

Sustainable Investing

Shaping the future of finance



David Uzsocki



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Sustainable Investing: Shaping the future of finance

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The Time for Sustainable Investing Has Come

Sustainable investing has come a long way. It was not long ago when this new way of investing was still considered to be niche, at times confused with philanthropy. Over the years, financial market participants have gained a better understanding of the value proposition of incorporating environmental, social and governance (ESG) considerations in asset allocations and recognized the potential in the increasing client demand for values-based investing.

With rapidly growing interest from investors, it has become clear that there is a pressing need to better define the financial characteristics of this new investing paradigm, especially concerning performance. Indeed, this was arguably the most important barrier for institutional players who were concerned about breaching their fiduciary duty when integrating sustainability principles in their investment decisions. However, the numerous studies published to date have largely dispelled the myth about the trade-off between financial performance and impact (Friede, Busch, & Bassen, 2015). LGT Capital Partners' survey demonstrates this shift in perception very well: 84 per cent of investors now believe that integrating ESG has either a positive or neutral impact on risk-adjusted returns (LGT Capital Partners, 2019).

“Nothing is more powerful than an idea whose time has come,” Victor Hugo (1802–1885) once said. Indeed, the heightened interest and pace of adoption by the financial industry is a powerful sign that the time for sustainable investing has arrived. Most financial professionals in developed countries have now become familiar with this investment approach and have shifted from asking “whether to do it” to “how to do it.” Every major financial institution is setting up



WHAT IS SUSTAINABLE INVESTING?

Sustainable investing—also called responsible investing or values-based investing— involves incorporating environmental, social and governance factors when making investment decisions rather than relying purely on financial considerations.

Source: Global Sustainable Investment Alliance (GSIA), 2019.

sustainable investing teams and ESG product and service offerings. Some of them, like UBS Asset Management, are even designing proprietary ESG rating methodologies for assessing environmental, social and governance performance. The financial industry is also represented much more than ever before in sustainable finance-related conferences. For example, at the Building Bridges Summit organized in Geneva Switzerland in October 2019, 49 per cent of the 800 participants came from the financial sector, much more than at similar conferences in previous years.

The financial sector is right to embrace this transition toward sustainability. The industry still has an image problem that it has struggled to overcome since the 2008 global financial crisis. According to a 2017 survey by Edelman, the public relations consultancy, consumers have the least amount of confidence in the financial services industry (Stein, 2018). Sustainable investing, delivering positive environmental and social impact, could be a powerful way of regaining this trust.



Sustainable Investing Today

So here we are in 2019 with sustainable investment reaching USD 30.7 trillion in assets under management in developed countries alone (GSIA, 2019). This represents a 34 per cent increase since 2016 and a 68 per cent increase since 2014 (GSIA 2017). “ESG integration is absolutely, completely mainstream,” said Alexandra Basirov, head of sustainable finance for financial institutions at BNP Paribas, in comments to *The Financial Times* (Asgari, 2019).

Table 1. Global assets with ESG mandate (USD billion)

Region	2016	2018
Europe	\$12,040	\$14,075
United States	\$8,725	\$11,995
Japan	\$474	\$2,180
Canada	\$1,086	\$1,699
Australia/New Zealand	\$516	\$734
Total	\$22,890	\$30,683

Note: Asset values are expressed in billions of US dollars. All 2016 assets are converted to US dollars at the exchange rates as of year-end 2015. All 2018 assets are converted to US dollars at the exchange rates at the time of reporting.

Data sourced from GSIA, 2019.



When looking at the market size of sustainable investing, it is also important to understand how assets under management (AuM) are spread across the different ESG strategies:

- **Negative/exclusionary screening:** Exclusion of certain sectors, practices or companies from the investable universe based on ESG criteria.
- **Positive/best-in-class screening:** Including companies and projects that have a superior ESG performance relative to their peers.
- **Norms-based screening:** Exclusion of companies and projects with a business practice not in line with international norms.
- **ESG integration:** Explicit and systematic inclusion of ESG risks and opportunities in financial analysis and investment decision making.
- **Sustainability-themed investing:** Investing in themes and economic activities that are directly related to sustainability.
- **Impact investing:** Investments with the intention to achieve positive and measurable ESG impact.
- **Corporate engagement:** Active shareholder engagement with companies to influence their corporate behaviour on ESG issues.

WHAT IS SUSTAINABLE FINANCE?

“Sustainable finance refers to any form of financial service integrating environmental, social and governance (ESG) criteria into the business or investment decisions for the benefit of both clients and society at large.”

Source: Swiss Sustainable Finance, n.d.b.

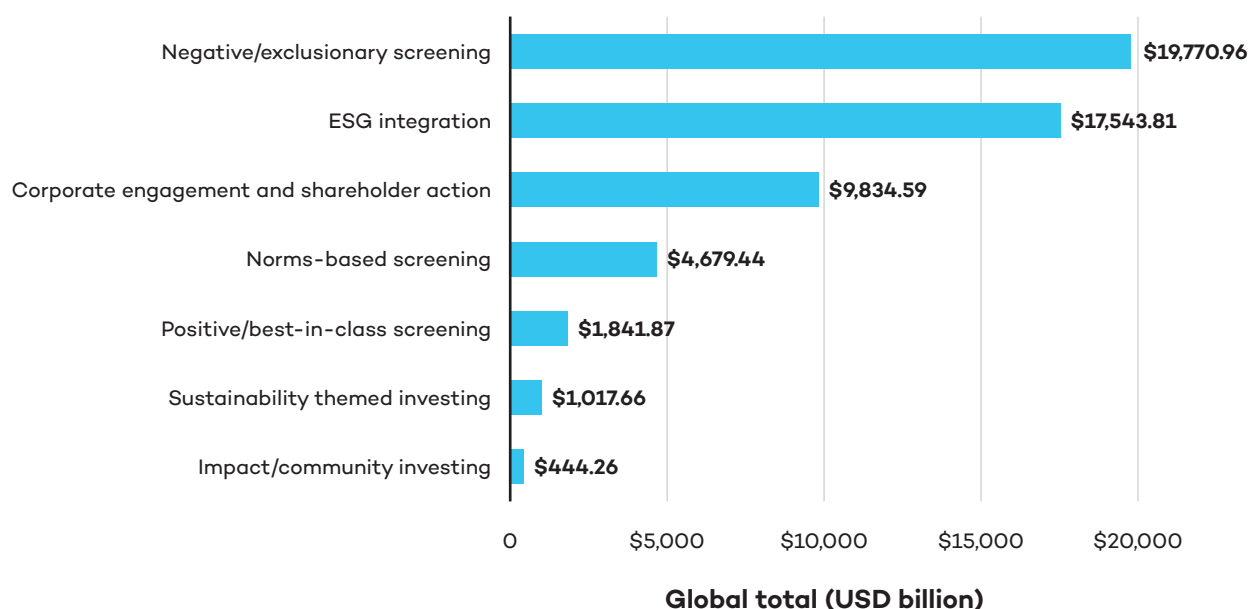
I will not discuss these approaches in detail here, but it is important to point out that USD 19.8 trillion of the USD 30 trillion of assets integrating sustainability considerations falls under the negative/exclusionary screening (GSIA, 2019). The popularity of negative screening is not surprising, as it has been around the longest and is the easiest to implement, even at scale. Therefore, it is often the starting point for investors eager to integrate ESG considerations into their portfolios. While some negative screening strategies are more complex—such as exclusion of companies with links to animal cruelty for example—most often it comes down to an exclusion of tobacco and weapons manufacturers and perhaps alcohol producers. As this space matures, I would expect simple negative screenings like this to no longer be considered sustainable investing, but instead to be included in most investment mandates by default. The problem with relying on exclusion criteria alone is that they mitigate only a few specific ESG-related risks, while ignoring others that could be material for financial performance. In addition, they cannot ensure that the portfolio as a whole generates any positive impact.

Therefore, I would like to see more diversification across the different sustainable investing strategies. For example, impact investing, which has perhaps the highest ESG impact potential, has only USD 502 billion assets under management (Mudaliar, & Dithrich, 2019). Also,



sustainability-themed investing and best-in-class screening strategies have been significantly underinvested to date (see Figure 1). At the same time, it is important to acknowledge that thematic investment is currently the fastest growing segment within the industry. Due to its unique characteristics, it is reasonable to assume that impact investing will always have a lower allocation than some of the other ESG investment strategies. It often includes private equity, private debt and venture capital investments in developing countries that are difficult to scale. However, the difference in allocations should not be as significant as it is currently.

Figure 1. Sustainable investing assets by strategy

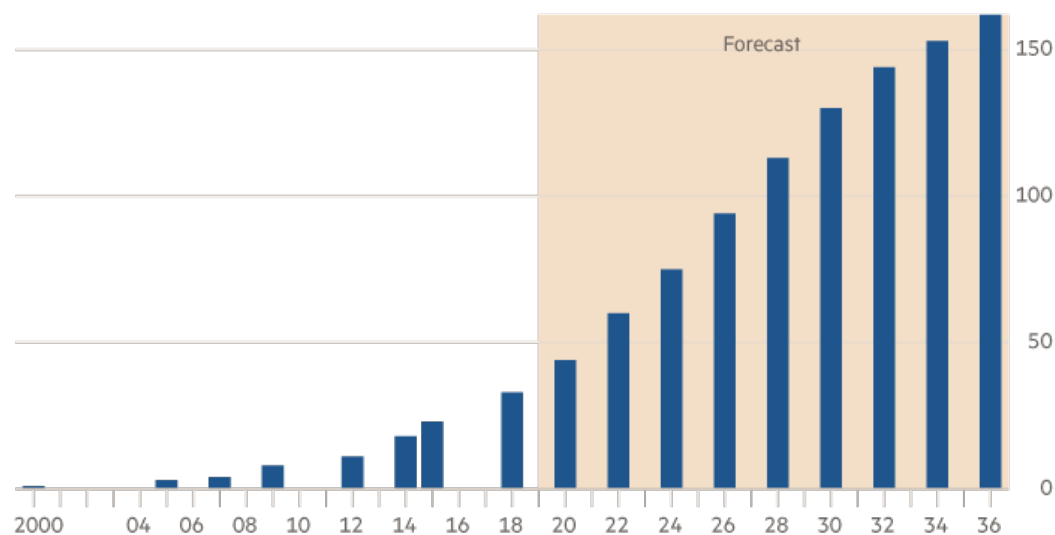


Source: GSIA, 2019.

This has been a quick summary of where sustainability investing is now. The question is where it is heading in the future. The following chart shows where analysts from Deutsche Bank expect the space to grow in the next 17 years.



Figure 2. Global assets with an ESG mandate (USD trillion)



Based on available data

Sources: Deutsche Bank; Global Sustainable Investment Alliance

© FT

Source: Fletcher, 2019.

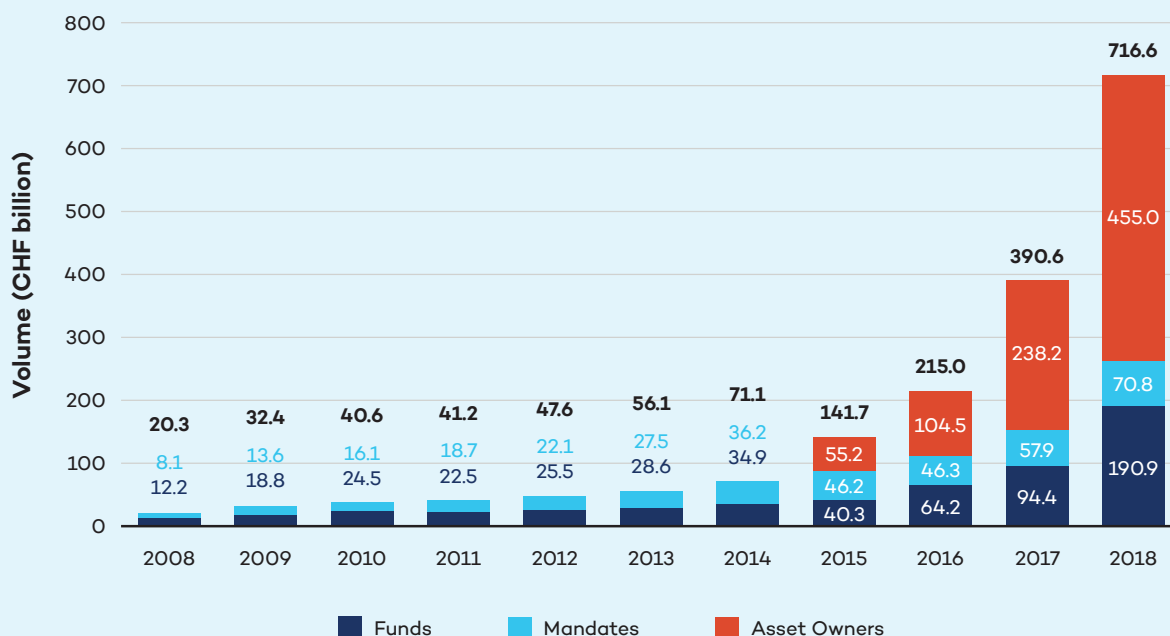
Figure 2 shows that we are currently at USD 30 trillion of assets under management, as discussed earlier. Based on this forecast, assets with an ESG mandate will reach USD 160 trillion by 2036, which is an increase of 433 per cent from 2018 levels. This would mean a close to 100 per cent ESG integration in fund management. Indeed, as early as next year half of all assets under management are expected to have an ESG mandate (Johnson, 2019). This forecast confirms that the growth of sustainable investing will accelerate further in the coming years and will be fully integrated into asset management.



Sustainable investing in Switzerland

As Switzerland seeks to position itself as a leader in sustainable finance (Swiss Sustainable Finance et al., 2019), it is worth taking a closer look at how sustainable/ESG investments have grown there in recent years.

Figure 3. Swiss assets with an ESG mandate (CHF billion)



Source: Swiss Sustainable Finance, 2019.

As Figure 3 illustrates, assets managed according to ESG principles have increased 233 per cent between 2016 and 2018 in Switzerland. This compares to a 34 per cent increase of ESG assets under management globally during the same period. These numbers clearly demonstrate the growth of sustainable finance in the Swiss financial industry. At the same time, it is important to highlight that two thirds of the growth between 2017 and 2018 can be attributed to first-time respondents to the survey on which the numbers are based. In other words, it is possible that a notable portion of ESG mandates were simply not captured in the previous year's survey. Only one third of the 83 per cent growth is a result of existing participants increasing their allocation to sustainable investing strategies. Indeed, sustainable finance professionals in Switzerland often complain that Swiss institutional investors are slower to integrate ESG criteria than their other European counterparts.



Drivers of Sustainable Investing

How can sustainable investing indeed become mainstream? What will fuel the exponential growth that analysts are forecasting? The answer lies largely in ensuring robust demand from investors across the board. At the same time, the drivers behind this demand can vary significantly across the different types of investors. For the sake of simplicity, I categorize investors into two distinct groups—private and institutional investors—while acknowledging that there are more complex distinctions to be made. In this context, private investors are retail investors and high net worth individuals, while institutional investors are sovereign wealth funds, insurance companies, pension funds, investment funds and other sophisticated market participants. Even though investors within each group can be rather diverse, it is still possible to identify a common set of drivers behind their interest in sustainable investing:

PRIVATE INVESTORS

- Demand for investments in line with their personal and moral values

INSTITUTIONAL INVESTORS

- Demand from their constituents to integrate sustainability considerations
- Policy risk—new regulations addressing ESG concerns
- Better understanding of how to price ESG and climate-related risks and therefore better awareness about their financial materiality



Private Investors – Millennials

The millennial generation, also called generation Y (birth years: 1981–1996), will play a significant role in creating demand for sustainable financial products and services. Their interest in this new way of investing is driven by their desire to invest in line with their values. Indeed, according to a survey by Morgan Stanley, millennials are twice as likely than other investors to invest in companies with significant positive social or environmental impacts (Morgan Stanley, 2019b).

This is especially important due to the ongoing intergenerational wealth transfer to millennials, with Deloitte projections suggesting an over two-fold increase from 2015 to 2020 levels in this generation’s aggregate net worth, estimated to reach USD 19 to 24 trillion (Kobler, Hauber, & Ernst, 2015). Figure 4 below provides a useful illustration of how millennials will overtake previous generations in terms of spending power, and therefore investable net wealth, during the coming decade and beyond.

“We are on the edge of a second consumer revolution where the public realises just how powerful their own money can be.”

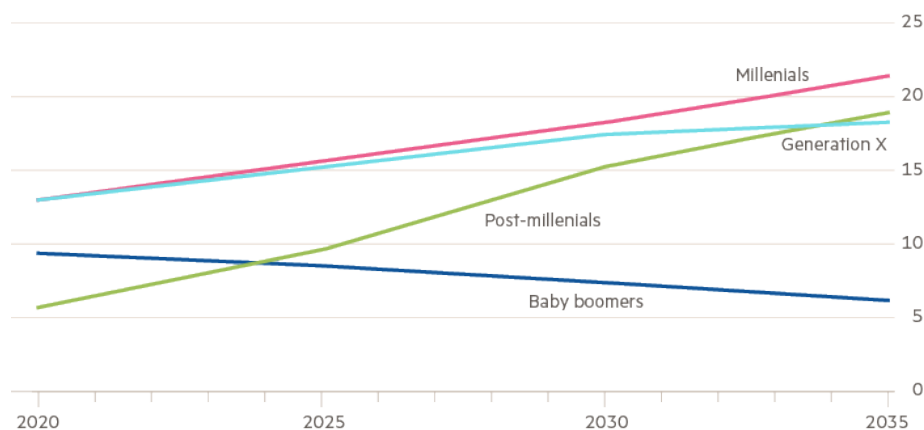
— RICHARD CURTIS, A FILM PRODUCER, WHEN TALKING ABOUT SUSTAINABLE INVESTING.

Source: Howard-Boyd, 2019.

Figure 4. Global millennial spending power

Global millennial spending power is set to overtake generation X by 2020 and will continue to rise

Forecast annual aggregate income, by generation (\$tn)



Source: World Data Lab
© FT

Source: Tilford, 2018.



Millennials will indeed play an important role in increasing demand for sustainable investing, as demonstrated by the numerous surveys confirming their interest in sustainability. At the same time, it remains to be seen what percentage of survey respondents that indicate their preferences in favour of ESG will actually require their financial advisors to integrate ESG considerations in investment decisions. In other words, the adoption of sustainable investing by millennials might be slower than these surveys seem to suggest.

Institutional Investors

It will not be possible to achieve a 433 per cent growth in sustainable investing without significant demand from institutional investors. Indeed, some of the largest investors have become leaders in the space and have re-adjusted their portfolios to integrate ESG principles. Interestingly, there is more focus on sustainability among investors with larger portfolios, i.e., USD 100 billion and above (Schroders, 2018). For example, Amundi, the largest European asset manager, announced last year that it would integrate ESG in 100 per cent of its investments by 2021 (S&P Global, 2019). Currently only 20 per cent of its EUR 1.4 trillion assets under management (AuM) are in responsible investments (Amundi Asset Management, 2017). Similarly, Blackrock, the world's largest asset manager with more than USD 7 trillion AuM, has committed to increase its sustainable assets from USD 90 billion currently to USD 1 trillion within the next 10 years (Henderson, 2019). Also, based on a survey of 650 investors, 83 per cent of European institutional investors said that sustainable investing has become more important for them. This compares to a global average of 74 per cent that indicated this same preference.

Pension funds are coming under renewed pressure to consider the ESG impacts of their portfolios as policy-makers and consumers demand more attention to sustainability. Asset managers are already seeing higher demand for ESG products as a result (Temple-West, 2019). It was not long ago that pension funds still argued against ESG integration, claiming that it would be a breach of their fiduciary duty of maximizing returns. Financial professionals working in this area point out that this perception has shifted significantly as a result of more evidence being available on the financial performance of these strategies. Institutional investors, including pension funds, now seek out sustainable investing solutions to avoid breaching their fiduciary duty.¹ At the same time, progress in this area varies significantly across different countries. For example, the world's largest pension fund, Japan's Government Pension Investment Fund (GPIF), with USD 1.3 trillion assets under management, is partnering with the World Bank Group to promote sustainable investments (Mooney, 2018). Besides some allocation to ESG indices, GPIF also puts pressure on its portfolio companies to improve their ESG performance and actively manage climate-related risks.

Among sovereign wealth funds, the Norwegian Government Pension Fund Global has been using negative screening for some time now. It has excluded tobacco production and nuclear weapon manufacturers from its portfolio of USD 1 trillion AuM, and recently got the green light from the

¹ Based on the author's discussions with experts.



Norwegian parliament to divest from coal and energy companies. As a result, it will be required to gradually sell its oil and gas holdings worth USD 5.9 billion (Holter & Sleire, 2019).

Central banks also play an essential role in the transition toward sustainable finance. So far, they have mainly focused on ESG risks, more specifically, climate-related risks that could have an impact on financial stability. In a recent open letter, Mark Carney, Governor of the Bank of England, and François Villeroy de Galhau, Governor of the Banque de France (2019), warned that “if some companies and industries fail to adjust to this new world, they will fail to exist,” referring to the risks of climate change.

They also call on the financial sector to follow the related recommendations issued by the Network for Greening the Financial System, a group of over 30 central bank chiefs and other top officials.

In addition, after years of quantitative easing, many central banks are sitting on huge balance sheets with investments across multiple asset classes and geographies. Integrating ESG into how they invest these funds will give another push to sustainable investing and sustainable assets. The French and Dutch central banks have recently decided to integrate ESG analysis into their investment decisions, while also applying some negative screenings to remove undesirable sectors and companies from their portfolios (Albuquerque, 2019). Similarly, the central bank of Sweden, Riksbank, announced that it would not invest in government bonds of issuers that have a large climate footprint. As a result, it has recently divested from bonds of the Canadian province of Alberta and the Australian states of Queensland and Western Australia (Flodén, 2019).

Other central banks, such as the Swiss National Bank (SNB), are still pushing back on applying negative screenings, citing the significant challenges of integrating ESG strategies.² One common argument against sustainable investing is that it decreases the universe of tradable assets and therefore makes asset allocation more difficult. For example, the SNB has a portfolio worth CHF 817 billion (Swiss National Bank, 2018), and therefore needs to invest in markets and securities that have sufficient depth to absorb its investments without causing significant movement in prices. However, as the examples discussed earlier demonstrate, this requirement can also be met while integrating ESG principles. The ESG-compliant investment universe is large enough to accommodate the needs of these large institutional players.

All this highlights that institutional investors with a significant amount of assets under management are already transitioning toward a more sustainable way of investing. This transition is expected to accelerate further in the coming years. According to an analyst at Société Générale, “the move to ESG-compliant portfolios and indices possibly represents one of the biggest shifts in assets since the advent of the Euro” (Gross, 2019). Public markets and asset valuations will start reflecting this shift of capital. For companies with large negative environmental footprints, this will result in a higher cost of capital, lower stock prices and the potential of some of their assets becoming stranded. Bruno Le Maire, France’s finance minister, has suggested that polluting

² CFA Society Switzerland-organized “Current Challenges for Central Banks” presentation by Thomas Moser, Geneva Switzerland, 26 September 2019. Retrieved from <https://swiss.cfa/events/current-challenges-for-central-banks-2/>



companies might indeed have difficulties raising financing, saying that “the environmental performance of companies in receipt of loans and investments also needed to be examined.” He added that “France aimed to stop all coal investments in Europe by its financial institutions within 10 years” (Mallet, 2019).

Giuseppe Corona, fund manager of AMP Capital’s Global Listed Infrastructure Fund, suggests that the market has already started re-pricing the cost of capital for fossil fuel assets: “I can see changes in the equity markets. The cost of capital for assets at risk of being stranded is getting higher” (Gagan, 2019). Coal and oil assets have the highest risk of becoming stranded. Natural gas could be next in line considering the European Investment Bank’s recent commitment to stop funding gas projects, alongside coal and oil (Tett, Nauman, & Temple-West, 2019). “From both a policy and from a banking perspective, it makes no sense for us to continue to invest in 20-25-year assets that are going to be taken over by new technologies and do not deliver on the EU’s very ambitious climate and energy targets,” said Andrew McDowell, vice-president for energy at EIB, in an interview with Bloomberg following the announcement (Hepker & Edwards, 2019). All these developments underline the importance of asset managers and asset holders remaining ahead of the curve before this sustainability transition is fully priced in by markets.

The growing institutional demand for sustainable investing can certainly be credited in large part to the increased interest in values-based investing from their constituents, such as millennial pension holders, but this alone is insufficient in ensuring the necessary uptake. Rather, new ESG regulation and the ability to reliably price ESG risks will be the main factors driving institutional adoption and are thus essential components that can help turn this increased interest into institutional action. I will discuss these last two points in more detail.

Policy Risk – New ESG regulation on the horizon

The increasingly visible signs of climate change together with the success of youth-led climate influencers have raised the general awareness of the urgency of climate action. Indeed, the environment has become a priority among voters in many parts of the world. According to a survey by Eurobarometer in October 2019, EU citizens believe that combating climate change and preserving the environment should be the top priority of the European Parliament (European Parliament, 2019). Similarly, in Canada the environment has emerged as a top issue among citizens, even exceeding topics such as the economy and health care (Bozinoff, 2019). In the UK, concerns about the environment have also reached record levels, coming only behind Brexit and health in 2019 (Smith, 2019).

This shift in priorities has also influenced voting behaviour. According to an Ipsos MORI poll, 77 per cent of potential voters across 11 European countries consider global warming an important criterion when deciding which political party to vote for (European Climate Foundation, 2019). In light of this, perhaps it was not surprising that political parties with a strong environmental agenda have done impressively well in recent elections across Europe, including the May 2019 elections for the European Parliament and the Swiss federal elections in October 2019.



Politicians are starting to realize that promising environmental action can indeed gain votes. As a result, many of them are increasingly turning “green,” publicly touting their environmental credentials. Even some radical right parties, who were historically against environmentalism, are changing their stance to better appeal to younger voters.

This pro-environment voter sentiment provides plenty of political capital for politicians to “get tough” on environmental issues. This could well materialize in the elaboration and adoption of more regulations that will penalize polluters and reward green industries and companies. New environmental regulations could include anything from carbon taxes, compulsory offsets or bans on fossil fuels to subsidies for green buildings and tax breaks for companies providing green solutions. In addition, I expect that public investors, such as pension funds and sovereign wealth funds, will be required to apply strict ESG screenings and integrate ESG considerations in how they allocate capital.

Many of these new regulations will be financially material and affect stock market valuations accordingly. When financial markets price in this elevated policy risk, investments with good ESG credentials will look even more attractive while the risk-return profile of polluting companies will deteriorate. The timing of these new regulations will also be important. A majority of institutional investors only expect to have a delayed—and as a result, a more forceful and disruptive—policy response based on a recent poll conducted by the UN’s Principles for Responsible Investment (PRI) (Robinson-Tillett, 2019).

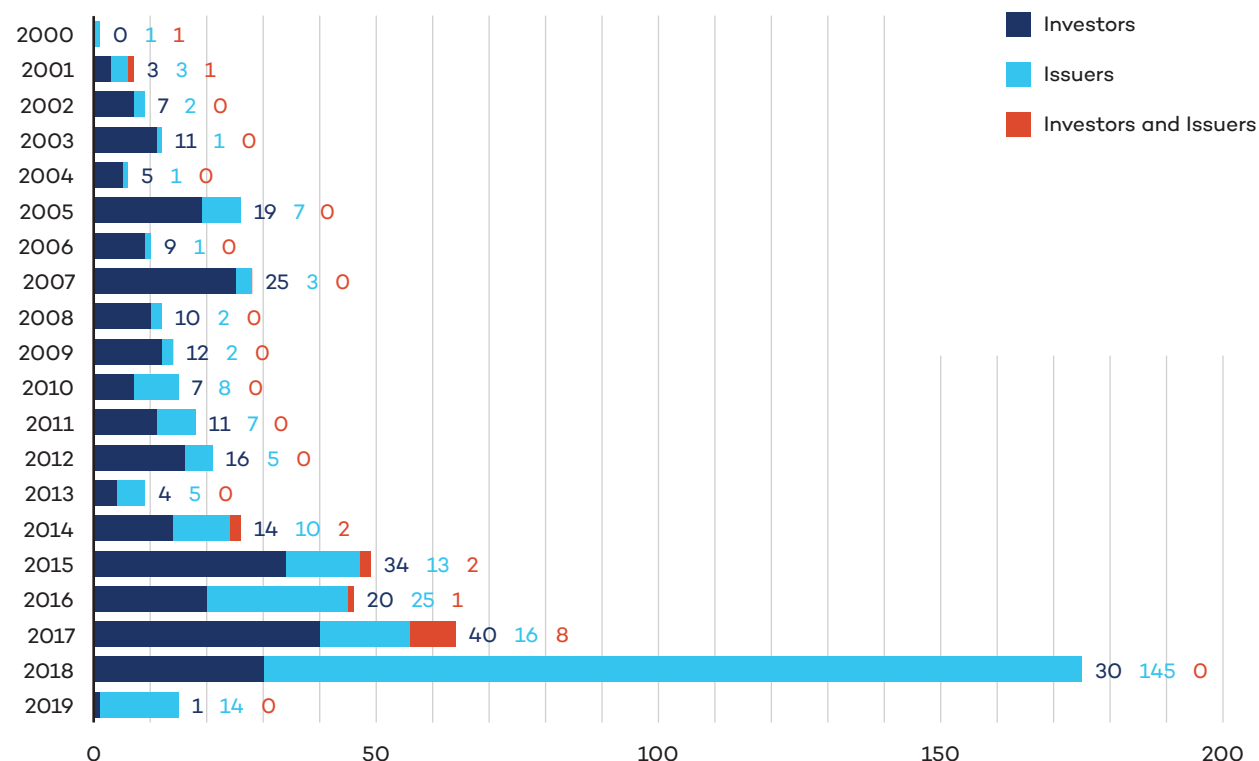
“Increasing transparency makes markets more efficient, and economies more stable and resilient.”

— MICHAEL R. BLOOMBERG, CEO OF BLOOMBERG L.P. AND CHAIR OF TCFD.

Source: Task Force on Climate-related Financial Disclosures, 2019.



Figure 5. Number of ESG regulations since 2000



Note: Regulations collected by MSCI and the UN PRI's ESG regulations database; regulations can be either mandatory, voluntary, or explanatory in nature – and are collected globally.

Source: Lee & Moscardi, 2019.

Figure 5 effectively illustrates this trend of increasing regulatory activity in the ESG space. In the first 15 days of 2019, more ESG regulations were introduced than during all of 2013. Indeed, I expect this trend to continue and even accelerate, considering the shift of the political landscape toward green policies.

Pricing of ESG Risks

More awareness and better transparency on environmental and social impacts will contribute to this accelerating trend of new ESG regulations. In recent years, policy-makers have gained a better understanding of the scale and socioeconomic significance of these environmental and social impacts. Governments have been increasingly using an array of tools and methodologies to reliably measure these so-called “externalities.” The International Institute for Sustainable Development (IISD) has also developed its own methodology, the Sustainable Asset Valuation (SAVi), to value the environmental, social and economic impacts and risks of infrastructure projects.



Sustainable Asset Valuation of IISD (SAVi)

Adapted from the SAVi website

SAVi is an assessment methodology that helps governments and investors steer capital towards sustainable infrastructure. It identifies the environmental, social, governance and economic externalities of infrastructure projects.

SAVi combines the outputs of systems thinking and system dynamics simulation with project financing modelling.

The valuation of externalities enables governments and investors to appreciate the second-order gains and trade-offs of infrastructure investments.

SAVi also demonstrates what the financial impact would be if externalities today transformed into direct project risks tomorrow. Such valuations provide invaluable information to investors for their asset allocation decisions.

More information can be found on the SAVi website: <https://iisd.org/savi>

Based on our experience with SAVi, we have seen a lot of interest from governments in accounting for the externalities of infrastructure projects and businesses. Policy-makers are asking how to deal with companies that make a profit by externalizing their costs, i.e., having a negative environmental and social impact, which are eventually paid for by society as a whole. The valuation of these externalities will serve as the basis for new environmental regulations. For example, the social cost of carbon emissions will be taken into account when determining the size of a carbon tax.

On the other end of the spectrum, institutional investors have also gained more awareness about ESG risks. They have been asking us how these risks can be included in valuations of unlisted assets as well as in their risk management processes. Indeed, the measurement of these risks is becoming increasingly urgent: just as with the introduction of new regulations, as discussed earlier, companies will be required to internalize many of their environmental and social externalities. How will this influence the credit ratings, financial performance and consequently the valuation of companies? These are some of the questions investors need to ask and have answered in order to assess and adjust their portfolios accordingly. Capital markets do not seem to be pricing in these risks yet, but once they do, portfolio adjustments can only be done on less favourable terms. Mark Lewis from BNP Paribas Asset Management also stressed the urgency to act, saying that “ESG risk is absolutely starting to hit and it’s spreading like wildfire across all asset classes” (quoted in Nauman & Gross, 2019). Indeed, Bank of America estimates that ESG-related controversies have wiped off USD 534 billion from the value of US listed companies between 2014 and 2019 (Bank of America Merrill Lynch, 2019).



For this reason, the ability to price ESG risks reliably will increase the interests of institutional investors in integrating sustainability considerations in their asset allocation processes. Indeed, as more capital shifts toward sustainable investments, valuations will adjust accordingly, encouraging even more market participants to divest from companies with high ESG risks. Some experts have voiced their concern about the creation of ESG bubbles,³ where the share prices of public companies with high ESG ratings experience an abnormal increase as a result of their sudden popularity. Given that sustainable investing mandates are so diverse, targeting different sectors and companies, I do not consider this a major risk. On the other hand, I do expect to see “negative bubbles,” where stock prices of certain companies and industries experience a dramatic fall. The starting point for any type of sustainable investing is the exclusion of “sin stocks,” such as weapons, alcohol, tobacco and increasingly fossil fuel companies. For example, the EU taxonomy on sustainable finance classifies an economic activity “green” if it makes a substantial contribution to one of six environmental objectives while doing no significant harm to the other five (EU Technical Expert Group on Sustainable Finance, 2019).

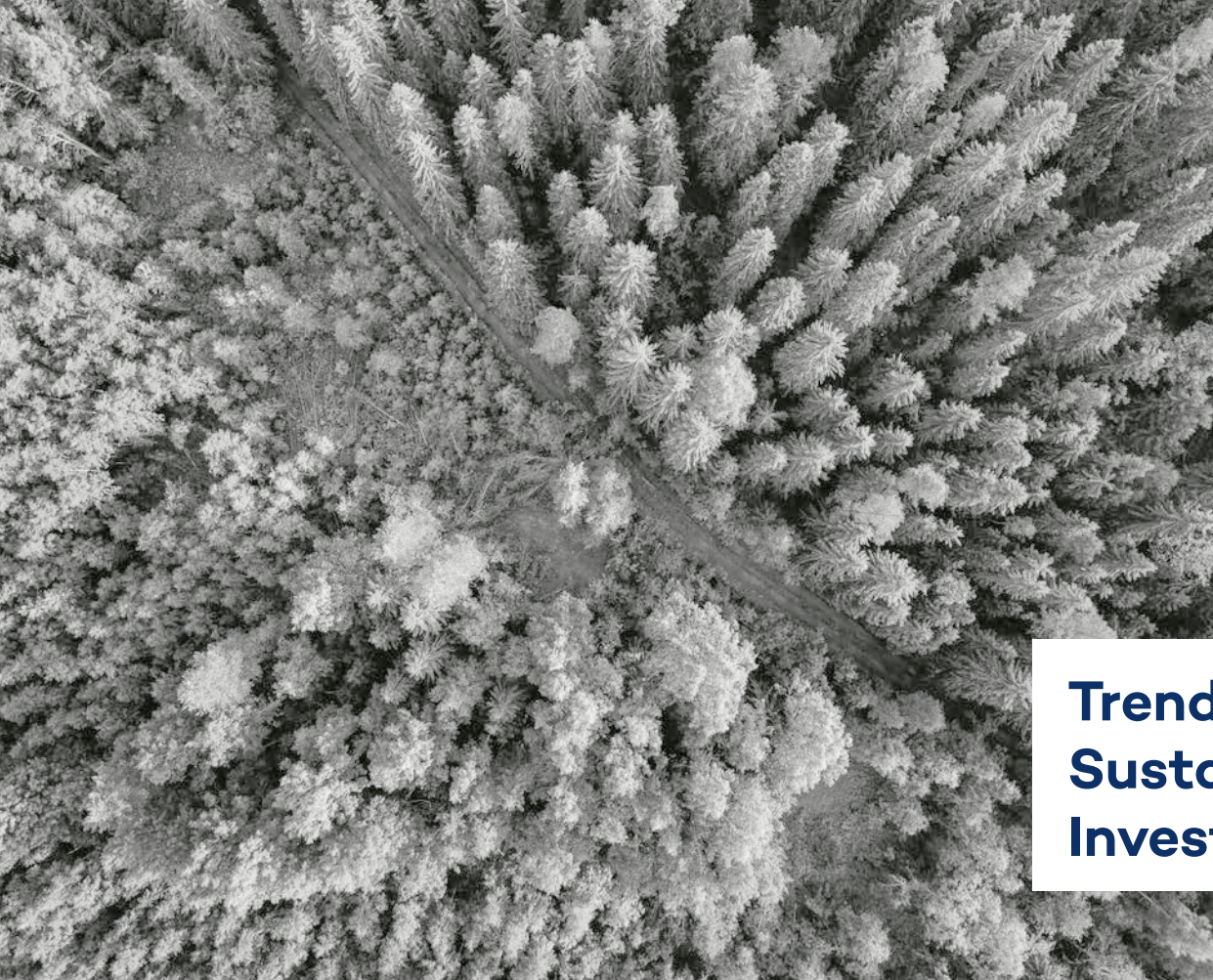
This “do no harm” principle is increasingly present in many ESG mandates irrespective of the EU’s taxonomy. The rationale behind this is that impact conscious investors would have a problem with investments with a strong social impact component while causing serious environmental damage at the same time, for example. This means that market participants integrating ESG principles would need to apply similar negative screenings to divest from the same set of companies, which will indeed result in a significant decrease in the market valuation of those companies. This can also create a reinforcing loop where these businesses will become unprofitable or even stranded due to an increase in their cost of financing as ESG risks are priced in, decreasing their share prices further.

“Investing in a company that doesn’t disclose its pollution is like investing in a company that doesn’t disclose its balance sheet.”

— SIR CHRISTOPHER HOHN, FOUNDER OF TCI FUND MANAGEMENT

Source: Hook, 2019.

³ DDQ Invest Sustainability Lunch Briefing Geneva, October 2019.



Trends in Sustainable Investing

The following trends will have an important influence on the development of sustainable investing in the coming years.

Managing Climate Risk

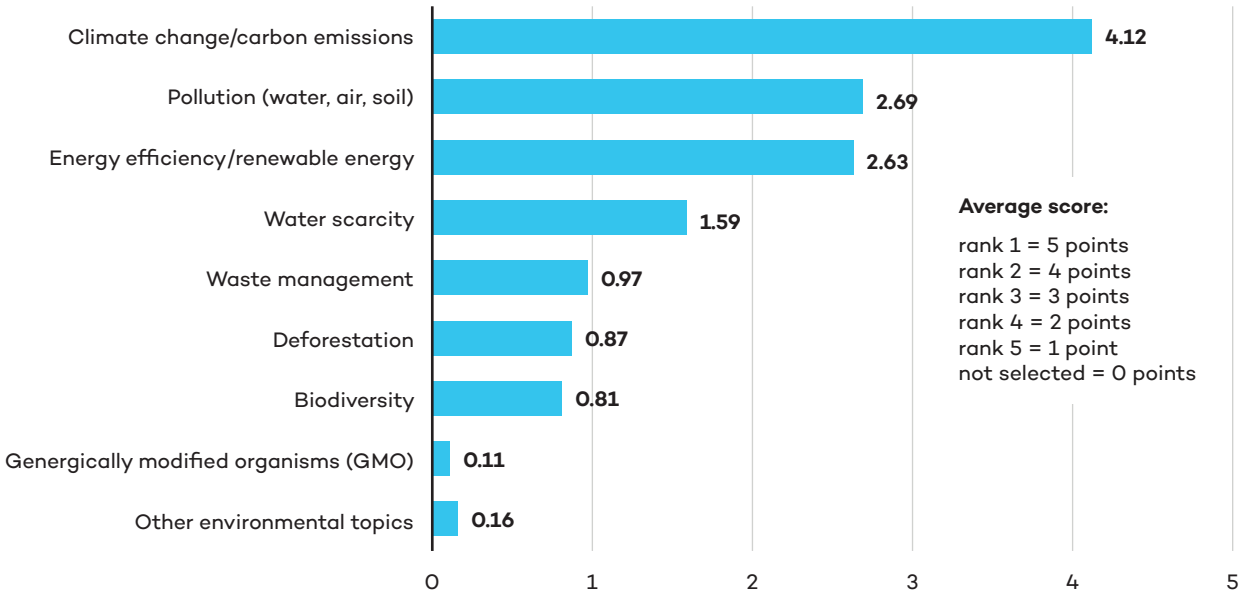
Climate risk will certainly take centre stage in the financial industry in the years to come. Even market participants who have not yet bought into the idea of sustainable investing are exploring how climate change would impact their portfolio companies. This should not be a surprise considering that earlier this year saw the first bankruptcy caused partly by climate change and a poor company response to its challenges: California's largest utility company, Pacific Gas & Electric (PG&E) filed for what is known as Chapter 11 bankruptcy protection in the United States as a result of USD 30 billion in liabilities and 750 lawsuits connected to the state's wildfires (Gold, 2019). Indeed, this bankruptcy was a result of PG&E not sufficiently mitigating the climate change-induced risks to its power grid.

Hence, it is no wonder that regulators are also looking at the potential impacts of climate change on financial stability. Currently, climate risk disclosures are voluntary only, but there are ongoing discussions in several jurisdictions on making them mandatory. For example, in a recent proposal, the UK's Financial Conduct Authority recommended that all UK-listed companies should be required to disclose their climate risks from 2020 onwards (Binham & Hook, 2019). Arguably the most important development in the space came from the recommendations of the Financial



Stability Board’s Task Force on Climate-Related Financial Disclosures (TCFD) on how to provide climate risk information to investors and other stakeholders. This has raised the general awareness of the financial impact of climate-related risks, due partly to its high-profile proponents such as philanthropist and former New York City mayor Michael Bloomberg and UK Central Bank Governor Mark Carney. A recent investor survey by LGT Capital Partners also confirmed this trend. As a response to the question “What are your most important environmental topics?” a large majority of investors answered with “climate change/carbon emissions” (see Figure 6) (LGT Capital Partners, 2019).

Figure 6. What are your most important environmental topics? – LGT Capital Partners survey



Source: LGT Capital Partners, 2019.

Climate change is perhaps the easiest ESG theme to grasp, given the universal nature of its overall impact, even as the scale of its impact and types of ramifications will vary for different locations, economic sectors and societies. Also, the financial consequences of inadequate climate risk management are becoming more widely understood. Morgan Stanley (2019a) estimates that the cost of climate-related disasters globally was USD 650 billion, or 0.28 per cent of the world’s GDP, between 2016 and 2019. Therefore, sustainable investing opportunities focusing on climate mitigation and adaptation will become even more attractive among investors during the years to come.



Alignment With the Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) require USD 5 to 7 trillion investment per year until 2030. As this amount is far beyond the budget of governments, a large part of the financing must come from private sources. This is where sustainable investing will play an important role. On the bright side, there is a strong political will globally to make this happen. Mobilizing financial flows into projects in line with the SDGs are high on political agendas. This is also demonstrated by the historic agreement of UN member states on this topic called the Addis Ababa Action Agenda. It includes “over 100 concrete measures to finance sustainable development, transform the global economy and achieve the Sustainable Development Goals” (United Nations Department of Economic and Social Affairs, 2015). In the long term, this political support should translate into new regulations favouring sustainable investments and innovative blended finance solutions to de-risk eligible projects. This will create opportunities for investments that are aligned with the SDGs.

The financial industry has embraced the SDGs much more than it had the previous Millennium Development Goals, partly due to the SDGs’ focus on shared responsibility. Indeed, sustainable investing is now often referred to as “SDG investing.” Also, financial institutions often use the SDGs as benchmarks in their ESG impact reports. According to the Global Impact Investing Network’s (GIIN) survey, more than 60 per cent of impact investors track some or all their impact performance against the SDGs (Mudaliar & Dithrich, 2019).

Proprietary ESG assessment methodologies often rely on the SDGs when defining indicators for impact measurement. Indeed, based on one survey, 89 per cent of investors say that the SDGs will play an important role in helping the financial industry to measure environmental and social outcomes (LGT Capital Partners, 2019).

The SDGs will be an influential framework in how sustainable investing develops in years to come. They will provide guidance to the financial industry on what the most pressing global environmental and social challenges are and which areas investors should focus on when integrating ESG considerations into their portfolios.

SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals were adopted by the world’s governments in late 2015, as part of Agenda 2030 for Sustainable Development. Crafted after detailed negotiations, the SDGs involve 17 goals and 169 associated targets covering areas ranging from gender equality to poverty and hunger eradication. All UN member states have adopted the SDGs and committed to achieve them by 2030.

Source: United Nations, 2015.



Financial Innovation

Innovative financial instruments are needed to address the world's various sustainability challenges. On the one hand, they are important for investments that otherwise would not have an attractive risk-return profile, but are expected to offer exceptionally high ESG impact. On the other hand, as sustainable investing becomes mainstream, it is vital that financial market participants have a large enough pool of green securities across all the asset classes to build ESG-compliant portfolios.

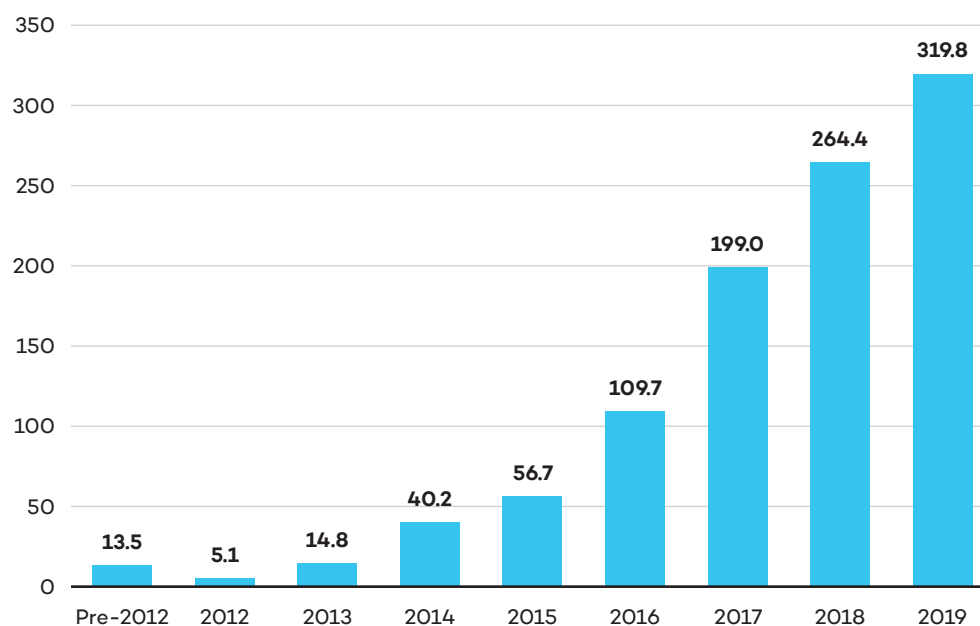
Indeed, financial innovation in sustainable investing has been accelerating in recent years, trying to meet the diverse needs of investors and projects alike. Since the European Investment Bank issued the first green bond in 2007, sustainable debt issuance has evolved considerably. Issuers started to look beyond “green” in order to address a broader set of SDGs, testing investor appetite for sustainability and social bonds. In 2018 alone total issuance of these fixed income securities reached USD 58.8 billion (Taneja, 2019) and is projected to grow substantially in 2019.

Other innovative instruments that have emerged in this space include sustainability-linked loans, where the terms of the loan are determined based on predefined sustainability objectives. Following a similar principle, ING has introduced the first interest rate swap, whose credit spread depends on the sustainability performance of the underlying company (ING, 2019). Catastrophe bonds have also gained popularity recently. They allow issuers to transfer certain climate-related risks to investors. They will be an important instrument in managing climate-related liabilities. Also, Sweden's largest property company, Vasakronan AB, recently issued the first-ever green commercial paper. This was the first short-term financing instrument whose proceeds were clearly earmarked for green assets (Leaper, 2018).

All this innovation has led to significant growth in sustainable securities. According to Bloomberg New Energy Finance (NEF), sustainability debt instruments have recently reached USD 1 trillion of total issuance (see Figure 7) (Henze, 2019). Unsurprisingly, green bonds are leading the way, but I expect other forms of sustainable debt to catch up in the coming years as sustainable investing becomes more mainstream.



Figure 7. Sustainable debt issuance (USD billion)



Source: Henze, 2019.

I see a lot of potential in designing sustainability-linked instruments for other asset classes besides debt instruments. For example, in the case of equities, dividends could be linked to the sustainability performance of the company. Also, financial innovation will play an essential role in improving the climate resilience of businesses and projects. I expect to see financial instruments linked to the climate-related risks of the underlying asset. They would be designed to incentivize companies to actively manage their climate exposure. In the case of debt instruments, the issuer would need to pay a higher coupon if it does not deliver on the pre-determined climate risk key performance indicators (KPIs).

Another interesting area that I expect will get more traction given the developments seen to date is betting against (i.e. short selling) companies that fail to make the shift toward sustainability. Asset managers are experimenting with structures, where they not only buy green companies, but also short sell unsustainable ones. Indeed, this is an attractive investment proposition, especially in light of the “negative asset bubbles” discussed earlier, where investors divest en masse from the same sin sectors and companies. Among others, BNP Paribas will launch a long/short thematic fund next year, which will also short companies that are particularly exposed to transition risk (De Paoli, 2019).

I anticipate that this trend of financial innovation will continue and accelerate further as sustainable investing becomes mainstream. At the end of the day, financial market participants will need to have a sustainable version of the same set of financial instruments they have been using to construct portfolios and service clients.



Conclusion

All of this demonstrates that sustainability already plays an important role in shaping the future of the financial industry. Indeed, assets under management with an ESG mandate are growing exponentially and most financial market participants accept that this sustainability transition is something they can no longer ignore. It is encouraging to see that discussions are moving away from whether to do sustainable investing to which sustainable investments are available to invest in.

Sustainable investing has become a significant trend in the financial sector. On the other hand, it is crucial to recognize that progress in this area can vary significantly across different geographies and jurisdictions. While some developed countries, like Switzerland, are on track to fully embrace sustainable finance, others are still lagging. In the case of emerging markets, China is one of the most active countries in Asia in green finance (International Organization of Securities Commissions, 2019). As of September 2019, it had the second biggest green bond market in the world, just after the United States (Climate Bonds Initiative, 2019), while none of the other emerging economies are close to this level.

Most of the assets globally are managed passively, where investment allocations are made based on the components of an index. In order to see a broader shift toward sustainable investing, it is essential that indexes that portfolios track, for both equity and debt, integrate sustainability considerations. While the number of ESG indices on the market is increasing, index providers are so far reluctant to make their “standard” indices more ESG-compliant. Mainstream indices have even continued to include companies involved in manufacturing controversial weapons,



whose exclusion has already become standard business practice among both institutional and private investors (Swiss Sustainable Finance, n.d.a). Any improvements in this area would be a major milestone in ESG integration.

Sustainable investment mandates must become more ambitious in generating impact. Negative screening and corporate engagement are good starting points, but they are certainly not sufficient on their own over the long term. The problem is that these strategies avoid the pricing of ESG externalities and offer only superficial ESG overlays with limited impact-generation potential. The failure to capture positive and negative externalities in valuation models prevents financial performance from

fully aligning with social good. Until there is substantial progress on that front, there will always be a risk of financial performance driving capital to investments with a negative impact. Therefore, market participants should aim for full ESG integration throughout the investment process: defining an ESG-compliant investment universe, including externalities in financial assessments and setting measurable and intentional ESG KPIs. Headlines about the ESG efforts of asset managers demonstrate very well that the current focus of ESG integration is on the *breadth* of coverage, i.e., the percentage of AuM following ESG principles. Press releases and sustainability declarations should now start focusing on the *depth* of the strategies implemented.

For sustainable investing to become mainstream, financial professionals need to have the necessary skills and understanding of how to integrate ESG considerations in their investment decisions and when advising clients. Any financial institution that wants to provide services in this area needs to have compulsory ESG training for relevant staff. This would enable front-office employees (such as investment advisors) to educate their own clients and to raise awareness about this new way of investing by talking about it in relevant events. ESG training would also be essential for middle and back-office staff responsible for sustainability-related disclosures, reporting and risk management.

Another question is how the different ESG strategies would perform under different market cycles. While sustainable investing has certainly been around since before the 2008 global financial crisis, it was not nearly at the scale we have today. Would a recession or new financial crisis dent the enthusiasm for sustainable finance? According to some experts that will be the ultimate proof that this new way of investing is here to stay.

The energy transition will also give a significant boost to sustainable investments. It was not long ago that renewable energy could only compete against fossil fuels with attractive feed-in tariffs in place. Today, four out of five coal power plants in the EU are unprofitable, making utilities

“If you’re going to be a financial services company in the 2020s, you’re going to have to respond to this trend.”

— PULESTON JONES, FORMER HEAD OF FIA EUROPE, REFERRING TO SUSTAINABLE INVESTING

Source: Stafford, 2019.



lose EUR 6.6 billion in 2019 alone. The reason behind the “eye-wateringly low utilisation rates” of coal power plants is they cannot compete with the increasingly cost-competitive renewable alternatives (Carbon Tracker, 2019). This is an example of a change in investment paradigms that will eventually hurt portfolio valuations if asset managers ignore what Lombard Odier calls the “sustainability revolution” (Lombard Odier, 2019).

Indeed, I am convinced that sustainable investing is the future of finance. Certainly, there is still a lot of progress to be made before it becomes truly mainstream. However, if the key drivers discussed earlier can indeed generate the expected demand, and if there is a willingness from market participants to transform the traditional way of doing finance, it is only a matter of time. I expect that in 10 years, sustainable investing will just be called “investing,” as integrating sustainability considerations will have become the new normal.



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