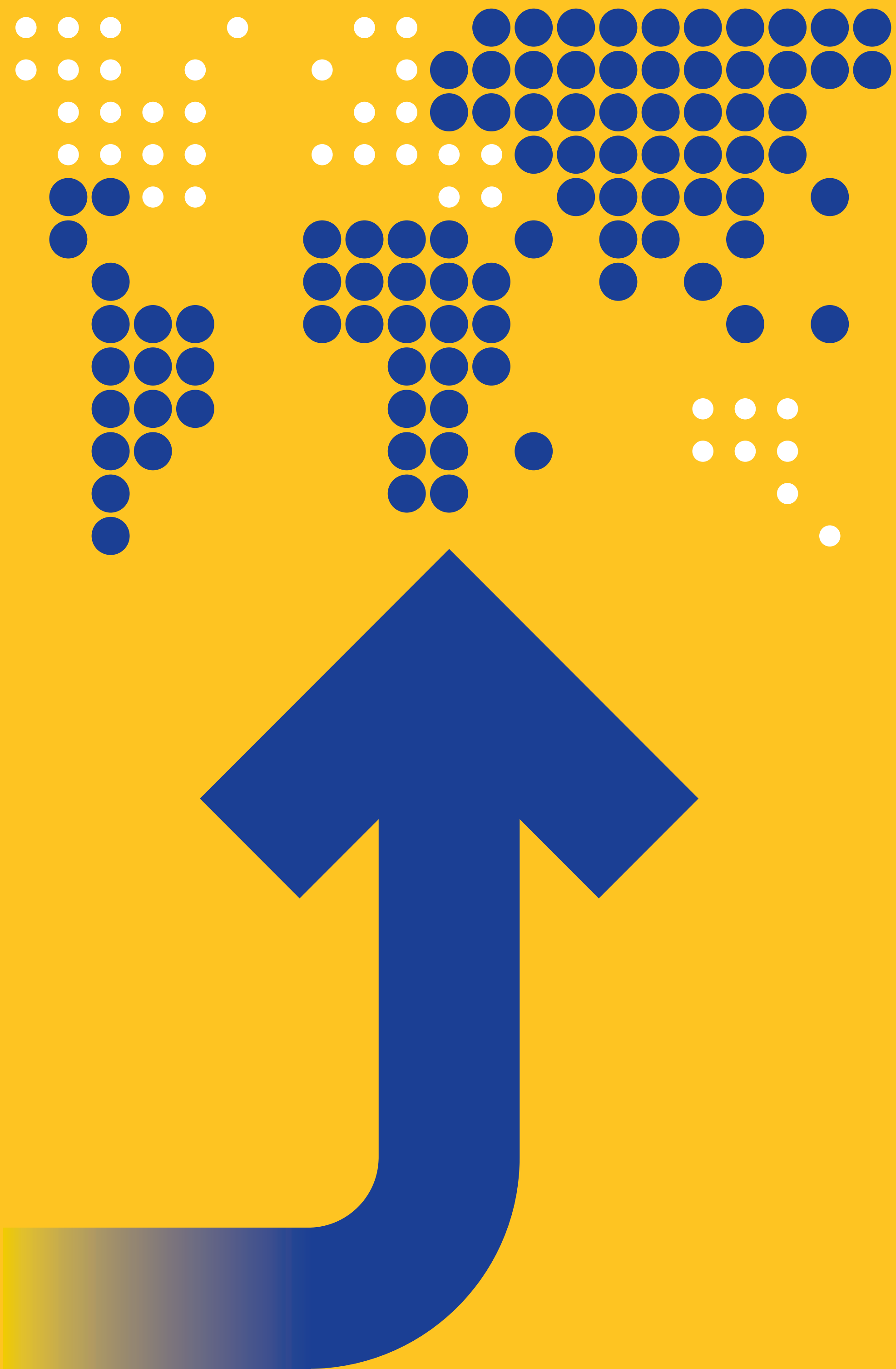

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EMERGING MARKETS FORUM

2016 GLOBAL MEETING

Beyond growth: Sustainability of our planet - Private sector finance initiatives

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Emerging Markets Forum
A nonprofit initiative of the Centennial Group

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Introduction

Today, it is safe to say that an increasing number of leading private sector finance institutions recognize that sustainable development and sustainable finance are important keys to their success. There is increasing acknowledgement within the mainstream financial industry that the consideration of non-financial information can both enhance returns and help mitigate risks in a large array of financial decisions. This includes environmental, social and governance (ESG) factors, such as climate change, air pollution, human rights and labor conditions, and independence or diversity of the board. As a consequence, the sustainable investment market is thriving and a vast number of initiatives are emerging among institutional investors and other financial sector players.

This paper shall give an overview of the most relevant sustainable finance trends and initiatives, focusing on sustainable investing. It will also touch on the important role of the financial regulator in advancing sustainable financial markets. Entire books have been written about each topic discussed in this paper; the purpose can therefore only be to provide a brief overview and to hopefully stimulate further discussion and interest.

Definitions Sustainable Finance

At the outset, it is sensible to introduce a definition of the subject matter, as sustainable finance means different things to different people. There is not one single agreed upon definition; however, there are two common denominators that are prevalent:

1. Environmental, social and governance (ESG) factors are taken into consideration in addition to regular financial information, in investment, lending, or underwriting decisions. Such information may in many cases be material to the financial performance, while in others it is not. For example, ethically driven investors may exclude the armament or the tobacco industry from their investment universe purely for ethical reasons while paying less attention to the performance repercussions. This is different to a mainstream sustainability investor who will consider for example how changing climate patterns (E) or human rights conditions (S) in certain regions will affect the performance of his or her portfolio.
2. Sustainable finance typically takes a longer-term perspective, as many ESG risks or opportunities don't materialize until the mid- to long term.

Sustainability in Lending

In lending and project finance the consideration of ESG criteria mainly aims to reduce lender-liability or reputational risks that can materialize in financial losses. In this respect, the Equator Principles constitute the most established framework for determining, assessing and managing environmental and social risks. The Principles were designed to apply to project finance and today cover roughly 70% of emerging market project finance debt. However, they are also frequently referred to in other lending activities by banks[1]. Other established initiatives for banks include the Thun Group of Banks, The Banking and Environment Initiative, and Social Banking, each with different focus areas and goals.

Sustainability in Investing

Sustainable investing, on the other hand, has progressed at a much faster pace and a wide array of products have become available that cater to the different needs of retail and institutional investors. In reflection of the prominence of sustainable investing (as opposed to sustainable financing), this is also where the paper sets its primary focus.

Sustainable investing typically takes one or several of the following forms, as outlined by the Global Sustainable Investment Association (GSIA)[2]:

1. Equator Principles (2016). About the Equator Principles. http://www.equator-principles.com/index.php/about-ep
2. GSIA (2016). http://www.gsi-alliance.org/

The sustainable investment segment has continued to grow, rising from 21.5% of all professionally managed assets in 2012 to 30.2% in 2014.

1. "Negative/exclusionary screening: the exclusion from a fund or portfolio of certain sectors, companies or practices based on specific ESG criteria;
2. Positive/best-in-class screening: investment in sectors, companies or projects selected for positive ESG performance relative to industry peers;
3. Norms-based screening: screening of investments against minimum standards of business practice based on international norms;
4. Integration of ESG factors: the systematic and explicit inclusion by investment managers of environmental, social and governance factors into traditional financial analysis;
5. Sustainability-themed investing: investment in themes or assets specifically related to sustainability, for example clean energy, green technology or sustainable agriculture;
6. Impact/community investing: targeted investments, typically made in private markets, aimed at solving social or environmental problems, and including community investing, where capital is specifically directed to traditionally underserved individuals or communities, as well as financing that is provided to businesses with a clear social or environmental goal;
7. Corporate engagement and shareholder action: the use of shareholder power to influence corporate behavior, including through direct corporate engagement (i.e. communicating with senior management and/or boards of companies), filing or co-filing shareholder proposals, and proxy voting that is guided by comprehensive ESG guidelines".

Sustainable Investing Overview

The GSIA keeps track of trends and developments in the global sustainable investment market. In their 2014 Global Sustainable Investing Review, the following figures can be found [3]: The sustainable investment segment has continued to grow, rising from 21.5% ($13.3 trillion) of all professionally managed assets in 2012 to 30.2% ($21.4 trillion) in 2014. The lion share of sustainably managed assets are held in Europe (63.7%), followed by assets located in the United States (30.8%) (Figure 1). The latter was the country in which sustainably managed assets grew the most, followed by Canada and Europe. These three together account for nearly all global sustainably invested assets, with only 1% being contributed by Asia and New Zealand & Australia.

The most common sustainable investment approach applied by asset owners and managers globally is "negative screening/exclusions" ($14.4 trillion, i.e., roughly two thirds of all sustainably managed assets), followed by "ESG integration" ($12.9 trillion, i.e., about 60%) and "corporate engagement/shareholder action" ($7.0 trillion, i.e., about one third). In terms of regional differences, "negative screening" is the most commonly applied strategy in Europe, while "ESG integration" now dominates in the United States, Australia/New Zealand and Asia. "Corporate engagement/shareholder action" is the most frequent strategy in Canada[4].

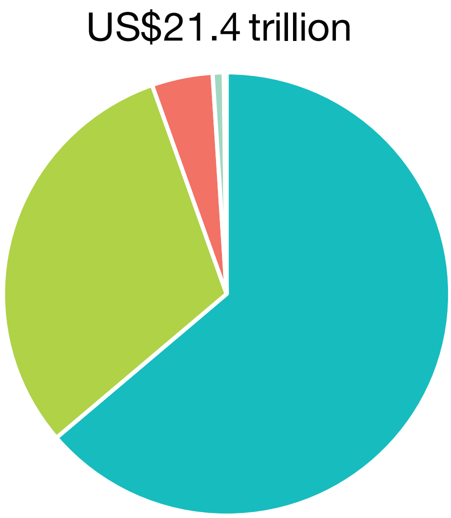
When considering these numbers one needs to keep in mind that the degree of actual "sustainability" varies in all of the above mentioned approaches. In fact, it is safe to assume that in the very strict sense of sustainability[5], only a small percentage of the above mentioned investments qualify.

Critics of sustainable investing frequently cite the presumed lower financial performance. Scientific reports[6] that

3. GSIA (2014). Global Sustainable Investment Review. http://www.gsi-alliance.org/wp-content/uploads/2015/02/GSIA_Review_download.pdf.
4. GSIA (2014). Global Sustainable Investment Report 2014. http://www.gsi-alliance.org/wp-content/uploads/2015/02/GSIA_Review_download.pdf.
5. Brundtland Report (1987). «Our common future»: Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
6. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies, Journal of Sustainable Finance & Investment, 5:4, 210-233, DOI: 10.1080/20430795.2015.1118917; Kleine, J., Krautbauer, M., & Weller, T. (2013). Nachhaltige Investments aus dem Blick der Wissenschaft: Leistungsversprechen und Realität, Analysebericht. Research Center for Financial Services der Steinbeis Hochschule Berlin.

Generally sustainable funds have similar, but not worse, performance in comparison to classical funds.

Figure 1: Proportion of Global SRI Assets by Region



Source: GSIA Global Sustainable Investment Report 2014

have analyzed numerous empirical studies on this question however, provide convincing evidence that performance does not have to be sacrificed with ESG strategies, as summarized by the association Swiss Sustainable Finance[7]:

- "A large number of studies indicate positive correlation between ESG performance and share performance" (Kleine et al., 2013; Friede et al., 2015).
- Generally sustainable funds have similar, but not worse, performance in comparison to classical funds" (Kleine et al., 2013; Friede et al., 2015) - While these results apply 'on average', the performance of individual SRI funds varies considerably.
- Studies highlight particularly strong correlation between ESG and financial performance for asset classes such as emerging markets, corporate bonds and green real estate." (Friede et al., 2015)"

Another frequently mentioned concern is the costliness of the investment approach. This concern can be addressed with the increasing number and range of ESG-based Exchange Traded Funds (ETFs). According to Morningstar and UBS Asset Management, as of February 2016, roughly $1.34bn was invested in such ETFs. Three years prior, it was not even a third of this amount[8]. It can be expected that this high growth rate will continue to prevail in the coming future.

Trends in Sustainable Investing

While sustainable investing started out - and is still most common - in the public equity space, there are several interesting trends emerging relating to other asset classes such as fixed income and alternative investments.

7. Swiss Sustainable Finance. For more information: http://www.sustainablefinance.ch/

8. I&PE magazine (2016). Sustainable investing is becoming much more important. https://www.ipe.com/reports/special-reports/etfs-guide-2016/sustainable-investing-is-becoming-much-more-important/10013232.fullarticle.

In recent years, one of the most notable trends in the context of financial product innovation is the emergence of green bonds. The key difference between conventional and green bonds is the specified use of proceeds, which need to be dedicated to projects, assets or other activities that benefit the economy, environment and society.

This section elaborates on three examples: Green bonds, infrastructure investments, and impact investing.

Green Bonds

In recent years, one of the most notable trends in the context of financial product innovation is the emergence of green bonds. The key difference between conventional and green bonds is the specified use of proceeds, which need to be dedicated to projects, assets or other activities that benefit the economy, environment and society.

- In 2007, the first issuers of green bonds were the World Bank and the European Investment Bank (EIB);
- In 2013, first corporate issuers entered the stage: EDF, Bank of America and Vasakronan;
- As of September 2016, the total issuance including public green bonds was at $51.4 bn[9]. 66% of this amount (= $33.9bn) has been issued by corporates[10]. The greatest part, about a third of this amount, came from Chinese companies.
- In 2016, global issuance could reach $80bn-$90bn according to a Bank of America Merrill Lynch estimate[11]. This would represent an increase of roughly 90% -115% from 2015 (yet, still comprising only roughly 0.1% of the total global bond market of $90trn[12]).

As investors become increasingly focused on integrating ESG factors into their investment processes, green bonds provide a convenient and much needed solution. Hence, demand for this debt instrument continues to be on the rise with most issuances being vastly oversubscribed. Also, major actors such as HSBC, Zurich Insurance Group, Barclays, and Deutsche Bank have expressed their commitment to further invest in green bonds.

There is however increasing criticism of green bonds: Today, with the exception of climate-related bonds, the young green bond market has yet to prove that it has actually helped preserve, restore and/or enhance natural capital. This is because issuers of green bonds typically only report on expected environmental and social benefits of the funded asset or activity, and not on the actual achieved benefit during the life cycle of the bond. Hence there is a certain risk of greenwashing.

WWF therefore believes that robust, credible, fully developed and widely accepted industry standards for green bonds are urgently needed. Only a bond for which the issuer can demonstrate measurable environmental benefits, certified by an independent party according to such a standard should qualify as a green bond.[13]

This criticism is partly shared by a group of asset owners, representing $11.2 trillion of assets and including significant players such as Allianz Global Investors, Aviva Investors, BlackRock, F&E Investors and Zurich Insurance Group. In December 2015, in connection with the Paris COP 21, the group issued a statement demanding both conducive government regulation to support the issuance of green bonds, and clear and ambitious standards in support of a 2-degree trajectory. They also called on issuers to ensure transparency around the use of proceeds and their resulting climate benefits.[14]

Infrastructure Investments

The current low-interest rate environment leads to another notable trend in sustainable investing, namely the increasing interest of institutional investors in new types of asset classes and investments connected with sustainable development. The investor interest theoretically makes a great match to the enormous investment needs. For example, the global need for new infrastructure investments alone

9. Climate Bond Initiative (2016). https://www.climatebonds.net/.
10. FT (2016). Bank of China issues $3bn in international green.
11. FT (2016). Bank of China issues $3bn in international green.
12. Bank for International Settlements (2016). http://www.bis.org/publ/qtrpdf/r_qt1606_charts.pdf.
13. WWF (2016). Green bonds must keep the green promise. http://wwf.panda.org/wwf_news/?270436/WWF-calls-for-industry-standards-in-the-Green-Bond-market-to-bolster-a-sustainable-economy.
14. Climate Bond Initiative (2015). Paris green bonds statement. http://www.climatebonds.net/files/files/Paris_Investor_Statement_9Dec15.pdf.

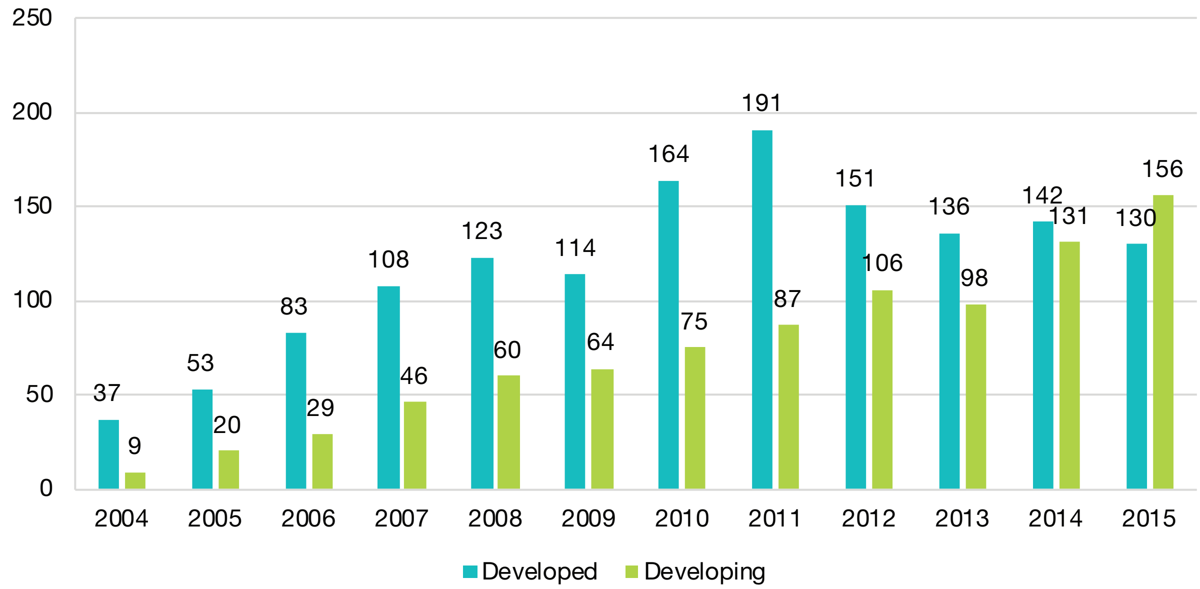
For higher-risk investments, "blended finance" can provide a suitable solution. In this case, development institutions and philanthropic funders guarantee investments or provide supplemental grant funding and thereby reduce the risk.

is estimated at 5% of the global gross domestic product, or about $4trn a year, for a total of $57 – 67trn until 2030[15]. With publicly funded infrastructure investment schedules lagging behind, and with rising public debt levels, a significant portion of these sums will have to come from private investors. This is now seen as a great opportunity by large institutional investors such as pension funds, sovereign wealth funds and insurance companies. With long-term liabilities and a low risk appetite they are well suited to invest in infrastructure with a low risk-profile. Potentially, the case can even be made that particularly sustainable and resilient infrastructure projects are financially less risky than their traditional counterparts and hence may be more suitable to institutional investors.[16] At present, however, only 7-13% of total global infrastructure investments can be considered "green".[17] So there are great opportunities for new products that address environmentally and socially conscious investors. Particularly investments in clean energy are on the rise, mainly in the developing parts of the world, as highlighted by the following graph.

For higher-risk investments, "blended finance" can provide a suitable solution. In this case, development institutions and philanthropic funders guarantee investments or provide supplemental grant funding and thereby reduce the risk. By providing technical assistance, they can further support the development of strategic projects and help improve the investment climate in key markets.[18] Estimates suggest that public capital deployed through

15. IIF, Swiss Re (2013). Strengthening the role of long-term investors. http://www.ub.unibas.ch/digi/a125/sachdok/2013/BAU_1_6162509.pdf.
16. There are several studies are examining this line of reasoning: For example, Keen, Kiose (2016). Understanding the impact of environmental risk factors on financial performance of global infrastructure projects; or GIB Foundation (2016) Financing Sustainable and Resilient Infrastructure. http://www.gib-foundation.org/content/uploads/2014/03/Financing_Sustainable_and_Resilient_Infrastructure_GIB.pdf
17. Report of the Canfin-Grandjean Commission (2015). Mobilizing Climate Finance. http://www.elysee.fr/assets/Report-Commission-Canfin-Grandjean-ENG.pdf.
18. World Economic Forum (2015). Blended Finance Vol. 1: A Primer for Development Finance and Philanthropic Funders.http://www3.weforum.org/docs/WEF_Blended_Finance_A_Primer_Development_Finance_Philanthropic_Funders_report_2015.pdf.

Figure 2: Global new investment in renewable energy: Developed v. developing countries, 2004-2015, $BN



Source: UNEP, BNEF (2016): Global Trends in Renewable Energy investment 2016

Over the past years, the impact investing approach within sustainable investing has experienced growing interest by the investment community and the media alike.

blended finance transactions can attract 1-10 times the initial amount in private investment.[19]

Impact Investing

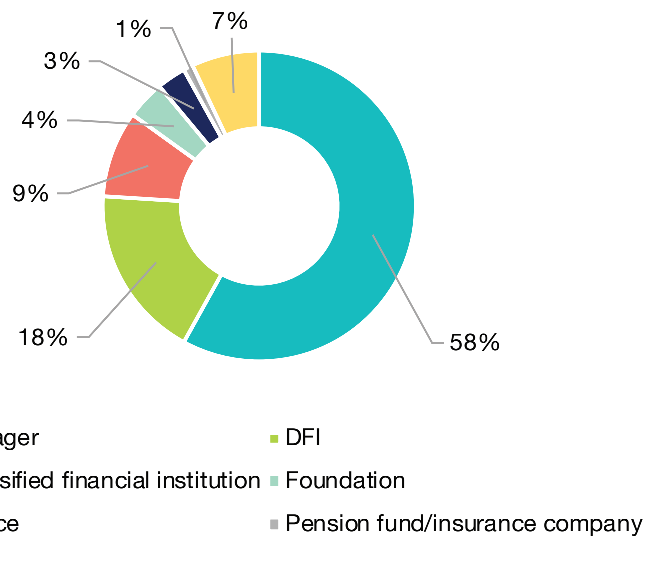
Over the past years, the impact investing approach within sustainable investing has experienced growing interest by the investment community and the media alike. The term "impact investing" is somewhat fuzzy and debatable, and there is not one clear definition. Some asset managers consider a share purchase in Toyota an impact investment due to its high-efficiency motors, others would draw the line at an organic agricultural venture. The Global Impact Investing Network (GIIN) defines it as follows: "Impact investments are investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets, and target a range of returns from below market to market rate, depending upon the circumstances."[20] There are two segments of impact investors: There are "impact first" investors, who put the main focus on solving a particular economic, social or environmental problem. To achieve their aim, they are willing to sacrifice some level of financial return. And there are "financial first" investors, who pursue the primary goal of achieving competitive financial returns while creating as much positive environmental and social impact as possible.[21] Further, impact investments cut across investment amounts and asset classes including venture capital, fixed income as well as public and private equity. Fund managers, development finance institutions and foundations have traditionally been the largest group of impact investors. Slowly, however, banks and institutional investors such as insurers and pension funds are also becoming active in the space. Today, the breakdown of investors by type presents itself as follows:

19. World Economic Forum (2013). WEF Green Investment Report 2013. http://www3.weforum.org/docs/WEF_GreenInvestment_Report_2013.pdf.

20. GIIN (2016). Thegiin.org.

21. Trilinc Global (2016). What is impact investing? http://www.trilincglobal.com/trilinc-blog/impact-investing/.

Figure 3: Total Assets Under Management by Organization Type



Source: GIIN Annual Impact Investor Survey 2016

In the ever more fast-paced environment of sustainable finance, networks and coalitions play a critical role. They provide financial institutions with timely information on the latest trends and developments, they facilitate discussions, and provide platforms to enable engagement with relevant stakeholders.

In total, the overall committed capital to impact investment by the respondents of the 2016 GIIN annual survey is $116.2 billion. In 2015 alone, $15.2 billion was committed to roughly 7,500 deals. A main hindrance to faster growth of this sector is the lack of a reliable pipeline of investable projects and the lack of suitable exit options. Yet the recent entrance of BlackRock and Goldman Sachs into the impact investing space promises continued momentum. The reason for their interest may well lie in increased retail investor demand: A study by Morgan Stanley showed that Millennials – and particularly high net worth (HNW) millennials - show increasing interest in this type of investment.[22]

Initiatives in Shareholder Action and Corporate Engagement

Making use of one's rights and responsibilities as a shareholder is key to sustainable investing. Proxy voting, corporate engagement, and participating in investor coalitions are becoming increasingly useful and potentially value-enhancing tools for institutional investors.

Exercising Shareholder Voting Rights

Both institutional and retail investors are increasingly seizing the opportunity to have a say in how companies they are invested in are being managed – particularly when it comes to ESG issues. They see proxy voting and company engagement as a potentially extremely potent way of influencing company behavior.

In the US, an encouraging 91% of institutional investors and 29% of retail shareholders made use of their voting rights in the 2016 voting season[23]. Investors are also increasingly filing shareholder resolutions, particularly with respect to ESG-related matters. The topics "corporate political activity" and "environmental matters" (including "climate change") make up 26% and 27% respectively of all ESG-related resolutions, with less frequent resolutions on topics such as "human & labor rights", "sustainability" and "diversity". In total, 433 such resolutions were filed in 2016 in the US alone, which represents a 4% increase from 2015[24].

Initiatives, Engagement and Coalitions

In the ever more fast-paced environment of sustainable finance, networks and coalitions play a critical role. They provide financial institutions with timely information on the latest trends and developments, they facilitate discussions, and provide platforms to enable engagement with relevant stakeholders. One of the most important networks is the UN-backed Principles for Responsible Investment (UN PRI). Nearly 1,500 investment institutions from 50 countries with a total of approximately $60 trillion assets under management have become signatories, and have thereby committed to the following:

"As institutional investors, we have a duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we believe that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time). We also recognize that applying these Principles may better align investors with broader objectives of society.

1. We will incorporate ESG issues into investment analysis and decision-making processes.
2. We will be active owners and incorporate ESG issues into our ownership policies and practices.
3. We will seek appropriate disclosure on ESG issues by the entities in which we invest.
4. We will promote acceptance and implementation of the Principles within the investment industry.
5. We will work together to enhance our effectiveness in implementing the Principles.

22. Morgan Stanley (2016). Investing in the Future: Sustainable, Responsible and Impact Investing Trends. http://www.morganstanley.com/ideas/sustainable-investing-trends.
23. PWC (2016). Proxy Season Review 2016. http://www.pwc.com/us/en/governance-insights-center/publications/assets/pwc-and-broadridge-proxypulse-2016-proxy-season-review.pdf.
24. Sustainable Investment Institute (2015). Proxy Preview 2015. http://www.proxypreview.org/download-proxy-preview-2015/

An important new type of investor coalition are impact- and specifically climate-focused alliances. With the increasing recognition that climate change will impact investment performance, the number of corresponding initiatives, actions and statements launched by groups of investors has mushroomed.

6. We will each report on our activities and progress towards implementing the Principles". [25]

There is no specific minimum standard that signatories have to fulfill, but reporting requirements have tightened, so that signatories are forced to demonstrate progress on the six Principles.

Within this group, there are various working groups and platforms, such as the UN PRI Engagement Platform where over 500 PRI signatories have posted more than 700 collaborative proposals on corporate engagement.

Other UN-affiliated networks in the larger finance space include the UNEP-hosted Principles for Sustainable Insurance (PSI), and the UNCTAD-hosted Sustainable Stock Exchanges (SSE) initiative, which in their respective fields are also attracting increasing numbers of signatories and supporters. Currently, 83 organizations representing 20% of world premium volume and $14 trillion in assets under management are supporting the PSI[26], and 57 stock exchanges with a total market capitalization of $36 trillion have committed to the SSE[27].

There are also numerous regional and national initiatives aiming at enabling and promoting sustainable finance. For example, in Switzerland, the newly formed organization Swiss Sustainable Finance unites over 90 financial institutions and various stakeholder organizations to strengthen "the position of Switzerland in the global marketplace for sustainable finance by informing, educating and catalyzing growth"[28]. Other similar initiatives include the Dutch, Italian, and Spanish Investment Forums.

An important new type of investor coalition are impact- and specifically climate-focused alliances. With the increasing recognition that climate change will impact investment performance, the number of corresponding initiatives, actions and statements launched by groups of investors has mushroomed. Investor activities on climate change started out with the Carbon Disclosure Project (today, CDP) in 2000, when a number of asset managers and asset owners began to urge investee companies to disclose their exposure and risk management with respect to greenhouse gases. Today, CDP runs the most comprehensive global self-disclosure system enabling companies, cities, states and regions to measure and manage their environmental impacts, and providing investors with key environmental data on topics such as climate, water and deforestation[29].

The umbrella organization for the major regional coalitions is the Global Investor Coalition on Climate Change, which includes IIGCC Europe, Ceres/INCR North America, IGCC Australia & New Zealand, and AIGCC Asia. Its web portal "Investors on Climate Change" (http://investorsonclimatechange.org/) shows all relevant investor initiatives and categorizes them according to the four pillars of "climate-proofing" an investment portfolio: Measurement, Engagement, Reallocation and Reinforcement.[30]

Measurement refers to investors measuring their exposure to climate change risks, including carbon footprinting and forward looking risk analyses. Currently the platform lists only one investor initiative --the Montreal Carbon Pledge-- but given current developments in the regulatory space (see section on "Trends in Regulation and Policy") there will certainly be a need for further catalyzing networks. It is increasingly agreed that mere carbon footprinting is not a sufficient risk management measure. Instead, investors will need to grapple with considering climate-related transition risks, policy risks, physical risks and demand risk. At this point in time, there are only very few tools available for investors to assess these risks; and those available are still largely in a development stage, such as the SEI-M Initiative which is driven by a multi-stakeholder consortium and led by the 2° Investing Initiative[31]. This open-source tool helps

25. United Nations Environment Programme – Finance Initiative (UNEP FI; 2016). The six principles. https://www.unpri.org/about/the-six-principles
26. UNEP FI PSI (2016). The PSI Initiative. http://www.unepfi.org/psi/
27. Sustainable Stock Exchanges Initiative (2016). http://www.sseinitiative.org/.
28. Swiss Sustainable Finance (2016). Who we are. http://www.sustainablefinance.ch/en/who-we-are-_content---1--1033.html.
29. For more information about CDP: https://www.cdp.net/en.
30. Global Investor Coalition on Climate Change - Investors on Climate Change. http://investorsonclimatechange.org/.
31. 2° Investing Initiative (2016). Developing Sustainable Energy Invest-

Investors will need to grapple with considering climate-related transition risks, policy risks, physical risks and demand risk. At this point in time, there are only very few tools available for investors to assess these risks; and those available are still largely in a development stage.

Table 1: Climate change-related investor actions and initiatives

Initiative	Measurement	Engagement	Reallocation	Reinforcement
Montréal Pledge	x			
Portfolio Decarbonization Coalition			X	
Low Carbon Registry			X	
Global Investor Statement of Climate Change				X
Aiming for A		X		
Carbon Asset Risk		X		
CDP Carbon Action		X		
CDSB Fiduciary Duty Statement				X
Ceres Shareholder Initiative on Climate and Sustainability		X		
Climate Bonds Initiative				X
Energy Efficiency Finance Task Group (EEFTG)				X
GES Carbon Risk Engagement		X		
IIGCC Initiative on EU Company Climate Lobbying		X		
Investor Expectations on Oil & Gas Company Strategy		X		X
Investor Expectations on Corporate Climate Risk Management		X		
PRI Investor Working Group on Corporate Climate Lobbying		X		
Regnan Climate Change Resilience Engagement		X		
Statement of Investor Expectations for the Green Bond Market				X

Source: http://investorsonclimatechange.org/

investors examine to which extent their portfolio is aligned with a global warming scenario of 2 degrees. Other available tools take a more holistic risk approach[32].

Engagement refers to investors advocating for improvements in the management and disclosure of climate risks and opportunities within the companies they own. Adopting an engagement strategy only makes sense if the investor takes a long-term approach to investing. With the short-term horizons still prevalent in the financial markets, the full potential impact of investor engagement is far from being reached and it remains impossible to measure the benefit of company engagement. However, it is not difficult to imagine that its absence can be detrimental to shareholder value.

Reallocation refers to shifting capital from emissions-intensive activities and companies to low and zero carbon alternatives. This can be achieved through engagement, divestment, investing in green technologies (e.g., renewable energy), as well as 'carbon-tilting'. The latter has gained in popularity: The technique consists of underweighting or excluding the most carbon-intensive securities and rebalancing the portfolio in order to maintain financial performance consistent with the benchmark.

Initiatives in this section include the Portfolio Decarbonization Coalition, whose members have committed to decarbonizing some $600bn in assets, and the Low-Carbon Investment Registry, which lists $50bn of climate-friendly

ment Metrics, Benchmarks and Assessment Tools for the Financial Sector.
32. For example Carbon Delta. More information at http://www.carbon-delta.com/.

It can be expected that sustainable investing will continue to be on the rise; not least because legal and regulatory frameworks are increasingly paving the way.

investments made so far. The decarbonization of portfolios through divestment from fossil fuel companies will likely continue for the coming years. To date, 630 institutions have either divested or made pledges to fully or partially withdraw from fossil fuels[33]. There is much debate about the effectiveness of the fossil fuel divestment movement. While it may not have achieved significant impact on a specific company's share price or capital cost, it certainly has created pressure on the fossil industry as a whole by putting its license to operate --if not its very business model-- into question. It also sends an important signal to policy makers, asking them to treat climate risks as a serious threat to shareholder value and potentially even to financial market stability.

Reinforcement refers to specific public statements by investors relating to topics such as green bonds, fiduciary duty, or transparency. While the increasing number of public investor statements is encouraging, one may not lose sight of the actual lobbying and voting record of the individual investors. For example BlackRock, the world's largest asset manager, has urged investors to not ignore climate risks while at the same time failing to support a motion tabled at Exxon's annual general meeting asking the company to disclose how its business would be affected by the Paris climate agreements.[34]

Trends in Regulation and Policy

It can be expected that sustainable investing will continue to be on the rise; not least because legal and regulatory frameworks are increasingly paving the way. The journey of aligning financial policy with sustainability investing began in 2005 with the findings of the "Freshfields" report, commissioned by the United Nations Environment Program Finance Initiative. The report concluded that not only was it permissible for investment companies to integrate ESG issues into investment analysis, but that it was arguably also part of their fiduciary duty to do so[35]. This was reiterated in 2014 when the UK Law Commission (England and Wales) confirmed that pension trustees were allowed to take account of ESG factors when making investment decisions.[36] In October 2015, the U.S. Department of Labor's Employee Benefits Security Administration issued a similar ruling that explicitly allows managers of pensions and 401(k)s to add ESG funds to their portfolio37. The French government took it a step further when in 2015, it introduced Article 173 of its law on "energy transition for green growth", which sets out mandatory climate change-related reporting for institutional investors[38]. It was the first country globally to do so. In 2016, the EU is following suit: The Institutions for Occupational Retirement Provision (IORP) Directive allows pension funds to include ESG factors in their investment decision-making. The Directive further explicitly encourages pension funds to consider climate change, use of resources and the environment, social risks and stranded asset risks in their own risk assessment.[39]

Many more examples of environmental and social risk consideration in financial market regulation come from the emerging markets, which for a long time have been ahead of industrialized countries in this respect.[40] For example:

- In Brazil, the central bank introduced a resolution on mandatory environmental and social policies for all banks.

33. Fossil Free (2016). Divestment commitments.
34. FTAdvisor (2016). Vanguard and Blackrock branded "hypocritical". https://www.ftadviser.com/2016/09/06/investments/vanguard-and-blackrock-branded-hypocritical-uIBVgC0QmE2gNpc5jwF90M/article.html.

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Momentum seems to be building, as highlighted by the Governor of the Bank of England, Mark Carney's remarkable interventions on the topic (such as his 2015 speech on the "Tragedy of the horizon"), the work of the FSB's Task-Force on Climate-related Financial Disclosure, and the newly mandated G20 Green Finance Study Group.

- In India, information on environmental and social risk was first issued by the central bank in 2007 as part of a general sustainability advisory. Since then, the "renewable energy" sector was added to the list of Priorities Lending Sectors, receiving advantageous lending rates.
- In Bangladesh, the central bank offers low-cost refinance lines to lenders against their SME and green financing, and provides environmental risk management guidance. The bank also takes macro-prudential measures, such as lower equity margin requirements for socially and environmentally beneficial lending options[41].
- In China, the Green Credit Guidelines established environmental and social controls in the credit process and direct funding towards green industries. The country has further issued new regulations for green bonds, targeting $46bn of issuance this year alone.[42] The securities regulator is also aiming to ban companies that are in non-compliance with environmental rules from an IPO[43].
- In South Africa, the pension fund regulation requires that ESG factors are taken into account when making investment decisions.[44]

The UNEP Inquiry into the Design of a Sustainable Financial System has identified many more initiatives by central banks and financial regulators that aim at integrating environmental and social considerations, citing examples from Mauritius, Philippines, Kenya and others. However, the speed and depth is still modest with only 60 jurisdictions so far having introduced some type of measure. None of them have a truly comprehensive approach.[45] Yet, momentum seems to be building, as highlighted by the Governor of the Bank of England, Mark Carney's remarkable interventions on the topic (such as his 2015 speech on the "Tragedy of the horizon"[46]), the work of the FSB's Task-Force on Climate-related Financial Disclosure[47], and the newly mandated G20 Green Finance Study Group. In order to contribute to these discussions, WWF commissioned three academic studies[48] that further explore the link between environmental and social risk and financial risk. Although wide-ranging in their considerations and methodology, the studies show three clear results:

1. Climate risk poses a threat to the solvency of the European banking sector, via network effects;
2. There is a negative correlation between climate-change related natural catastrophes and financial market resilience; and
3. Environmentally unfriendly infrastructure debt commands a higher risk premium.

We expect a further strengthening of the links between environmental and social risks on the one hand, and financial stability on the other as the research evolves and the body of knowledge in this area begins to develop.

Closing Note

In closing, it needs to be pointed out that while the large number of initiatives and activities in the sustainable finance space are encouraging, we need to realize that they only represent the beginning of what needs to become a rigorous and holistic approach toward the creation of a green and inclusive economy. Prevailing rules and incentives governing financial markets can disadvantage long-term, sustainable behavior. This leads to a clear divide between current financial flows and scientific recommendations for a safe and prosperous future. In order to align investments

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with science, the traditional approach of relative performance benchmarking in today's asset management must be enhanced to acknowledge the absolute requirements of the natural systems that underpin our economies. The natural boundaries with respect to biodiversity loss, ocean acidification, chemical flows, etc. must be understood and translated into concrete goals for the real and financial economies.

This represents an enormous challenge and paradigm shift, as the financial industry needs to realize that there is a social obligation to think beyond the maximization of profits. It requires leaders from the financial sector -from policy, regulation, and public and private finance institutions- to come together with their peers from science and civil society to jointly work on solutions that do not only serve our ourselves today, but that also serve the next seven generations, or as WWF puts it: that allow humans to live in harmony with nature.

The Emerging Markets Forum was created by the Centennial Group as a not-for-profit initiative to bring together high-level government and corporate leaders from around the world to engage in dialogue on the key economic, financial and social issues facing emerging market countries.

The Forum is focused on some 70 market economies in East and South Asia, Eurasia, Latin America and Africa that share prospects of superior economic performance, already have or seek to create a conducive business environment and are of near-term interest to private investors, both domestic and international. Our current list of EMCs is shown on the back cover. We expect this list to eveolve over time, as countries' policies and prospects change.

Further details on the Forum and its meetings may be seen on our website at http://www.emergingmarketsforum.org

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