Mobilizing private wealth for public good

UBS White Paper for the World Economic Forum Annual Meeting 2017

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World
Economic
Forum

Foreword

The world cannot go on growing as it has been. While global imbalances like uneven growth, wealth inequality, and environmental degradation have generally raised living standards, unsustainable growth now puts future living standards at risk, and can imperil the welfare of the generations to come.

The Sustainable Development Goals (SDGs) present a critical opportunity to promote sustainable growth for all. Private capital can and must invest to achieve them, and yet a number of obstacles prevents it from doing so to the necessary extent.

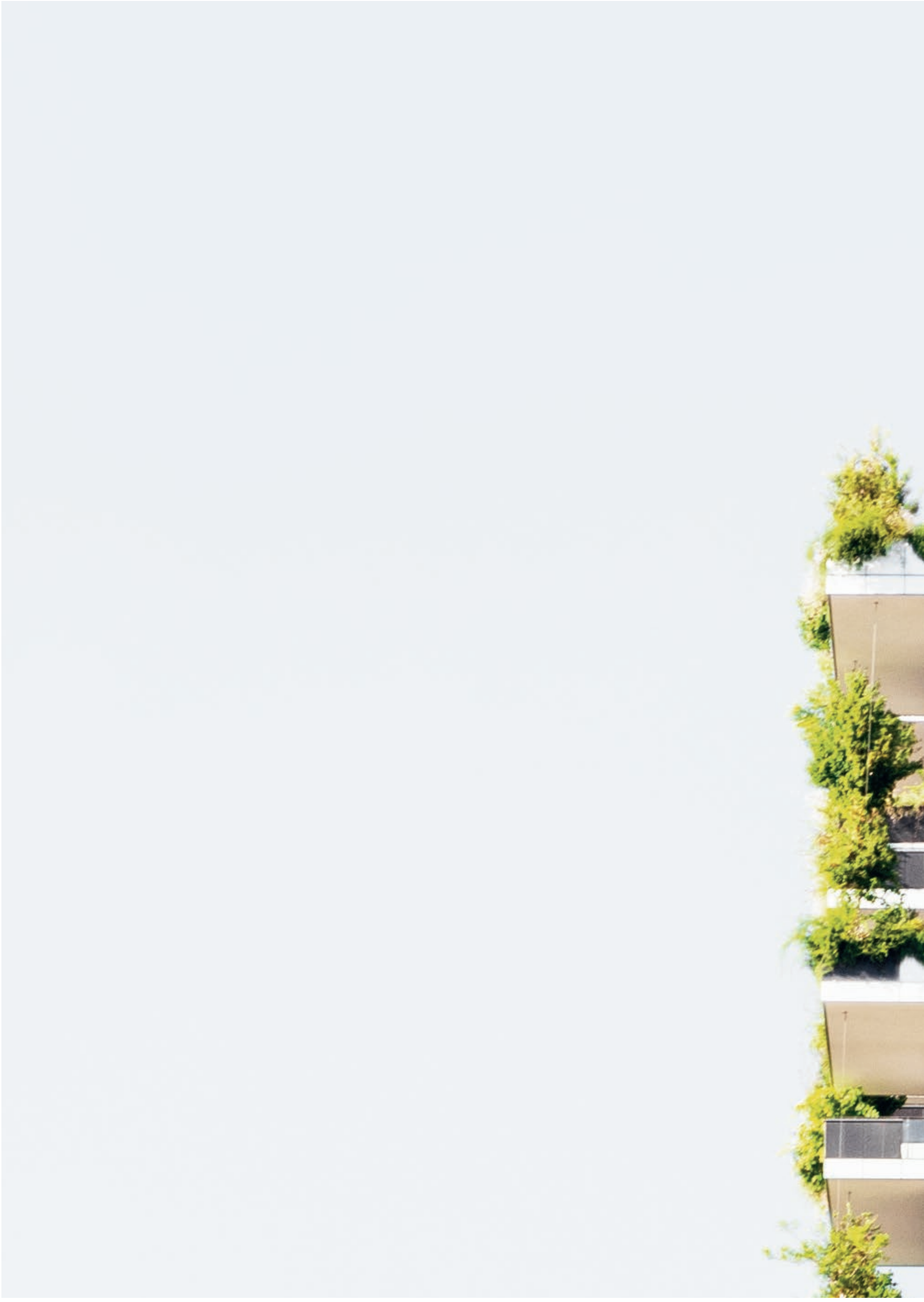
UBS promises to work together with its clients to grow and protect their wealth over generations. Sustainability is a cornerstone of our business.

We invite you in this white paper to examine why private capital fails to reach SDG-related projects. We encourage policymakers to follow our recommendations to engage private capital investment in the SDGs. And we urge potential partners to work alongside our new and existing initiatives to build sustainable investment solutions to meet these vital goals.

Divided, the best efforts to change our world to become more sustainable will fail. Together, we can create a better, balanced, and more sustainable future.

Your sincerely,

Axel A. Weber Chairman of the Board of Directors	Sergio P. Ermotti Group Chief Executive Officer



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Contents

P. 21

4. Key hurdles to overcome

- There is a lack of transparency regarding funding requirements that a country-based needs analysis suggests arises from data scarcity and an absence of centralized information.
- Connections between stakeholders are insufficient to ensure that private philanthropic and for-profit capital can seize opportunities to contribute to or participate in SDG funding.
- Incentive structures today principally attract institutional and philanthropic capital and do not align with the risk-return characteristics of many private investors.

P. 26

5. Recommendations

- Increase investment in data availability and measurement to improve transparency about where funding shortfalls lie, and standardize investments to plug such shortfalls.
- Focus non-private wealth capital and regulation on SDGs that need private investment capital and philanthropy least.
- Connect investors more effectively with philanthropic and investment opportunities that have meaningful impact.
- Pool private wealth impact investments to incentivize greater private wealth capital involvement in funding the SDGs.
- Other investment, philanthropic, government, and multilateral institutions should join UBS in supporting a new platform solution. This platform will provide transparency and connections between SDG investment needs and opportunities in a way that optimizes funding contributions across all stakeholders working to meet the SDGs.

1. The evolution of the Sustainable Development Goals (SDGs)

Ten years after the global financial crisis, the world continues to grapple with lower economic growth.

Despite this post-crisis growth slowdown, the world economy continues to expand in an often unsustainable manner that is exacerbating existing economic imbalances. Standards of living for people today threaten to undermine those of the people of tomorrow.

The Sustainable Development Goals (SDGs), which went into effect January 2016, seek to address these imbalances.

The year 2017 will mark the 10th anniversary of the start of the subprime crisis. Unchecked private-debt accumulation in many parts of the developed world, a mortgage crisis in the US, and a cascade of failures across interconnected financial systems led to a worldwide economic recession.

Governments and public bodies responded to the financial crisis with a range of robust and at times unorthodox policy measures. They sought to revive economic growth while reducing imbalances and encouraging a more sustainable global economy.

They have achieved these goals to varying degrees. Real GDP is forecast to have expanded 3.1% in 2016, and to grow 3.4% in 2017, based on International Monetary Fund (IMF) projections. If these figures are met, the average annual real GDP growth rate between 2007 and 2017 will be 3.5%, seven-tenths of a percentage point below the 1997–2007 average.

In spite of the slower post-crisis GDP growth rate, the world economy continues to expand in a manner that cannot be maintained. Consumption of non-renewable resources and over-consumption of renewable resources have enabled humanity to raise its standard of living at the expense of future generations. On 8 August 2016, demand on the earth's natural resources exceeded what the planet can regenerate in a year, according to the Global Footprint Network (GFN). In fact, average consumption patterns and lifestyles require the resources of 1.6 planet Earths at current levels, according to GFN.

Put simply, today's standards of living are unsustainable and threaten to undermine those of generations to come. Environmental constraints in countries such as China could reverse the progress made in reducing poverty within a matter of years. It is therefore necessary to consider policies that promote viable ways of living, that help to equalize relative differences, and that avoid undoing the great progress already made in raising many millions of people's absolute quality of life.

In developed economies, the millennial generation has a lower average income than its parents for the first time in modern economics, and the US white population's life expectancy is falling, not rising. This could indicate the world has reached a tipping point in growth sustainability.

Sustainable growth is a major concern in emerging economies too. Despite the progress made in tackling global poverty, the UN's World Food Program estimated that 795 million people were chronically undernourished in 2014, 98.2% of whom lived in developing economies. Undernourishment often results from damage to agricultural land, water shortages, and/or a dearth of biodiversity.

To address these problems, the SDGs were conceived and announced at the UN Conference on Sustainable Development in 2012. In September 2015, with the support of 193 nations, the UN launched the 2030 Agenda for Sustainable Development. Its purpose, among other things, was to end poverty, combat climate change, and fight injustice. Aligned to these areas of focus, the SDGs came into effect in January 2016. This ambitious set of 17 goals recognizes the traditional forms of capital – physical, human, and land (also known as environmental capital, in today's terms) – while acknowledging that social and legal structures play an important role in determining their effectiveness. So how do the SDGs offer solutions to the problems outlined above?

The sustainable development goals (SDGs)

Source: UN. UBS supports the Sustainable Development Goals.

An economist would view these goals as maximizing long-term growth potential (which by definition is sustainable) by making optimal use of all forms of capital. This means creating an economic environment in which different forms of capital are treated more equitably, and investment is not chiefly directed toward privileged forms of capital based on outmoded economic systems.

For example, two characteristics of the Fourth Industrial Revolution, examined in a prior UBS whitepaper, are extreme automation (arising from artificial intelligence), and extreme connectivity (resulting from fast, integrated technological networks). Both these trends may increase the marginal return on human capital relative to that of "old" physical capital such as manufacturing plants and heavy machinery.

The SDGs challenge not only the traditional interpretation of which types of capital merit investment. They also invite debate on the investment quantity/quality trade-off, and call into question preconceived ideas about which part of the economy (government, non-governmental organizations (NGOs), private, or a combination) is best placed to make such investments.

2. Private wealth has a role to play in helping fund the SDGs… yet most initiatives ignore it.

The SDGs recognize the importance of encouraging cross-capital investment and developing institutions to promote more equitable and tenable economic growth.

And the total amount of private capital available to help achieve the SDGs is significant, across both philanthropy and investment.

However, many of the numerous SDG funding gap initiatives overlook private wealth and the obstacles to increased private wealth engagement.

Engaging private capital investment in funding the SDGs needs to start now, even though the goals themselves target a fulfillment date of 2030. Current policy approaches may be running out of time, given the rise in increasingly radical populist political movements worldwide.

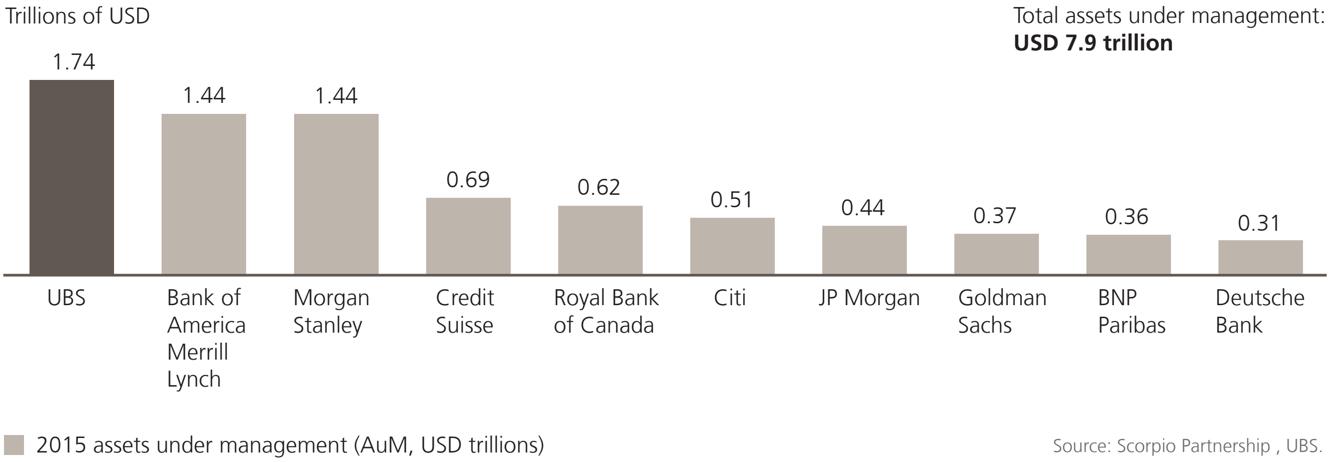
Developments that many investors regarded as economic orthodoxy are under threat. The globalization tide may be turned by increasingly protectionist trade policies. Freedoms of labor and financial capital are being eroded due to economic or political pressures. And if financial market asset prices continue to grow more quickly than real GDP in many parts of the world, wealth inequality could be exacerbated.

According to analysis by Saez and Zucman in a 2016 article for the *Quarterly Journal of Economics,* the top 0.1% of Americans by income level owns the same share (around 23%) of US household wealth as the bottom 90%. This compares to a peak of 40% of US wealth commanded by the bottom 90% in the mid-1980s. UBS noted in a recent white paper that the notion of society's richest making the greatest gains in wealth, income, and consumption over the post-financial crisis period has contributed to social disquiet, a push against globalization, and a rise in populist political sentiment. We outlined one potential solution, increased investment in human capital (health and education) as alternative measures of wealth. Improving health and education aligns closely with a number of the SDGs. How governments choose to fund such investment remains uncertain. Governments may respond by pursuing more forceful private wealth capital deployment to fund SDGs, either through higher taxation or via expropriation of assets in extreme cases.

Widespread uptake of investment projects with positive social/environmental impact can help ease international and inter-generational tensions about income and wealth inequality. Private wealth's motivation to invest in the SDGs seems likely to rise from here. There are several reasons why private wealth, in fact, may be the SDGs' "best friend":

1. The SDGs and private wealth investors generally share the same long-term investment horizon. This alignment and consistency is an important step toward achieving the SDGs and satisfying the investment objectives of private wealth capital.
2. Private wealth capital faces fewer constraints or limitations to investing in SDGs than other types of institutional capital. High risk weightings on long-term investments may preclude banks from investing in infrastructure to meet SDGs, for example. Insurance firms, especially life insurers, often have long-term liabilities that might match well with SDG-funding assets. Yet regulation governing the maximum tenor and minimum credit rating of debt instruments under Solvency II legislation may prevent insurers from funding SDGs.

Top 10 private banks by assets under management (AuM)



Source: Scorpio Partnership , UBS.

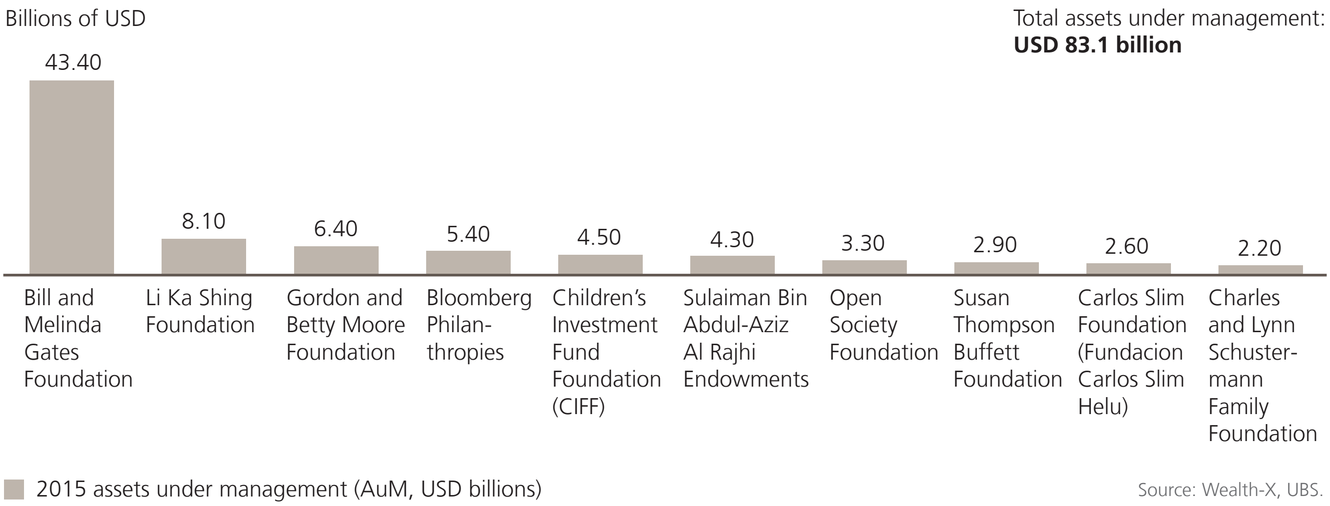
The World Economic Forum's view (contribution by Marjo Koivisto)

Why responsive and responsible leaders need long-term thinking and action

The theme of the 47th Annual Meeting of the World Economic Forum in Davos, Responsive and Responsible Leadership, calls on leaders to think and act for the long term. How can governments and businesses do better at planning for the long haul, while acknowledging the current and growing frustration felt in segments of society that are not experiencing economic development and social progress? Against the backdrop of the Fourth Industrial Revolution, responsive and responsible leadership demands a deeper commitment to inclusive development and equitable growth, both nationally and globally.

World Economic Forum members have engaged in a series of projects that arise from adopting a long-term mindset toward investing. These initiatives explore how asset owners can collaborate on a global level to emphasize long-term financial performance. Thinking and acting for the long term requires a systemic approach to multi-year governance, and setting objectives for enhanced long-term return and the positive externalities that would go with it.

Top 10 ultra high net worth-led private foundations by AuM



Source: Wealth-X, UBS.

In terms of size, private wealth definitely has a role to play in helping fund the development of a more sustainable world. In 2015, total global household wealth amounted to USD 250trn, or about 3.5x world GDP, according to Deutsche Bank. More generally, the total amount of private capital, of which a proportion could be available for potential deployment, is significant:

Private investors have capital to put to work and want to do so. There are two principal avenues for committing it to achieving the SDGs:

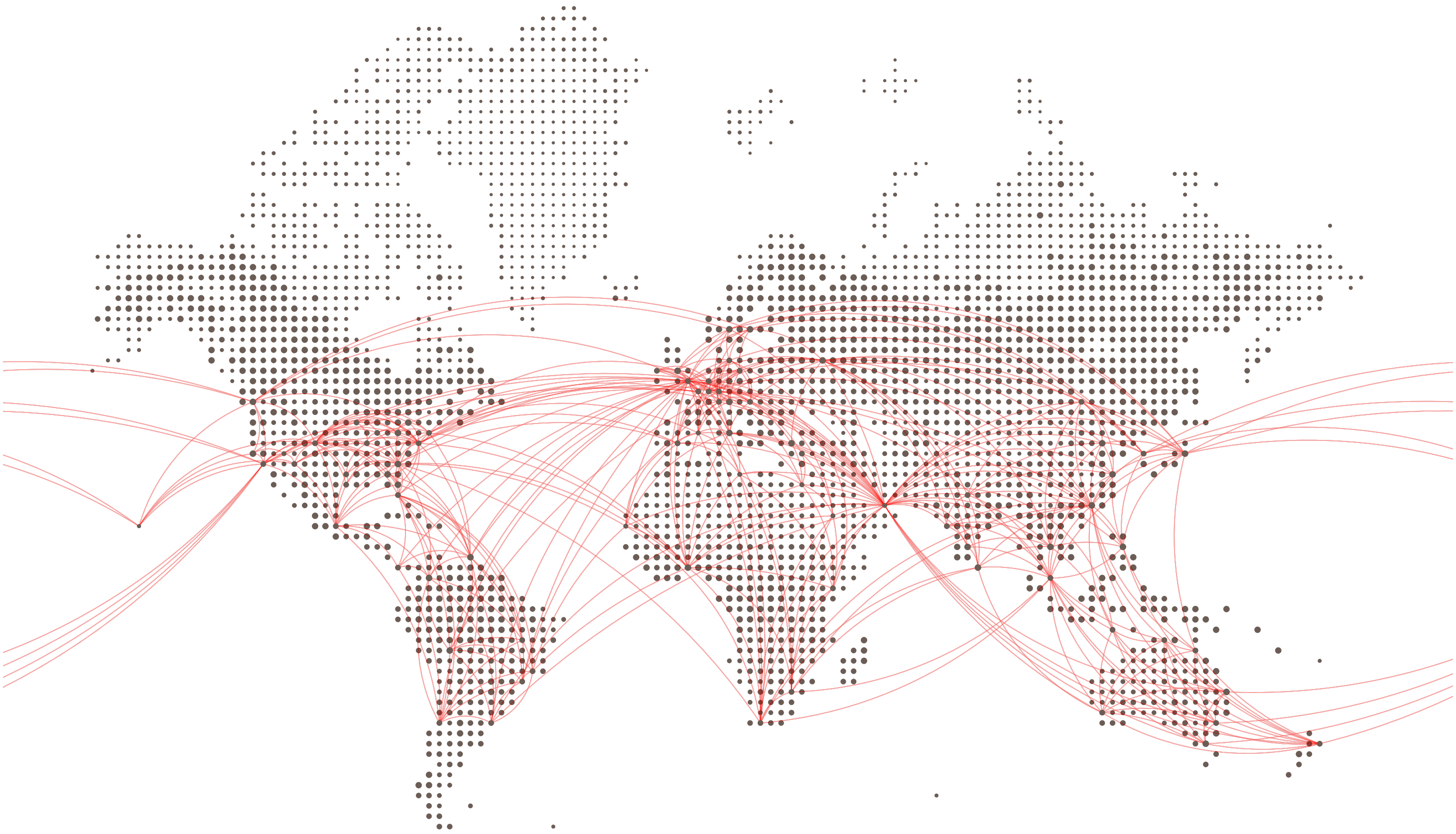
1. Giving
Philanthropy remains an important part of many private clients' total wealth strategies, with financing, time, and/or expertise donated to causes with social and/or environmental impact but no explicit financial gain.

For many of the most generous charitable donors (such as the Bill and Melinda Gates Foundation or Facebook founder Mark Zuckerberg), philanthropy is not just about making proprietary donations, but advocating for and encouraging others to contribute too. This is often best facilitated through networks that share ideas and connect capital with impactful projects.

UBS has a history of supporting such charitable giving. It launched its own network for philanthropic and social impact-oriented UHNW clients, the Global Philanthropists Community, in December 2014. The community has since grown to over 200 members worldwide, and allows members to share best practices and knowledge about philanthropic giving, and to collaborate across projects.

2. Investing
Private clients still express significant interest in the broad field of sustainable investing (of which investing to meet SDGs is a part). Many seek out impact investments or opportunities with a "dual bottom line" of positive societal and financial returns. The Global Family Office Report 2016, a UBS and Campden Wealth joint publication, found that 32% of 267 surveyed family offices were either somewhat or highly active in impact investing, and that an additional 30% are likely to become active in this field. It should be noted that this segment of the sustainable investment universe is arguably still in its growth phase compared to mandates based on negative screenings and exclusions, or investments motivated by environment, social, and corporate governance (ESG) criteria.

Nevertheless, the younger generations have a particular affinity for the dual bottom line approach of impact investing. According to the recently published UBS/PwC Billionaires report, many millennials inheriting billionaire wealth see business success as a way of benefiting society. Their view is that business goals must deliver not only returns to the family, but also tangible benefits to a wide group of stakeholders – including employees, customers, and society at large. While corporate sustainability has often been criticized as "greenwashing" (i.e. marketing that deceptively promotes an organization's products or policies as environmentally friendly), these young billionaires are passionately committed to their cause. This trend is particularly interesting as we are about to witness the greatest transfer of wealth in human history. Approximately 460 billionaires will hand down USD 2.1trn to their heirs over a period of just 20 years, according to the report.



The World Economic Forum's approach (contribution by Marjo Koivisto)

Engaging the next generation of impact investing
Today's investors are facing a paradigm shift. Old ways of doing business are no longer viable from a social and environmental perspective, and early business adopters of sustainable practices are enjoying a distinct competitive advantage. With a wave of millennials demanding portfolios that reflect their values and trillions of dollars in wealth set to be transferred over the next decade, the industry ecosystem looks certain to face transformation. The World Economic Forum has conducted research on how businesses can move toward more sustainable corporate models. There is an urgent need to move investors from theory to practice and to foster opportunities for action. Those institutions that do not act and innovate will soon be faced with competitors who do.

The WEF is promoting this move from talk to action. Its initiative, *Shaping the Future of Impact Investing*[1], seeks to accelerate businesses', investors', and foundations' systemic evolution from a short-term investment outlook to one that focuses on long-term investments with sustainable positive social and environmental impact. This initiative, in its fourth year, aims for an increase in the flow of capital into impact investments. After three years of comprehensively surveying the stakeholder landscape, the WEF is now looking to spur investors, governments, and impact enterprises to address the challenges that hinder impact investing from moving into the mainstream. The WEF places a particular emphasis on catalyzing increased private capital involvement in key impact investing solutions (such as supporting displaced populations) while also encouraging concrete paths toward increasing the scale and scope of the impact investment sector.

[1] For more information, please see the World Economic Forum website. URL: https://www.weforum.org/projects/mainstreaming-sustainable-and-impact-investing

The market size of impact investing has grown significantly in recent years, reflecting this increased investor interest. According to a 2016 survey of 158 investors undertaken by the Global Impact Investing Network (GIIN), impact investments raised have swollen from USD 10.3bn in 2013 to USD 77bn (those surveyed had to show a minimum deal size of USD 10m, and have engaged in at least five impact investing transactions). And impact investing is strongly influenced by private market instruments – private debt, real assets, and private equity accounted for 35%, 25%, and 17% of total assets under management respectively. By way of comparison, the global market size of the largest sustainable investment strategy, negative screening or exclusion investing, was USD 14.4trn in 2014, followed closely by ESG integration investing (USD 12.9trn), according to the

Stylized landscape of selected SDG funding gap initiatives (Y= yes, dark shading where focus is lacking)

Initiative	Primary sponsoring organization	Geography		Focus					
		Global	Regional/ country	Deal struc- turing	Deal sourcing	Return augmented?	Private capital sourced?	Education	Advocacy
Global Infrastructure Hub	G20	Y		Y				Y	
Global Infrastructure Initiative	McKinsey	Y		Y				Y	Y
Global Infrastructure Facility	World Bank	Y		Y			Y		
Guarantee Program	World Bank	Y		Y			Y		
Sustainable Development Investment Partnership	OECD	Y		Y	Y		Y		
Convergence	Canadian Government	Y			Y		Y	Y	
Platform Capital Stewardship	Christian Aid	Y					Y		Y
Business & Sustainable Development Commission	Gov and foundations	Y						Y	
Business Commission on Sustainable Development		Y						Y	
UNEP	United Nations	Y						Y	
PCSD Partnership	OECD	Y						Y	
PRI	United Nations	Y						Y	Y
SDG Global Agenda Council	WEF YGLs	Y						Y	Y
Benchmark of companies' progress on SDG	Aviva	Y						Y	Y
B20 Infrastructure Taskforce	Senior business executives	Y							Y
Long Term Infrastructure Investors Association	Allianz	Y							Y
World Business Council for Sustainable Development	CEOs	Y							Y
UN Global Compact	United Nations	Y							Y
Measure what Matters	Green Economy Coalition	Y							Y
Guarantee program	AfDB		Y	Y			Y		
Project Preparation Facility	ADB		Y	Y					
Asian Infrastructure Investment Bank	Chinese Government		Y		Y		Y		
"UN SDGs as framework for investment"	Collection of Dutch and Swedish pension funds		Y				Y		Y
Bretton Woods II	New America		Y					Y	Y
Dutch sustainable investment policy	Dutch Government		Y					Y	
UKSSD	Diverse		Y					Y	
UNECE	United Nations		Y					Y	

Source: primary sponsoring organizations, UBS. Data as of September 2016.

2014 Global Sustainable Investment Review of the Global Sustainable Investment Alliance (GSIA). And sustainable investment asset allocations remain dominated by public equities (49.5% of total asset allocation in Canada and Europe) and fixed income (39.5%). Private assets accounted for just 2.7%.

Work is underway to meet the SDGs…

Many governmental, NGO, and private bodies are exploring ways to address some of these challenges, and to engage with private investors to mobilize capital for meeting the goals. The UN's Principles for Responsible Investing, the

Types of private capital targeted		
Institutional	Private wealth	Blended/ impact investors
Y		
Y		
Y		
Y		
Y	Y	Y
	Y	
Y		
Y		
Y		
Y		
Y		
Y		
Y		

World Bank Global Infrastructure Fund (GIF), the World Economic Forum Young Global Leaders' Initiative, and the OECD Sustainable Development Investment Partnership are all examining how to publicize and promote the SDGs, encourage their incorporation in private investors' long-term investment plans, and mobilize private capital to plug holes in SDG funding.

Market data providers like MSCI continue to create new products to identify private companies that address environmental, social, and corporate governance issues, some of which overlap with the SDGs. More recently UBS has also announced the launch of a sustainability index in partnership with the UN Global Compact (UNGC) to further increase investor engagement in this field.

…yet most initiatives ignore private wealth.
But a survey of global initiatives related to the SDGs suggests that the needs of private clients and the information they require to commit capital are being overlooked. Many initiatives focus on education, advocacy, and encouraging institutional investment in SDG-related projects. Conversely, very few focus on sourcing SDG-related investment opportunities for interested private investors, augmenting project returns to incentivize private for-profit capital, increasing the reach and scope of impact investing, or optimally mobilizing private wealth.

As illustrated above, the obstacles preventing greater private wealth mobilization for funding the SDGs include:

- *Lack of transparency on need:* Investors struggle to understand where their investment or philanthropic capital is required. In the 2016 report of the UN Association – UK *(Sustainable Development Goals 2016: The people's agenda),* contributors Mahmoud Mohieldin and Claire Melamed note that insufficient or unequal data availability among countries obscures where the most-pressing SDG funding needs may lie.

- *Absence of information about available philanthropic or investment opportunities:* Investors do not necessarily have access to centralized information on where to find opportunities to deploy capital.

- *Incentivization:* Deals are typically structured to appeal to institutional investors' risk-return preferences; they are less attractive to private clients seeking to make either donations or for-profit investments. For example, a 2015 presentation of the UN Global Compact and KPMG suggests the greatest opportunities for shared value from an investment perspective involve using not-for-profit or sovereign wealth fund capital to draw in institutional capital to de-risk investments. However, this omits the possibility of using public or not-for-profit funds to enhance returns, which may appeal to private wealth impact-investment capital.

3. Where should private wealth deployment be focused?

Meeting the SDGs will require a combination of public, philanthropic, and private investment capital, along with regulatory change.

Our qualitative assessment of the 17 SDGs suggests that private investment capital has a critical role to play in achieving the SDGs of zero hunger; quality education; good health and well being; affordable and clean energy; industry, innovation and infrastructure; and climate action.

We also find that philanthropic capital may be most efficiently deployed for goals relating to public goods or those where establishing market-clearing price mechanisms for externality costs is difficult. Pure SDG examples would include clean water and sanitation, and life on land.

Before attempting to establish where SDG investment needs are greatest and where private capital (philanthropic or for-profit) could be best deployed, it is important to consider both the size and nature of the required investment.

Traditionally the development of capital has been thought to be purely a matter of investment volume. The estimated amount of investment required to meet the SDGs is large in absolute terms – USD 5-7trn per annum, according to a Brookings Institute report by Kharas and McArthur (2016). When expressed as a percentage of global GDP (7-10%), the volume appears more manageable. But even with large-scale investment, success will depend on the quality and means of such investment. Additionally, the efficacy of such capital commitments can vary significantly. The efficiency of government, NGO, philanthropic, and private capital may differ, for example, according to the desired objectives of each SDG.

Furthermore, the economic problems that some SDGs seek to remedy will likely have to be addressed either through pure regulatory change or a combination of investment and regulatory change. Regulation may be required for a host of reasons. It is likely to be the method most effective in accurately reflecting the long-term costs of specific activities (internalizing externalities) and in breaking the economic inertia generated by social norms and other inefficient economic legacies.

The table below revisits the 17 UN SDGs. Many of them overlap, unsurprisingly, given the importance and complexity of concepts like education and climate change. Some goals are more fittingly met via investment and others as a result of regulation.

In this stylized qualitative assessment, we use a system of stars to denote which actions (public or not-for-profit investment, private investment, or regulation) are likely to have the greatest relative role in helping to achieve each SDG.

Public investment, private investment, or regulation? Achieving SDGs

SDG	Public or not-for-profit investment (government, NGO, philanthropic)	Private Investment	Regulation	Notes
No poverty	**	**	*	Regulation broadly defined may include income redistribution policies. Public/not-for-profit and private investment in social housing and similar projects can help alleviate poverty.
Zero hunger	***	***	*	Food waste is considerable and includes around 30% of cereals and up to 50% of root crops globally. Investing in efficient agriculture and food distribution is key to alleviating hunger, and can be done by public/not-for-profit or private institutions. Regulation is unlikely to be as effective, as complex cross-border supply chains would likely require a high degree of international regulatory harmonization, which may be politically difficult to achieve.
Good health and well being	**	***	**	Investment in healthcare infrastructure, particularly where populations are aging, will improve health. Investment can also be made in education programs (i.e. in human capital) to aid disease prevention. Regulation may minimize environmental externalities like pollution that harm health.
Quality education	***	***	*	Education requires investment in facilities and in the human capital of teaching. Some regulation may be necessary to ensure standardized educational quality especially if the goal is to raise standards beyond basic numeracy and literacy.
Gender equality	*	*	***	While investment in education may promote it, gender equality is essentially a regulatory goal. Investment to develop a corporate culture and allow flexible working practices can help. There is a profit incentive to increase gender equality too – a sustainable investing report by UBS Global CIO ("Gender Diversity Matters," September 2016) notes that companies in which women hold at least 20% of leadership positions generated higher profits across various metrics relative to their less-gender-diverse peers, while firms with more female leaders tended to outperform the MSCI World Equity Index between 2011 to 2015 by around two percentage points per annum.
Clean water and sanitation	**	*	**	Public/not-for-profit investment in infrastructure is required to supply clean water and sanitation. Problems of pricing water make it difficult for private investment, although opportunities for developing water capital equipment (e.g. irrigation or drought-resistant farming) may arise. Regulation may also be needed to prevent pollution by attributing appropriate economic costs to the polluter.
Affordable and clean energy	***	***	*	Energy is essentially an infrastructure issue. Investing in renewable energy readily takes place with the right financial incentives. At the margin, pollution regulation that imposes a cost on any externalities may further this goal.
Decent work and economic growth	**	**	*	Investment promotes growth. Public/not-for-profit investment runs the risk of being backward-looking (preserving existing jobs and economic practices, even if outmoded, rather than investing for future, alternative market structures). Private investment may be too short term. Regulation can promote the quality of jobs in terms of working conditions.
Industry, innovation and infrastructure	**	***	*	Innovation, which by definition directly challenges the status quo, tends to be stifled by regulation. But positive regulation to introduce tax incentives for research and development, for example, may help at the margin. Investment is a symbiotic part of the innovation process.
Reduced inequalities	*	*	***	Investment in education can reduce inequality, but investment in capital may actually promote it (especially if the labor force lacks the ability to adapt to capital-for-labor substitution). Regulation, in the form of fiscal transfers, etc., can keep inequality within certain limits – though legislation that stifles labor mobility may in fact harm long-run equality trends.
Sustainable cities and communities	***	*	*	Sustainable cities are almost by definition a matter of infrastructure spending and investment. For the most part this is likely to be public or not-for-profit in nature. But regulation can contribute by changing the economic incentives for urban planners to pursue longer-term, adaptable solutions.
Responsible consumption and production	*	**	***	Regulation greatly shapes consumer behavior and directs the nature of economic production toward a more sustainable model. Public or not-for-profit investment in facilities to encourage recycling and (via education) consumer understanding of sustainability risks may help. Private investment is important, but may be driven by regulatory changes.
Climate action	***	***	***	Action on climate change requires more investment to heighten efficiency and reduce the dependence of global growth on environmental credit. Regulation is also needed to attach a market price to negative externalities like pollution that may otherwise go uncorrected.

Public investment, private investment, or regulation? Achieving SDGs (continued)

SDG	Public or not-for-profit investment (government, NGO, philanthropic)	Private Investment	Regulation	Notes
Life below water	*	*	***	Investment can help with issues like pollution, but regulation is the main means by which fish stocks can be maintained.
Life on land	**	*	**	Investment in rural infrastructure can help with issues like irrigation. Private investment can be useful, but is likely to need either the incentive of public support or the compulsion of regulation. Regulation of agriculture can minimize externalities.
Peace, justice and strong institutions	*	*	***	Investment in education may offer some tangential support to institutional structures, but this is essentially an issue of regulation and culture.
Partnership for the goals	***	***	***	The catch-all nature of this goal and its focus on global cooperation and partnership will likely require harmonization of regulatory frameworks, and investment of both time and money across all sectors to leverage local or intra-national efforts on a global scale.

Key
* = moderate role
** = significant role
*** = critical role

The above analysis allows us to draw a number of high-level conclusions about how the SDGs can be reached:

1. Private investment is likelier to yield results than public/not-for-profit investment or regulatory change for goals where it is possible to make a market and attach a price to physical, human, or environmental capital. The fights against poverty via social protection schemes, and hunger through agricultural investment, will require combinations of public/not-for-profit and private investment. This idea chimes with the work of Guido Schmidt-Traub in the 2016 report of the UN Association – UK ("Sustainable Development Goals 2016: The people's agenda"). Good health and well being, quality education, industry, innovation, and infrastructure, and affordable and clean energy all require some public investment funding, but they can also benefit from a significant infusion of private capital too, in line with the findings of a 2015 presentation produced by the UN Global Compact and KPMG discussing the role of financial services firms in meeting SDGs. In addition, supplementary investment would help in achieving goals related to the general area of innovation and growth, and the overlapping goals of sustainable cities and communities, and climate action.

2. Not-for-profit capital (government, philanthropic, NGO) may be most efficiently deployed for goals relating to public goods or those where establishing market-clearing price mechanisms for externality costs is difficult. Pure examples would include clean water and sanitation, and life on land.

3. Regulatory change may succeed more readily than public/not-for-profit or private investment in achieving goals that depend on developing social and legal frameworks, or environmental capital where significant externalities persist. Such goals include responsible consumption, life below water, peace, justice and strong institutions, and climate action. Regulatory change can bring us closer to achieving the overlapping goals of gender equality and reducing wider inequality. Last, regulatory or policy coordination would be a key component in attaining the partnership goal (SDG 17) both inter- and intra-nationally.

4. Key hurdles to overcome

There is a lack of transparency regarding funding requirements that a country-based needs analysis suggests arises from data scarcity and an absence of centralized information.

Connections between stakeholders are insufficient to ensure that private philanthropic and for-profit capital can seize opportunities to contribute to or participate in SDG funding.

Incentive structures today principally attract institutional and philanthropic capital and do not align with the risk-return characteristics of many private investors

Three main barriers hinder increased private client giving and investing to help meet SDGs. To recap the conclusions of Part 2, these key hurdles can be described as a lack of transparency regarding investment needs; an absence of information about where the philanthropic or investment opportunities lie; and insufficient incentives to mobilize private wealth investment capital.

Lack of transparency - investment need

To highlight this difficulty, let us take the SDG of "zero hunger" as an example. Goal 2.2 of the zero hunger target is: "by 2030, end all forms of malnutrition, including achieving by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons."

Using malnutrition as a starting target for SDG improvement and carrying out an analysis *independent* of institutional frameworks, we used two World Development Indicators from the World Bank to compare potential investment gaps based upon the depth of food deficit (defined as the difference between average calorific consumption per head per day, and the average dietary energy requirement) and the incidence of undernourishment (as a percentage of the population). By ascertaining the bottom 20 countries on these two metrics, one can see the nations where the investment gaps to achieving the SDG of zero hunger may be greatest.

This analysis approach draws on a consistent, readily available set of economic data, though it lacks a wider data set that permits analysis of other goals that constitute the broad zero hunger SDG (such as increasing agricultural productivity, targeting sustainable agricultural practices, protecting biodiversity, or reducing global agricultural market distortions). And while outlining *absolute* gaps, it fails to address the r*elative institutional framework* of each country. Factors such as the robustness of legal frameworks, the ease of doing business, and broader measures of competitiveness would enhance any analysis if they suggest not only *where* the biggest investment gaps might be, but also *where* additional investment or regulatory change may have the most cost-effective, measurable impact.

A second methodology would take into account institutional factors, derived from World Bank Worldwide Governance Indicators like regulatory quality and rule of law, World Economic Forum measures of marketplace competition such as the Global Competitiveness Index, and IMF forecasts for prospective GDP growth and inflation (taken from the World Economic Outlook publication, October 2016 edition).

Bottom 20 countries by Hunger World Development Indicator – depth of food deficit

2015	
Depth of food deficit Kilocalories/person/day	
Haiti	530
Zambia	411
Central African Republic	349
North Korea	344
Namibia	323
Chad	276
Zimbabwe	264
Liberia	261
Tajikistan	258
Ethiopia	244
Rwanda	240
Tanzania	237
Madagascar	227
Sri Lanka	200
Congo, Rep	196
Swaziland	190
Timor-Leste	190
Iraq	188
Mozambique	188
Botswana	183

Source: World Bank via Haver Analytics, UBS. Data as of November 2016.

Bottom 20 countries by Hunger World Development Indicator – undernourishment

2015	
Undernourishment % population	
Haiti	53
Central African Republic	48
Zambia	48
Namibia	42
North Korea	42
Chad	34
Madagascar	33
Tajikistan	33
Zimbabwe	33
Ethiopia	32
Liberia	32
Rwanda	32
Tanzania	32
Congo, Rep	31
Swaziland	27
Timor-Leste	27
Uganda	26
Yemen, Rep.	26
Mozambique	25
Botswana	24

Source: World Bank via Haver Analytics, UBS. Data as of November 2016.

The analysis could be further improved by comparing countries according to income group, and distinguishing between the top and bottom five performers. Placing the top-performing nations and those with scope for improvement side by side may enable more efficient sharing of investment and regulatory best practices, especially when accounting for countries whose economic and institutional conditions are most similar. This could help mitigate some of the informational asymmetries and data shortages alluded to at the start of this section.

An example of this approach for the Quality Education SDG – which admittedly uses the flawed metric of years of education that does not account for the *quality* of education – is illustrated below, subdivided by income category:

This interpretation of investment gaps also has drawbacks. It neither accounts for each of the underlying SDG targets or KPIs, nor does it adjust for any goals that may overlap with or derive synergies from investment or regulatory change.

As we outline in Part 2 and here, an absence of *centralized information* about giving and investment needs makes it difficult for private investors to understand where potential gaps lie, who the stakeholders in any potential investment project may be (governments, NGOs, philanthropists, private for-profit investors, regulators, or financial services firms), who will coordinate and oversee any broad impact-investing project, and how to assess the success or failure of a project based upon concrete financial and social metrics. We propose a number of innovative recommendations in Part 5 that could help overcome these challenges.

Lack of transparency – limited company disclosure about sustainability metrics related to the SDGs
Many companies now disclose sustainability performance and the impact of their activities. 93% of the world's 250 biggest companies reported on sustainability in 2013, according to *The KPMG Survey of Corporate Responsibility Reporting.* Nevertheless the quality and consistency of firms' reporting on SDGs is variable. Many firms report on topics that relate to SDGs (like climate action, affordable and clean energy, and gender equality). Few tie these disclosures to specific SDGs, identify why certain SDG-aligned sustainability criteria were chosen, or match the language of their disclosure to that of the SDGs.

Lack of transparency – absence of information about giving and investment opportunities
One of the unfortunate ironies of the SDG private sector funding gap is that it is a supply-side issue, at least in part. Information regarding available investment opportunities is in short supply, and there is no standardized structure or form presented to potential investors. The good news is that a number of the global initiatives outlined in Part 2 focus on addressing project preparation and readiness. The bad news is that little progress has been made to reduce the opaqueness of the available investment opportunity set, particularly for private wealth.

Lack of standardization – investment opportunities do exist, but with little consistency
Even where private wealth investors can identify investment opportunities, a lack of standardization across some long-term investment types hinders capital commitment. SDGs (including climate action, good health and well being, and industry, innovation, and infrastructure) can only be met through significant infrastructure or green investment. Yet both these types of investment are yet to exhibit sufficiently standardized terms to be considered asset classes that can consistently and sustainably attract investor capital. The Institute of International Finance (IIF) Council for Asset and Investment Management highlighted a number of impediments to long-term infrastructure financing and investment in June 2014. These include a lack of standardization across infrastructure as an asset class. Standards for deal terms and documentation vary widely, debt instruments to fund infrastructure projects are often heterogeneous, and secondary capital markets for securities are at very different stages of development.

Insufficient incentives – private wealth investment capital not encouraged
Philanthropic giving is typically well supported by government concessions such as tax and other fiduciary incentives. This enlarges the financial scale and social or environmental impact of donated capital. By way of example, a combination of tax breaks and matched giving from UBS means that one unit of donated capital to our Optimus

Top and bottom five countries by Quality Education SDG Indicator – low income

Rank (No. of countries = 25, low rank = worst data as of 2015)	Country-Name	SDG Yrs Schooling (higher assumed to be better)	Regulatory Quality (RANK, higher = better)	Rule of Law (RANK, higher = better)	Ease of Doing Business Rank (lower = better)	GDP next 5yrs	Inflation next 5yrs	WEF Global Competitiveness Index (lower = better)
1	Niger	5.4	26	31	168	6.46	2.02	NA
2	Central African Republic	7.2	5	1	187	5.76	3.12	NA
3	Chad	7.4	10	10	185	4.41	3.44	139
4	Burkina Faso	7.8	42	34	167	6.04	2.00	NA
5	Senegal	7.9	49	52	161	6.99	1.79	110
21	Malawi	10.8	23	44	164	5.20	9.83	135
22	Zimbabwe	10.9	4	6	171	0.37	2.66	125
23	Benin	11.1	31	32	151	5.50	2.30	122
24	Togo	12.2	23	23	149	4.58	2.41	NA
25	Nepal	12.4	25	27	108	3.85	7.70	100

Source: International Monetary Fund, OECD, United Nations, World Bank, World Economic Forum, UBS. Data as of November 2016.

Foundation may multiply as much as fourfold. This incentive results in more financial resources being devoted to projects that deliver measurable, long-term benefits to recipients – in this case, the world's most vulnerable children.

But offering incentives to private investors in impact investing is far less advanced – even non-existent in some instances. Additionally, incentivization structures for sustainable, for-profit investment deals often focus on loss mitigation or risk management to attract long-term institutional capital whose risk limits are tightly defined to meet inflexible obligations (such as insurance or pension fund liabilities).

Private wealth investors, especially ultra high net worth (UHNW) investors, typically have different risk-return characteristics than do institutional investors (though in some instances their assets under management may be comparable). Some UHNW investors or family offices boast potential investment advantages over institutions, such as a greater tolerance for illiquid assets; the ability to hold long-term investment views and positions without the constraining influence of monthly performance-reporting requirements; and no encumbrance from restrictive accounting practices or tightly defined risk limits.

Consequently, an incentive structure that uses investment partners' or multilateral development banks' (MDB) balance sheet capabilities to augment investment returns may be just as, if not more, attractive for UHNW clients than risk mitigation. Equally, tax breaks or government incentives on for-profit impact investing akin to those afforded to philanthropic giving could also increase for-profit investor incentives. This may be especially true today since many private investors are looking for higher prospective returns in the current low interest-rate environment. Yet our table of selected SDG initiatives in Part 2 illustrates that there is a distinct lack of such incentive structures in today's marketplace.

Top and bottom five countries by Quality Education SDG Indicator – upper / lower middle income

Rank (No. of countries = 25, low rank = worst data as of 2015)	Country-Name	SDG Yrs Schooling (higher assumed to be better)	Regulatory Quality (RANK, higher = better)	Rule of Law (RANK, higher = better)	Ease of Doing Business Rank (lower = better)	GDP next 5yrs	Inflation next 5yrs	WEF Global Competitiveness Index (lower = better)
1	Sudan	7.0	5	8	160	3.50	13.42	NA
2	Pakistan	7.8	29	24	128	5.34	5.04	126
3	Mauritania	8.5	21	21	176	3.31	4.93	138
4	Myanmar	8.6	7	8	177	7.68	7.63	131
5	Cote d'Ivoire	8.9	33	30	NA	7.49	1.90	91
75	Montenegro	15.2	60	58	36	3.51	1.74	70
76	Brazil	15.2	47	50	120	1.59	4.75	75
77	Mauritius	15.6	82	77	28	3.93	2.42	46
78	Belarus	15.7	15	24	57	0.82	9.80	NA
79	Argentina	17.9	17	22	124	2.96	15.65	106

Source: International Monetary Fund, OECD, United Nations, World Bank, World Economic Forum, UBS. Data as of November 2016.

5. Recommendations

Increase investment in data availability and measurement to improve transparency about where funding shortfalls lie, and standardize investments to plug such shortfalls.

Focus non-private wealth capital and regulation on SDGs that need private investment capital and philanthropy least.

Connect investors more effectively with philanthropic and investment opportunities that have meaningful impact.

Pool private wealth impact investments to incentivize greater private wealth capital involvement in funding the SDGs.

Other investment, philanthropic, government, and multilateral institutions should join UBS in supporting a new platform solution. This platform will provide transparency and connections between SDG investment needs and opportunities in a way that optimizes funding contributions across all stakeholders working to meet the SDGs.

Clarify SDG investment needs by enhancing data and measurement.
We recommend that public policymakers, NGOs, and the private sector collaborate on improving data availability, data measurement techniques, and data quality.

The need for better data on SDG successes or failures at the country level is widely discussed in the 2016 UN Association – UK report ("Sustainable Development Goals 2016: The people's agenda"). It cites recent studies that show there was no available data on measurable poverty trends in 29 developing countries between 2002 and 2011. For an additional 28 emerging nations only a single data point was available over a nine-year period. Historically, few resources have been devoted to developing national data systems or infrastructure – a meager 0.24% of all aid was allocated to building these critical foundations in 2013.

Initiatives like the Global Partnership for Sustainable Development Data should be supported with resources to enhance data and measurement. Launched in September 2015, this network draws upon the resources of more than 150 data producers and consumers to fill in data gaps, increase the supply of credible, dynamic, and disaggregated data, and provide fuller data transparency on where SDG funding needs lie. Developing tools like the Millennium Institute's iSDG Integrated Simulation Tool would also enable stakeholders to use data to simulate the effectiveness of investment at narrowing SDG funding gaps before capital is committed.

The aim for a fuller, consistent data set across countries may sound bold and ambitious. But technological developments arising from the Fourth Industrial Revolution may make this task comparatively easy and not as costly as assumed.

Mobile telephony, satellite imagery, and the "Internet of Things" (where everyday objects are connected to the internet and can send and receive data) could eventually be used more widely in the context of engaging private philanthropic and for-profit capital to collect more comprehensive data and identify SDG funding gaps. For example, OpenForis' Collect Earth program, drawing upon high-resolution satellite images from Google Earth, is supporting mapping projects to restore degraded land in Africa, a project fully aligned with the climate action SDG. Ethiopia and Kenya have already used mapping technologies to establish 15-million-hectare and 5.1-million-hectare restoration targets respectively, according to the World Resources Institute (WRI). And yet leveraging this data to engage private capital is proving more difficult – the WRI finds that, of the USD 50bn spent annually on restoration and conservation, just USD 10bn of it comes from the private sector.

Internet-derived big data (even in developed economies) almost always excludes the lowest income groups, however. So the opportunities it provides in low-income countries to capture macroeconomic data is limited at present. Its true potential is only likely to be realized when internet penetration rates in the poorest countries reach a critical mass, which, arguably, is still years away.

Standardize conditions, terms, and disclosure requirements to attract investment capital

It is imperative that standardization of infrastructure and green investment continues, in order to grow and expand the amount of capital committed to filling SDG funding gaps. In Hangzhou last year the G20 launched the Global Infrastructure Connectivity Alliance Initiative to enhance cooperation across existing infrastructure financing efforts.

UBS would encourage the Initiative's stakeholders to redouble standardization efforts across infrastructure investments, with the aim of producing a common set of standards on deal structuring and terms, consistent investment instruments with harmonized legal and operational frameworks, and deeper national and international secondary markets for these instruments.

Furthermore we support greater efforts for consistent disclosure about corporate sustainability, particularly how it pertains to the SDGs. Schemes like the Financial Stability Board's Task Force on Climate Change have recently launched their recommendations on how to design voluntary but consistent climate-related financial risk disclosures, including the management and resolution of physical, liability, and transition risks. UBS held its first Policy Outlook Forum in November last year to promote cooperation and consensus with other leading Swiss financial firms on how to embrace and respond to these new disclosure requirements. While this initiative most closely relates to the SDG on climate action, we would welcome a similar approach across all SDGs. *The SDG Compass* produced by the Global Reporting Initiative, UN Global Compact, and World Business Council for Sustainable Development (WBCSD) offers practical examples of how to begin aligning financial and sustainability disclosures more closely to the SDGs. We would encourage policymakers and corporations to promote these efforts further, as part of a full integrated reporting approach.

Focus regulation, government spending, and philanthropic activities on SDGs that most need public involvement to provide transparency on the incremental giving and investment opportunities available to private wealth.
Many public sector bodies, whether governmental, non-governmental, or regulatory, face considerable financial constraints in the aftermath of the global financial crisis.

Although recent geopolitical developments at the time of printing suggest that fiscal stimulus will be increased in coming months, comparatively few governments are willing or able to raise investment spending via unfunded expenditures (debt levels remain high) or funded ones (given stagnant real wage growth, upcoming electoral cycles, and heightened voter appetite for more populist political stances). What fiscal spending governments do propose to undertake is generally biased toward preserving old economic structures, rather than building new ones that give a competitive edge in the Fourth Industrial Revolution.

Consequently, it seems prudent to focus government spending, philanthropic giving, and regulatory change on meeting needs gaps for certain SDGs. These SDGs, introduced in Parts 1 and outlined in Part 3, are:

- clean water and sanitation
- life on land
- life below water
- responsible consumption
- peace, justice and strong institutions
- climate action
- gender equality
- reducing wider inequality
- partnership for the goals.

Such a focus would also have a signalling effect for private wealth investors, and highlight where their capital investment is *less (or least) required.*

Furthermore, policymakers should consider measures that harmonize common policy and regulatory frameworks across and within national borders. This is critical in a world where environmental externalities make societies increasingly interdependent and enhance the need for a holistic, cross-border legislative approach.

At UBS we commit ourselves to supporting this coordination via two additional channels.

We will work with our Global Philanthropists Community to promote innovative funding and support for these specific areas. Our impact philanthropy approach seeks to maximize the effectiveness of available funds, and aligns with UBS's wider impact investing efforts.

We will also redouble our efforts to work with our Global Visionaries to highlight, promote, and facilitate the noteworthy efforts these individuals are making to achieve the SDGs. We will host a new annual summit that brings together Global Visionaries and clients from across our philanthropic and impact-investing communities, as well as our global media partners. We will refocus our existing Social Innovators initiative to also provide its mentoring, promotion, and financial sponsorship to the Global Visionaries. And we will also feature Global Visionaries at all our major client events.

Increase participation of private wealth in funding and advancing SDGs by encouraging:

1 Transparency - bringing greater clarity to investment and giving decisions

Increasing transparency across the industry can be achieved, we believe, by promoting individual, highly impactful projects and connecting them with large numbers of wealth management clients. These connections can lead not only to impact investment or philanthropic activity but to projects being advanced and accelerated by providing additional advice, mentoring, and greater access across sectors, countries, and regions.

Financial services firms can apply their experience as major players in global financial networks to extend information networks too. A 2015 presentation produced by the UN Global Compact and KPMG draws parallels between the global financial network and opportunities to share information and boost transparency across SDG goals. Areas for sharing and collaboration include financial access, investment, leveraging risk expertise, and active investor stewardship.

For example, many private investors would be keen to commit more capital to emerging market infrastructure financing (aligned with the industry, innovation, and infrastructure SDG). However, investments in this sector have tended to focus on equity rather than debt. Many investors perceive the publicly available information on infrastructure debt (and where opportunities lie) to be too limited to commit capital to it.

Important efforts are being made to rectify this situation, especially by the World Bank's Global Infrastructure Facility (GIF). UBS is proud to be a member of the GIF's Advisory Council and welcomes continued development of an emerging market infrastructure debt index, discussed in October last year. This important innovation exemplifies how greater clarity about where available investment opportunities lie can help spur private capital involvement to reduce SDG funding gaps.

How the World Economic Forum is supporting capital market development in emerging market-scontribution by Marjo Koivisto

Engaging the next generation of impact investing

The World Economic Forum has identified that one impediment to the growth of emerging market infrastructure financing is underdeveloped capital markets. To promote financial market development, the WEF launched a multiyear project in 2014, *Accelerating Capital Markets Development in Emerging Economies.*[2]

The scheme develops concrete initiatives to help emerging economies develop their local capital markets. Through new research, the project asks whether it is possible to speed up the traditionally lengthy, drawn-out process of deepening capital markets in the emerging world. At the national level, it builds partnerships with interested governments and domestic and foreign investors to identify solutions on how the local capital market development process can be more effective. The initiative also examines how to better promote economic growth, unlock new pools of investment capital, and secure financing for the next generation of emerging market infrastructure projects.

[2] For more information, please see the World Economic Forum website. URL: https://www.weforum.org/projects/accelerating-capital-markets-development-in-emerging-economies/

A second area where increased transparency on need and investment solutions can help fill SDG funding gaps is in the area of gender equality. In March 2016, UBS Wealth Management published a report that found that companies with women in at least 20% of leadership positions had higher profitability across various metrics than companies that are less gender-diverse.

In November 2016, UBS launched the Solactive Global Gender Diversity Index, together with Solactive, which enables investors to integrate gender equality into their investment strategies by choosing companies from a global stock universe that exhibit both low volatility and boardroom gender diversity.

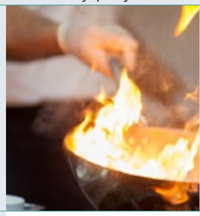
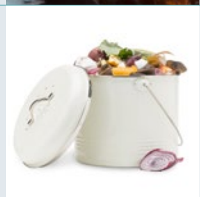
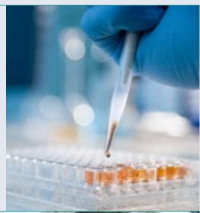
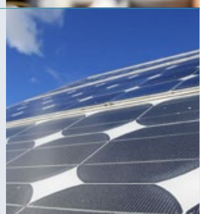
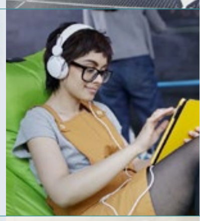
Meeting the SDG of gender equality will chiefly require regulatory change to promote more equal workplaces. But as we outlined in Part 2, UBS believes private investment has a role to play in promoting the development of fair corporate cultures that allow flexible working patterns and promote gender equality as a best practice.

2 Connections – linking philanthropic capital with great ideas

UBS supports schemes that encourage open sharing of data on philanthropic investments, linking these ideas to philanthropic capital. One initiative that focuses on bringing in new sources of capital, as well as new partners with different areas of expertise, is the SDG Philanthropy Platform, created in 2014 by the UN Development Program, Rockefeller Philanthropy Advisors and Foundation Center, just as the negotiations on the SDGs were being finalized (www.SDGfunders.org).

This Platform recognizes the need to build bridges and connections between governments, the UN system, and the philanthropy sector and its partners that will transform the landscape of stakeholders involved in achieving national and global goals. Active in a growing number of countries, the Platform catalyzes and tests new approaches and partnerships to achieve the SDGs. At the same time, the Platform is in turn seeking to connect with other networks that provide specialized finance expertise, enabling them to leverage larger investment pools.

The profiles of UBS Global Visionaries and their work to meet SDG funding gaps

Sustainable Development Goals	UBS Global Visionary project	What they're doing
2 ZERO HUNGER		David Hertz, founder of Gastromotiva, promotes the social gastronomy movement. His business trains disadvantaged young people and prisoners to cook, and then train others, to lead to better lives.
2 ZERO HUNGER		Tristram Stuart's environmental campaign organization, Feedback, campaigns globally to tackle world hunger by ending food waste at every level of the food system.
3 GOOD HEALTH AND WELL-BEING		George Daley's research seeks to translate insights in stem cell biology into improved therapies for genetic and malignant diseases, including human blood disease, cancer, and genetic immune deficiency.
3 GOOD HEALTH AND WELL-BEING		Shaffi Mathers, founder of MUrgency, designed a smartphone app to create the largest first-responder network of doctors, nurses, EMTs, paramedics, and Red Cross volunteers.
7 AFFORDABLE AND CLEAN ENERGY		Donald Sadoway, founder of Ambri, developed the liquid metal battery. This electricity-storage technology is helping create cleaner, cheaper, and more reliable electricity supply.
7 AFFORDABLE AND CLEAN ENERGY		Matthew Tilleard and his business, CrossBoundary Energy, install solar power-generating infrastructure across Africa and use energy-as-service agreements to sell clean, affordable electricity back to businesses across the region.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE		Deepak Madnani, founder of PaperClip, created Hong Kong's first dedicated startup campus that improves early-stage entrepreneur education and promotes best practices.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE		James Song, founder of Mithrandir Labs, teaches full stack web programming to disadvantaged young people in Myanmar, cutting total learning time from 24 to just three-and-a-half months.

Source: UN, UBS Global Visionaries. UBS supports the Sustainable Development Goals.

In addition, UBS is committed to leveraging existing networks such as its Global Philanthropists Community and Global Visionaries program (see break-out box on page 33) to centralize and disseminate information on SDG funding gap opportunities with interested investors and donors.

3. Incentives – encouraging private wealth for-profit impact investment to engage with good projects that offer a positive social and environmental impact.
Definitional differences abound but the growth of the traditional, private market-focused impact investing industry has generally disappointed most expectations. The World Economic Forum's report "From Margins to Mainstream" noted that, in 2013, less than USD 40bn of cumulative capital had been committed to impact investing compared to the tens of trillions globally available. A continued large shortfall exists between the aspirations of a 2011 JPMorgan, Rockefeller Foundation, and GIIN report (whose authors forecast that impact investing's market size could total USD 1trn by 2020) and current reality.

One recommendation to alleviate this shortfall would be to present for-profit impact investments to private clients clearly, with financial, social, and environmental returns in "lock step." Too often impact investments have been pitched as having meaningful impact and possibly also a return, rather than as attractive investments in their own right that are also impactful. At UBS we have started to emphasize the dual bottom line sought by many private investors – that is, we stress the importance both of attractive investment returns and of positive social and/or environmental impact.

To date, the results have been compelling. For example, the UBS Oncology Impact Fund successfully closed last year after raising USD 471m, making it the largest healthcare impact investment ever. The fund was presented to clients as an appealing risk-reward proposition whose investment catalyst is the ever-growing spread of cancer (new cancer cases are expected to outpace population growth by a factor of three to one, according to UBS Global CIO analysis). There have been significant scientific breakthroughs in curing cancer via the development of immuno-oncology drugs, and the regulatory environment has become more supportive. The fund has scope to exhibit a positive social impact as the 1% royalty attached to it directs funds to promising early stage oncology-based academic research that otherwise might be unable to obtain them.

The success of the UBS Oncology Impact Fund, in terms of funds raised and new investors engaged, can help catalyze an industry-wide change in approach, we believe, and advance the ability of impact investing to attract private investment capital. To help fuel this evolution, UBS has committed to launching a minimum of one major thematic impact investment every year. Each will be linked to our UBS Global CIO-defined, SDG-related impact-investing priorities. In so doing we aim to build on the success of the UBS Oncology Impact Fund by opening up impact investing to a wider group of private wealth investors and accelerating its transition into the mainstream.

We will continue to focus on private market opportunities and the dual bottom line definition of impact investment, which we believe provides the most direct link between investment capital, a financial return, and positive social and environment impact.

Meeting SDG goals – examples from UBS Global Visionaries network

One example of successful impact investing, aligned with the SDG "good health and well being" target of achieving universal health coverage, comes from UBS Global Visionary Shaffi Mathers. When his mother fell ill 12 years ago, the lack of ambulance service in India meant he had to drive her to the hospital for urgent medical attention. The experience inspired him to create MUrgency, a mobile app that connects people in medical need with a nearby network of medical professionals. Since the company began operations in 2004, over six million people have been taken to the hospital thanks to MUrgency. Emerging market (EM) healthcare needs are expected to rise considerably as populations age in the coming years – the EM proportion of people aged 65 or over has doubled to 10% since 1980 and is forecast to reach 15% by 2030, according to the UN. But with EM state healthcare spending just half of that of developed markets, a considerable SDG funding deficiency remains that entrepreneurs like Mathers can help to correct.

A second example that makes common cause with the SDG "affordable and clean energy" is that of Global Visionary Matt Tilleard. He recognized the potential to meet African businesses' need for clean, reliable sources of electricity via solar power. In 2013 the UN Sustainable Energy for All initiative noted that, to meet 2030 goals of universal access to electricity, over 65% of off-grid populations (630 million people) would need access to mini-grids. The cost of solar power, a clean alternative to dirty inside-the-fence diesel-generated power, had declined 85% since 2008. And yet businesses, the principal consumers of electricity, were failing to adopt solar technologies.

Tilleard discovered that financial barriers to entry were discouraging firms from adopting sun-powered electricity – few had the technical expertise to install this comparatively new technology or the desire to bear the expense of its technical risk, and upfront infrastructure costs were prohibitive. Tilleard responded to this problem by building a team of experienced infrastructure and finance professionals, adopting a power purchase agreement (PPA) model from the US, and co-founding a solar-fitting panel company, CrossBoundary Energy.

He and his team install the solar infrastructure, assume all technical risks and infrastructure costs, and enter into energy-as-service agreements with business to sell energy generated by solar back to them over a multi-year period. And in December 2015 the team raised USD 8m of equity for their (and the world's) first dedicated investment fund for commercial and industrial solar in Africa. Their goal remains the continued development of the latent opportunity for renewable own-generation in Africa.

4. Incentives – focusing on pooling investment risks
We would encourage a broader focus on attracting private for-profit impact investment capital into SDG funding projects by pooling resources. The impact of each component of the aggregate portfolio could be measured and reported. Private equity firms can use independent analysis to measure impact outcomes, and transition them to a dollar value. This monetary value can then be discounted based upon evidence-based risks to the impact being achieved (such as institutional headwinds or geopolitical risks) to provide a quantifiable social and environment value for investments.

One example of how wealth managers can play an important role in this field is evidenced by UBS' new strategic collaboration with TPG Growth, who will source SDG-related investments, combining them in a geographically and thematically diversified portfolio accessible to UBS clients. Given the relatively brief history of impact investing (the term itself celebrates its 10-year anniversary in 2017), and even shorter track record of most managers in the space, a diversified portfolio approach run by a well-resourced and successful global private equity manager is particularly appropriate in our view.

In addition, we will also establish a multiple-vintage program focused on impact investment to be open annually, beginning in 2018.

The Impact Multi-Vintage Program (MVP) will draw together projects at different stages of capital call, diversifying across established and new projects. Clients should benefit from well-structured, diversified private markets exposure which is optimized for financial returns, and also has significant social and environmental impact. This investment approach aims to "lock-step" financial and societal returns for private investors, and is a potential business model to follow when looking to use private capital to alleviate SDG funding shortfalls.

Combined with the commitment to launching major, thematic impact investments each year outlined above, this will provide an industry-redefining impact investment proposition for UBS clients and meaningfully increase the total amount of private wealth capital being deployed into SDG-related investments globally.

5. Development – creating an optimized platform that provides transparency, connectivity, and appropriate incentives for all stakeholders
The above four recommendations are all important steps to mobilizing private investment and philanthropic capital and helping address different components of the existing financial architecture. But they are incremental.

To truly optimize funding from private wealth for SDGs, industry-wide collaboration is needed. UBS' proposed answer is to join with other major institutions to support Align17, a WEF Young Global Leaders (YGL) initiative named after the seventeenth SDG of partnership for the Goals. It is an independent, digital platform that helps investors, philanthropists, development finance institutions (DFIs), multilateral development banks (MDBs), and governments work together to close the SDG funding gap by collecting co-investment opportunities. It would be funded by discrete buckets of for- and not-for-profit capital, using market-clearing pricing to determine the minimum or optimal blend of not-for-profit capital and guarantees needed to attract for-profit capital to invest.

The envisaged digital platform would have four core aspects.

- **Transparency of need and investment opportunity –** It would offer clarity on investment needs and opportunities to all, with independent assessment of the funding requirement and the financial/social/environmental impact of every project.

- **Connection (of SDG-related opportunities) –** It would provide a centralized platform for private equity, multilateral development banks (MDBs), and DFIs to present sponsored SDG-related co-investment opportunities for investment, philanthropic, and government grant funding.

- **Incentivization (for private wealth investment capital) –** It would exhibit incentive structures aligned with the goals and objectives of private wealth clients. Current incentivization efforts to mobilize private capital typically focus on risk mitigation, such as not-for-profit money taking equity tranches in debt-financed deals. Align17 focuses instead on return enhancement, which means it could yield even greater results while still being perfectly aligned with the not-for-profit money provider's objectives. And no not-for-profit funds would be contributed unless the investment has achieved 100% of its required funding. Align17 focuses on increasing incentives for private for-profit and philanthropic investment to fund SDG-related co-investments by setting them in more attractive, return-augmented form, as opposed to exclusively on risk mitigation.

- **Optimization (of not-for-profit contributions and required return guarantees) –** Align17 does not predetermine or presuppose the incentives needed to encourage private for-profit investment. Instead it would allow market forces to determine the exact share of each type of capital and guarantee support required to fund each individual co-investment. These guarantees would be conditional and depend on whether they are required to mobilize private investment capital for each individual project. The size of any guarantee is also conditional. So these two contingent factors could significantly leverage existing public funding, not-for-profit capital, and philanthropic capital to further ensure that any capital providing return guarantees is focused on the areas it is most needed.

This proposed platform differs from existing initiatives in a number of important ways.

- It focuses on meeting the funding shortfall for SDGs, including the full spectrum of funding from philanthropy to blended to pure for-profit impact investment finance, as compared to many current platforms that privilege blended-financing models.

- It determines the clearing level of charitable and investment funds needed for an investment to proceed rather than having a predetermined funding structure for every featured opportunity.

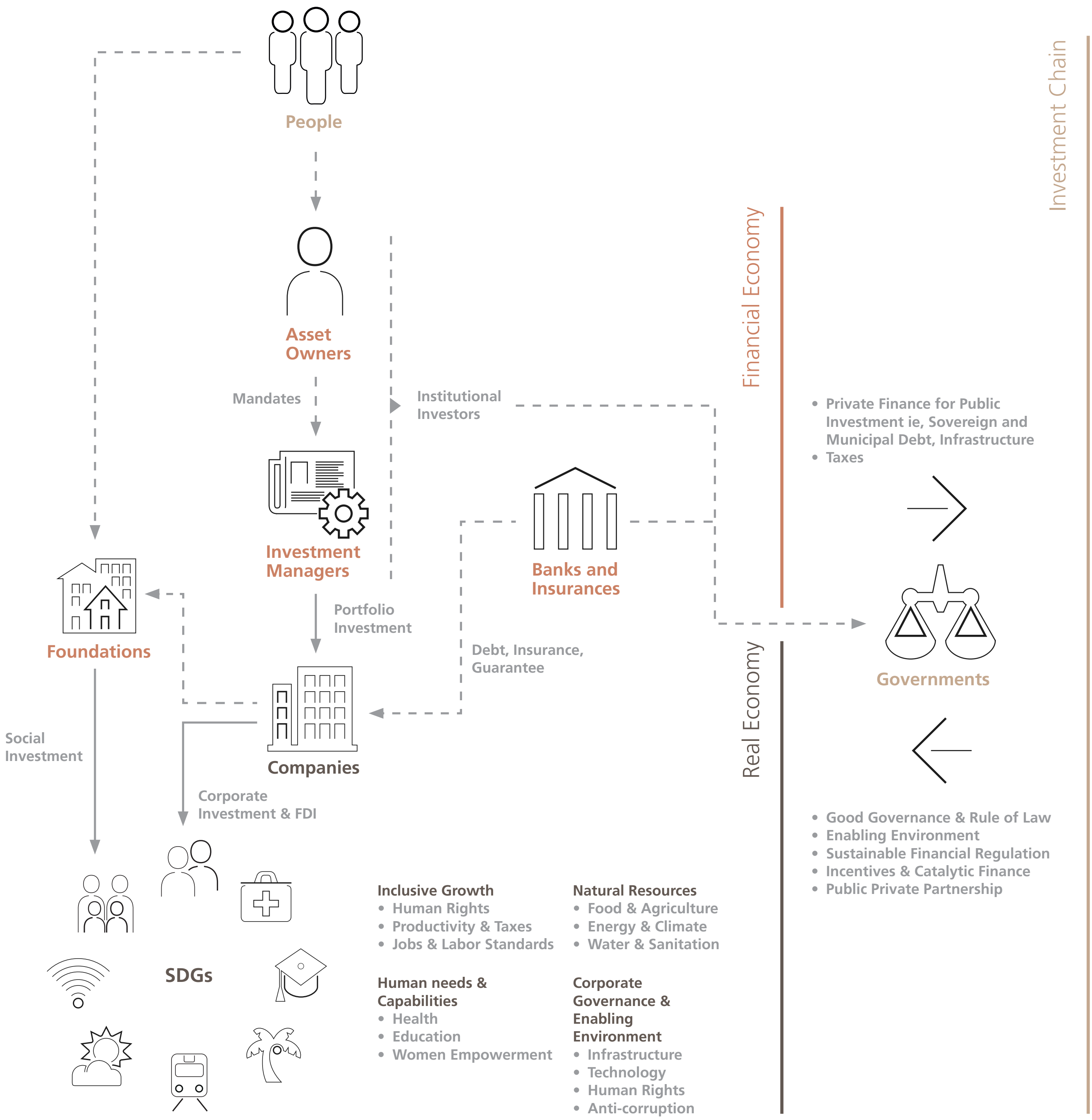
- Its investment universe comprises SDG-related co-investments, each with a sponsor who has conducted due diligence, structured the investment, and committed to providing a minimum amount of the total capital required. This contrasts with other platforms that feature a broader universe of blended investments, including funds, each with a confirmed anchor investor.

- It is a pure investment, philanthropy, and guarantee-matching platform as opposed to a broader one (that includes education, structuring advice, and sponsorship) driving the development of a particular type of finance model (i.e. blended finance).

- It links SDG-related investments to a wide range of providers of traditional or mainstream charitable and investment capital, and does not focus exclusively on blended finance investors.

- It explicitly breaks out multilateral development bank/development finance institution guarantees and allows these organizations to add guarantees to deals only if the market directly shows that doing so would increase the likelihood of a project being funded.

Current ecosystem for meeting SDGs



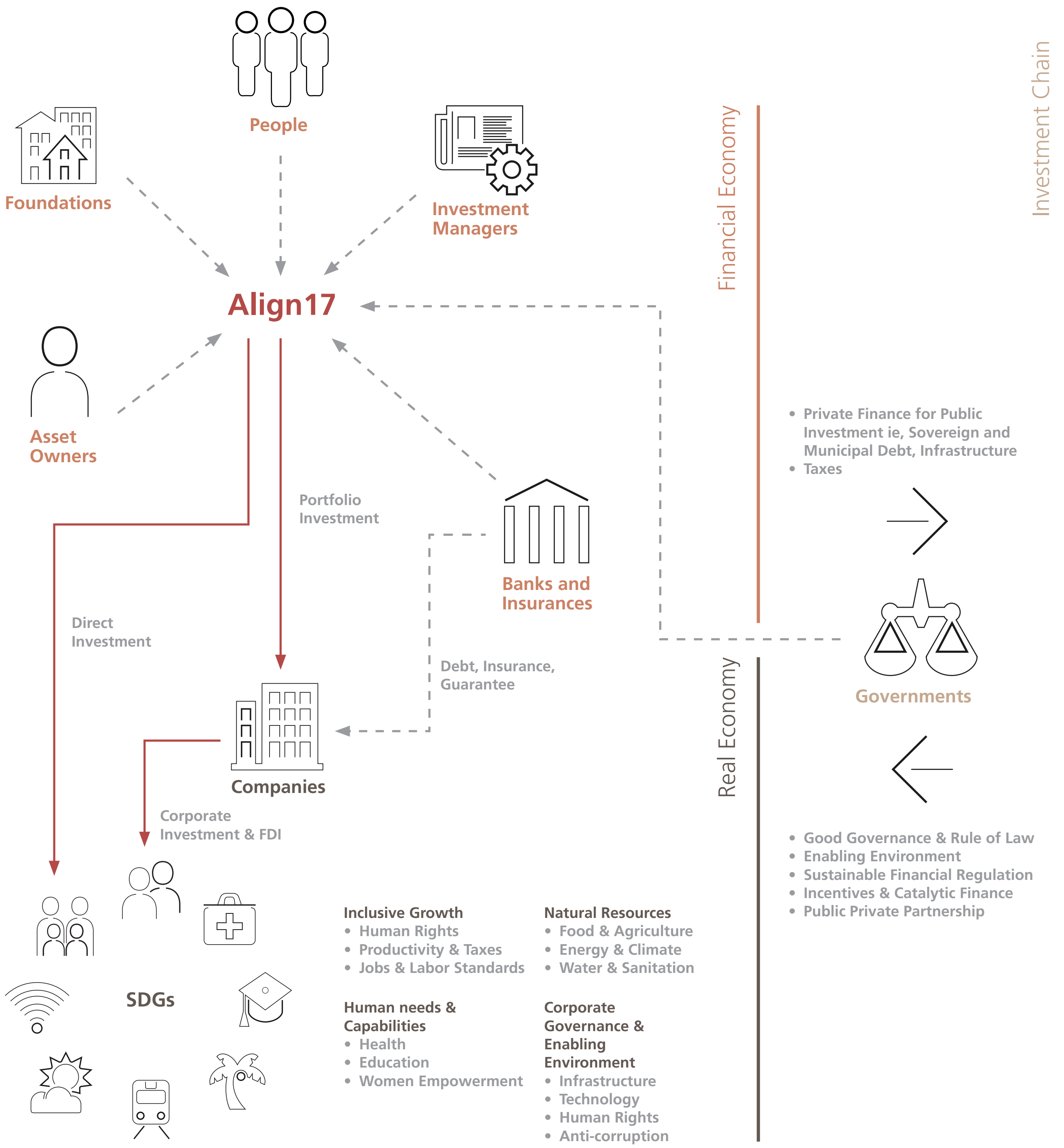
Source: 'Private Sector Investment and Sustainable Development' UN Global Compact, UNCTAD, UNEPFI, PRI (2015)

The World Economic Forum's perspective – the case for institutional investment in affordable, clean energy (contribution by Marjo Koivisto)

The world of renewable energy infrastructure offers increasing appeal for institutional investors too. In its December 2016 report *Renewable Infrastructure Investment Handbook: A Guide for Institutional Investors*[3] the World Economic Forum investigates how technological and marketplace transformations over recent years mean that renewable infrastructure investment is now a viable proposition for the world's largest investors. Furthermore, the sector can offer investments with compelling financial return potential and the chance for positive social impact to reduce the effects of global warming.

The scope for continued fossil fuel replacement remains considerable, as just over three-fifths of global energy generation comes from coal and natural gas. Impediments to wider uptake of renewables – low efficiency, high production costs, frontier technology risks, and relatively expensive levelized costs of electricity versus fossil fuels – are receding.

How Align17 would work to meet SDG funding gaps



Source: UBS, based upon 'Private Sector Investment and Sustainable Development' UN Global Compact, UNCTAD, UNEPFI, PRI (2015)

Deeper investment markets also increase the appeal of renewable energy investments for institutional investors. Total investment commitment of USD 285.9bn in 2015 exceeded the prior record levels achieved in 2011. Obstacles to investment still exist – deal pipelines still have comparatively few opportunities available for large investors, a lack of standardized deal conditions prohibits scalable investments, and regulatory uncertainty discourages some institutional investors.

Yet the report highlights the increasing willingness of institutions to fund renewable infrastructure, spurred by both an encouraging investment track record at the macro level, and more granular examples of success as highlighted in three concluding case studies.

[3] For more information, please see the World Economic Forum website. URL: http://www3.weforum.org/docs/WEF_Renewable_Infrastructure_Investment_Handbook.pdf

UBS is committed to supporting such an initiative in a number of ways, including:

1. Sponsoring SDG-related co-investments and marketing such a platform actively to its institutional investor, sovereign wealth fund, private equity fund manager, and private wealth clients.

2. Align17 would become a source of investment opportunities for a geographically and thematically diversified portfolio for UBS clients, and the key investment sourcing platform for our pooled Impact Multi Vintage Program product. This will provide a dedicated pool of investment capital to fund co-investments brought to the platform, thereby increasing its attractiveness to sponsors and creating a virtuous circle of demand for it. A key lesson of the Fourth Industrial Revolution is that demand-side economies of scale are a vital attribute for any successful platform.

3. UBS also commits to providing philanthropic support to the platform in two ways. We will provide funding to projects on Align17 that address needs aligned with the focuses of our internal philanthropic institution, the Optimus Foundation. We will also work with our Global Philanthropists Community to develop committed pools of philanthropic capital for projects relating to each relevant SDG. In both cases, provision of this guaranteed pool will be subject to eligible projects meeting a standardized and independently measured minimum level of "impactfulness."

However, UBS cannot drive this potentially ground-breaking initiative alone, as the proposed Align17 platform must be open architecture and collaborative to succeed. We are in discussions with PwC, which has developed an open source impact assessment methodology and conducted industry-leading research on the Sustainable Development Goals. Additionally, the Gates Foundation and the SDG Philanthropy Platform have expressed interest in collaborating with Align17.

Nevertheless, we cannot stress enough that this must be a truly collaborative, industry-wide effort if it is to fulfill its true potential. As a result, we call on other large investors – private equity funds, wealth managers, philanthropists, MDBs, and DFIs – to join us. We must work together to launch this initiative and close the current huge SDG-related funding gap.

UBS believes that, with greater collaboration and investment, we can help solve many of the critical challenges facing today's world. The ultimate measure of success, however, will be bringing about a more sustainable global growth trajectory not just for today but for decades and centuries to come.

ALIGN17

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