investing Network.

United Nations Sustainable Development Knowledge Plan (2015) "Sustainable Development Goals." United Nations.

Appendix

Nontraditional Assets

Nontraditional asset classes are alternative investments that include hedge funds, private equity, real estate, and managed futures (collectively, alternative investments). Interests of alternative investment funds are sold only to qualified investors, and only by means of offering documents that include information about the risks, performance and expenses of alternative investment funds, and which clients are urged to read carefully before subscribing and retain. An investment in an alternative investment fund is speculative and involves significant risks. Specifically, these investments:

(1) are not mutual funds and are not subject to the same regulatory requirements as mutual funds;
(2) may have performance that is volatile, and investors may lose all or a substantial amount of their investment;
(3) may engage in leverage and other speculative investment practices that may increase the risk of investment loss;
(4) are long-term, illiquid investments; there is generally no secondary market for the interests of a fund, and none is expected to develop;
(5) interests of alternative investment funds typically will be illiquid and subject to restrictions on transfer;
(6) may not be required to provide periodic pricing or valuation information to investors;
(7) generally involve complex tax strategies and there may be delays in distributing tax information to investors;
(8) are subject to high fees, including management fees and other fees and expenses, all of which will reduce profits.

Interests in alternative investment funds are not deposits or obligations of, or guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other governmental agency. Prospective investors should understand these risks and have the financial ability and willingness to accept them for an extended period of time before making an investment in an alternative investment fund and should consider an alternative investment fund as a supplement to an overall investment program.

In addition to the risks that apply to alternative investments generally, the following are additional risks related to an investment in these strategies:

- **Hedge Fund Risk:** There are risks specifically associated with investing in hedge funds, which may include risks associated with investing in short sales, options, small-cap stocks, "junk bonds," derivatives, distressed securities, non- US securities and illiquid investments.
- **Managed Futures:** There are risks specifically associated with investing in managed futures programs. For example, not all managers focus on all strategies at all times, and managed futures strategies may have material directional elements.
- **Real Estate:** There are risks specifically associated with investing in real estate products and real estate investment trusts. They involve risks associated with debt, adverse changes in general economic or local market conditions, changes in governmental, tax, real estate and zoning laws or regulations, risks associated with capital calls and, for some real estate products, the risks associated with the ability to qualify for favorable treatment under the federal tax laws.
- **Private Equity:** There are risks specifically associated with investing in private equity. Capital calls can be made on short notice, and the failure to meet capital calls can result in significant adverse consequences including, but not limited to, a total loss of investment.
- **Foreign Exchange/Currency Risk:** Investors in securities of issuers located outside of the United States should be aware that even for securities denominated in US dollars, changes in the exchange rate between the US dollar and the issuer's "home" currency can have unexpected effects on the market value and liquidity of those securities. Those securities may also be affected by other risks (such as political, economic or regulatory changes) that may not be readily known to a US investor.

Appendix

Investing in Emerging Markets

Investors should be aware that Emerging Market assets are subject to, amongst others, potential risks linked to currency volatility, abrupt changes in the cost of capital and the economic growth outlook, as well as regulatory and sociopolitical risk, interest rate risk and higher credit risk. Assets can sometimes be very illiquid and liquidity conditions can abruptly worsen. WMR generally recommends only those securities it believes have been registered under Federal U.S. registration rules (Section 12 of the Securities Exchange Act of 1934) and individual State registration rules (commonly known as "Blue Sky" laws). Prospective investors should be aware that to the extent permitted under US law, WMR may from time to time recommend bonds that are not registered under US or State securities laws. These bonds may be issued in jurisdictions where the level of required disclosures to be made by issuers is not as frequent or complete as that required by US laws.

For more background on emerging markets generally, see the WMR Education Notes, "Emerging Market Bonds: Understanding Emerging Market Bonds," 12 August 2009 and "Emerging Markets Bonds: Understanding Sovereign Risk," 17 December 2009.

Investors interested in holding bonds for a longer period are advised to select the bonds of those sovereigns with the highest credit ratings (in the investment grade band). Such an approach should decrease the risk that an investor could end up holding bonds on which the sovereign has defaulted. Sub–investment grade bonds are recommended only for clients with a higher risk tolerance and who seek to hold higher yielding bonds for shorter periods only.

Disclaimer