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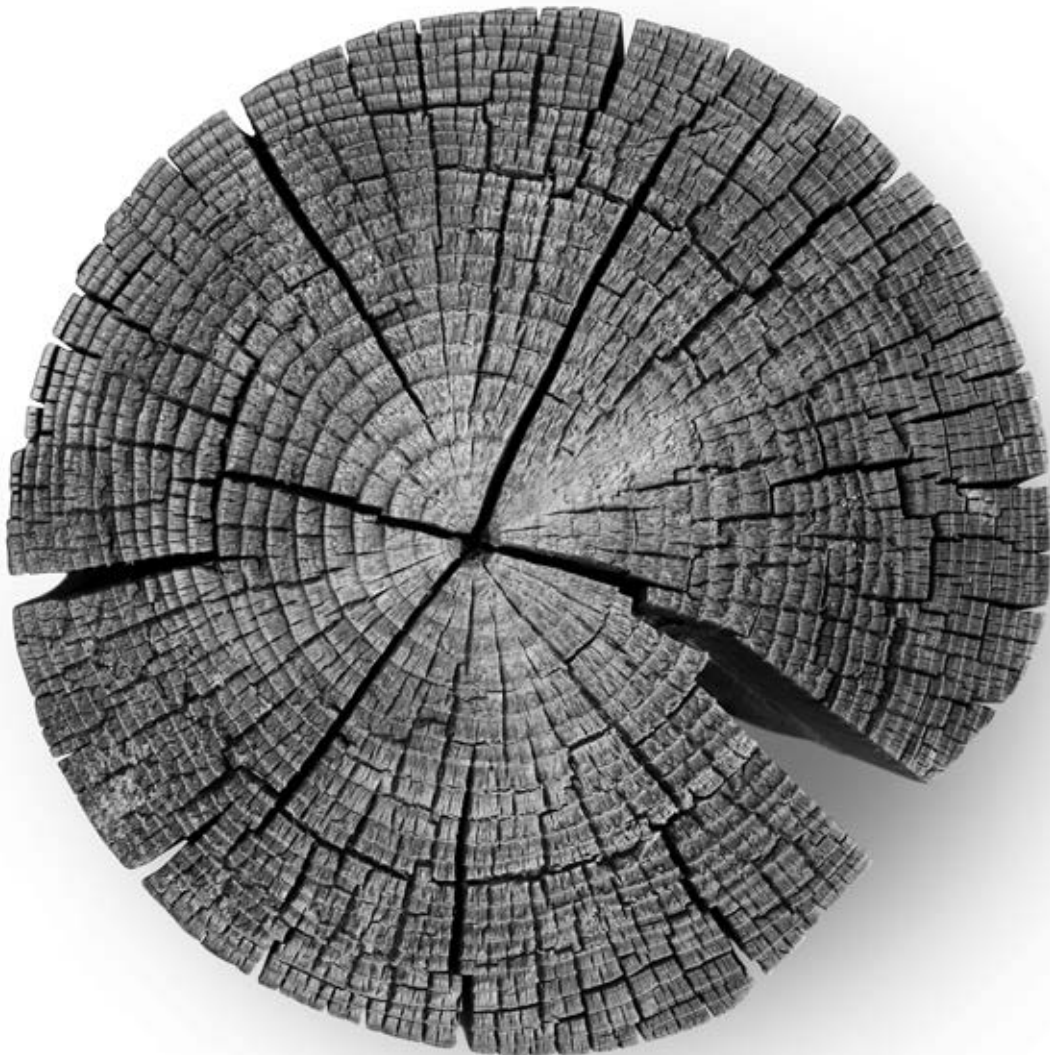
2018

ESG

SPECIAL REPORT



BNY MELLON



SPECIAL REPORT

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Introduction

Global recognition of environmental, social and governance (ESG) issues is driving a major shift in investor attitudes, embedding itself in investment choices, becoming more integrated into processes, incorporated in risk management and intertwined with ethical concerns.

Investors increasingly understand that neglecting ESG considerations can not only make poor ethical sense but can also heighten the risk of financial loss in their portfolios.

By using their influence, investors now realise they can help reduce risks by insisting companies and governments address potential ESG factors that threaten the long-term sustainability of companies and the environment.

In its latest survey on ESG, research and consulting specialist Aon notes a dramatic upsurge in the number of institutional clients exploring or implementing responsible investing initiatives over the past year.¹ In a world of shifting demographics, ESG concerns are also an increasingly prominent concern among millennials – now emerging as the most dominant group in the global workforce and a potentially powerful investment lobby.²

In addition, the influential United Nation's Principles for Responsible Investing has attracted support from more than 1,800 signatories representing over US\$68 trillion in assets under management as at April 2017. These institutions are required to report annually on their responsible investment activities through the PRIs' reporting framework.

While some scepticism still surrounds the real impact of ESG processes and their ability to hold companies and governments to account, greater scrutiny of corporate governance and the impacts of ESG factors via techniques such as data mapping and screening looks set to increase³, as managers seek to bring greater transparency to investors. The application of ESG based initiatives and approaches is also extending across asset classes to embrace fixed income investment and other sectors.

Against this backdrop, BNY Mellon Investment Management boutiques examine the latest developments within the ESG investment landscape, exploring the types of areas now encompassed and some of the risks and opportunities it presents.

Investment Managers are appointed by BNY Mellon Investment Management EMEA Limited (BNYMIM EMEA) or affiliated fund operating companies to undertake portfolio management activities in relation to contracts for products and services entered into by clients with BNYMIM EMEA or the BNY Mellon funds.

Effective 31 January 2018, The Boston Company Asset Management, LLC (TBCAM) and Standish Mellon Asset Management Company LLC (Standish) merged into Mellon Capital Management Corporation (Mellon Capital), which immediately changed its name to BNY Mellon Asset Management North America Corporation.

¹ Aon. Global perspectives on responsible investing. 12 June 2018.

² Ibid.

³ *Investment Europe*. KBIGI launches data mapping to provide ESG metrics. 23 March 2018.

Walking the walk

As interest in environmental, social, and governance (ESG) issues matures, greater scrutiny is being placed on engagement and integration. At the same time, fixed income adherence to ESG factors is improving while geographical laggards on ESG adoption are catching up. Here we look at the latest trends in policies and practices.

The industry, through much of Europe, has spent the past few years evolving ESG principles from negative screening to engagement and integration in investment processes.

Investors entrusted billions to ESG, green, sustainable, socially responsible investment or environmental funds in Europe last year.¹ Globally there are more than 285 index funds and ETFs with ESG mandates – an uptick threefold from where the industry was five years

ago.² In addition most institutional mandates across Europe claim to adhere to ESG principles. For example, 75% of institutional assets in France are now managed under ESG considerations, according to some research.³

While some trends are advanced in certain countries, in others they are less developed. This is because the evolution of ESG has largely been directed by regional trends. While places like the Netherlands and Nordics have been early adopters

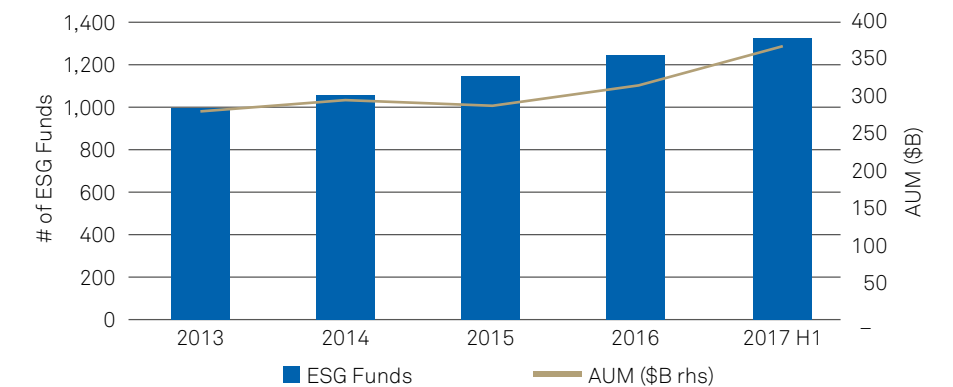
of ESG integration in investments, other countries started considering ESG much later and as such their application and even emphasis may be different. For example, the United Nations' Principles in Responsible Investing (PRI) notes North American managers do not typically use the same integration techniques as European managers.

Yet despite this widespread embracing of ESG as a whole, the spectre of so-called 'greenwashing' by companies,

and even of asset managers, remains. Greenwashing is a term formed in the 1980s when companies, such as those in the oil & gas sector, professed – via media and advertising – to be kind to the environment, even as they engaged in environmentally unsustainable practices.

Today greenwashing has become more sophisticated, aided by the lack of a universal definition over what constitutes good corporate behaviour and consequently, what are eligible

GLOBAL ESG FUNDS AND ASSETS UNDER MANAGEMENT (AUM)



Source: Bloomberg Intelligence.

Note: Includes active and inactive funds tracked by Bloomberg (excludes hedge funds and separately managed accounts).

investments. This ambiguity plays into the hands of companies purporting to exhibit ESG-friendly practices.

Companies are aware of the premiums they can extract from the market if their products or services are deemed green or sustainable. However, knowing whether or not a company – or fund – really ‘walks the walk’ requires in-depth knowledge of management quality, supply chain practices, corporate culture, labour relations, environmental impacts and risk profile. In much the same way a company’s fundamentals are scrutinised, so too are a company’s ESG claims now under a microscope.

Joshua Kendall, ESG analyst at Insight Investment, says he understands the temptation to greenwash, noting there is relentless pressure on companies to “do good”. This is why the emphasis on accountability and demonstration of principles is growing. “It used to be adhering to ESG principles was a nice to have; today it is a must have. As a result, evidence is playing a larger role in assessments.”

Conflicts of interest?

ESG analysis was once only associated with developed market equities but today it can be seen across emerging market assets as well as fixed income.

While there is now the widespread acceptance of ESG principles in investing, there remain some that suggest adhering strongly to ethical considerations could hamper returns. Perhaps the starkest example of this would be US Treasuries. Given the recent US withdrawal from the Paris Agreement, could the country be considered on the path downwards with respect to sustainable practices? Kendall agrees it could. But if so, could an ESG screen really eliminate portfolio investment in what is considered one of the essential investment hedges?

Kendall says the argument isn’t that clear cut. It is about materiality, he notes. The move by the US with respect to environmental practices and any resulting lower sustainability score would have a more notable impact on the sovereign debt and yield curve of a different country than it likely would for the large US market, he says. As such the risk is less, he notes.

Ultimately awareness of ESG factors should be part of good risk management and not just something of special interest to investors with strong principles, Kendall says.

An example of the balance struck between returns and uncompromising ESG objectives can be seen from one of

¹ *FTFM: ESG? SRI? Is your green portfolio really green?* January 2018.

² *Money Marketing: Behind the numbers: Passive ESG: Growing and evolving.* June 2018.

³ INDEFI's 2018 French institutional market research. August 2018.

the world’s largest sovereign wealth funds – Norway’s US\$1 trillion Government Pension Fund Global, which derives its money from Norway’s oil industry. Last year the fund reported its exclusion of tobacco companies and certain weapons manufacturers reduced returns. However, it also pointed out this was somewhat mitigated by the positive contribution of conduct-based exclusions, such as mining companies.⁴

In a recent study, MSCI reported high ESG-rated companies tend to show higher profitability, higher dividend yield and lower tail risks. They also found that high ESG-rated companies tended to show less systematic volatility, lower values for beta and higher valuations.⁵ As that belief has become embedded, with it comes an evolution – a leaning of institutional investors towards differentiated and targeted ESG strategies, across asset classes and markets.

According to Newton: “Academic and industry research highlights not only that companies with positive ESG credentials perform better but also that those companies with the worst ESG scores are more likely to have below-average financial performance.” The ESG team at Newton also point out that industry consensus is that analysis of ESG works best at the company level, incorporated into the standard analysis of a company’s fundamentals. However, others advocate considering ESG risks at a portfolio level.

Assessing fixed income

Kendall says: “fixed income is one of the strongest growth areas in ESG analysis. Once the purview solely of equities, bonds are rapidly catching up in import. With green bond issuance reaching over US\$140bn in 2017⁶ and with fixed income investments by far the largest asset class globally, it is important to understand how ESG factors can affect the default risk of a bond issue or its issuer,” he says. Detailed issuer analysis can also pay dividends in identifying climate-change-related risks, Insight Investment’s 2018

responsible investment report states.

Since 2017 the United Nations’ supported PRI – the world’s leading proponent of responsible investment – has worked to support an international network of investor signatories in incorporating these factors into their investment and ownership decisions and has also been addressing the need for ESG considerations in bonds.

For corporates, concerns such as stranded assets linked to climate change, labour relations challenges or lack of transparency around accounting practices can cause unexpected losses, expenditure, inefficiencies, litigation, regulatory pressure and reputational impacts. At a sovereign level, risks related to natural resource management, public health standards and corruption can all affect tax revenues, trade balance and foreign investment. Such events can result in bond price volatility, and increase the risk of defaults.⁷

In June 2018 the PRI released its second report into credit risk and ratings, highlighting that while an assessment of governance factors has traditionally featured in credit risk analysis, formalising a systematic approach to considering environmental and social factors is still at a nascent stage. Assessing where these are relevant and how they can impact balance sheets and cash flow projections needs more work, according to the PRI.

Kendall comments ESG considerations may be priced into a bond so it is essential investors know what they are buying and the risks involved.

Carbon footprint

Another area accelerating in the ESG area is the measuring of a fund’s carbon footprint. Some analysts see the sum of a proportional amount of each portfolio company’s emissions to be a useful quantitative tool in the creation and implementation of a broader climate change strategy. By improving the understanding of the portfolio risks and

opportunities climate change presents, carbon foot printing can, for some, be a demonstrable way to show commitment to tackling climate change.

As companies and countries have not yet been able to decouple economic growth from carbon emissions growth, carbon footprinting has become a popular practice among institutional investors. As of June 2016, 120 international investors with €8.8 trillion in assets had committed to measuring and disclosing the carbon footprint of their investment portfolios annually.⁸

In January 2018 MSCI noted among its ESG trends to watch was the evolution of footprinting to scenario testing, expanding the view of portfolio climate risk to macro exposures across asset classes.

Societal impact

Victoria Barron, responsible investment analyst at Newton, notes that sustainable strategies which place emphasis on investments that could lead to positive societal outcomes are also a rapidly evolving area. This is fuelled by investors determined to generate social and environmental impact as well as financial returns. She says: “We believe this is especially relevant in the case of the millennial generation, as recent studies have found that this cohort cares more deeply than previous generations about ESG issues, in the belief that corporations can have as much influence as national governments in tackling social issues.”

This impetus for impact has led to the development of funds following the UN’s sustainable development goals (SDGs).⁹ According to the PRI: “achieving the UN’s SDGs will be a key driver of global economic growth, which any long-term investor will acknowledge as the main ultimate structural source of financial return: over the long term, economic growth is the fundamental driver of the growth in corporate revenues and earnings, which in turn drive returns from equities and other assets.”

Driving change

Electric and self-driving vehicles have the potential to transform the way we live. They may also have an impact on the way we invest, given the environmental considerations they encompass. Here The Boston Company’s Barry Mills and Frank Goguen look at how the world of transportation is changing fast.

It is fair to say the general public feels conflicted about the revolution taking place in the world of transportation. One day, they are excited at the thought of greater freedom, being whisked from home to work, work to home in electric, self-driving cars. They look forward to an end to accidents caused by drunk or distracted drivers in pollution-free towns and cities. On other days, they are fearful as the position is reversed and accidents during real world testing of autonomous vehicles raise questions about the safety of these futuristic four-wheelers.

Yet, while many consumers still have to be convinced of the advantages of replacing the internal combustion engine with electric batteries and steering wheels with self-driving software, governments around the world have been more resolute. The potential environmental and social benefits of a shift to electric and connected autonomous vehicles means their development has attracted generous subsidy and policy support. This is being driven not just at national and state levels but at the municipal

level too, as city air quality becomes a high priority as urbanisation continues.

China is now leading the world in terms of new electric vehicle (EV) sales, a development that has largely been politically driven, says Barry Mills, senior research analyst at The Boston Company. Last year, 579,000 EVs were sold in China while American customers bought less than half that at 198,350 EVs. The French, in third place, bought some 118,770 electric vehicles in 2017.¹

Mills says: “The Beijing government is focusing on electric vehicles not just for environmental reasons but for reasons of national security as the adoption of electric vehicles reduces the country’s reliance on oil imports.”

Burgeoning growth

China aims to have five million EVs on its roads by 2020.² However, not for the first time, Beijing’s efforts at directing the market are in danger of leading to overcapacity, as investors pile in chasing government subsidies.

A flood of start-ups have announced intentions to join more established Chinese automakers in making and selling EVs. Many of the new entrants are trying to compete with US car manufacturer Tesla at the more expensive end of the market, says Mills.

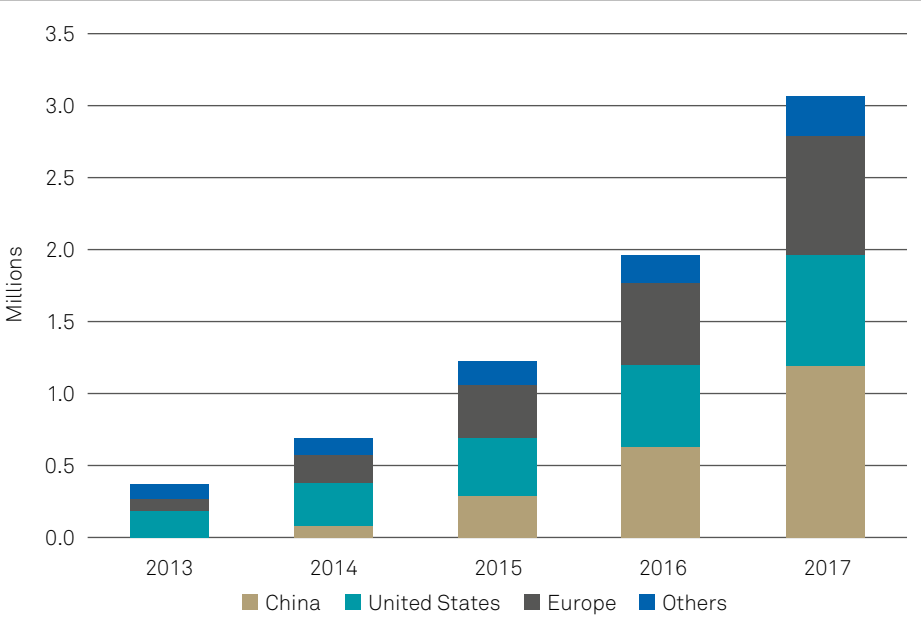
“Some of the domestic carmakers will not be around for long unless they attract other investors because the market is overcrowded. There is a danger that too many electric cars will be brought to the market before consumers have had the time to adapt.”

Domestic Chinese players are also competing with global auto giants edging their EVs into the world’s biggest auto market. These global players, such as Volkswagen, Toyota and General Motors, are also investing heavily in EVs in Europe and North America. Sales of electric vehicles worldwide are forecast to increase from a record 1.1 million in 2017 to 11 million in 2025, surging to 30 million in 2030. By 2040, 55% of new car sales and 33% of the global fleet are expected to be electric.³

Frank Goguen, senior research analyst at The Boston Company, says: “The UK, France and Germany have been most vocal about electrification but we are now seeing countries that have been quiet about it coming forward. For example, the Italian government has said it wants to put one million electric cars on the road by 2022.”

4 Chief Investment Officer: Norway Pension Fund Balances ESG with Returns. November 2017.
5 Forbes: Why does ESG matter? Key items for investors to consider in 2018. March 2018.
6 Bloomberg figures as at 31 December 2017.
7 https://www.unpri.org/credit-ratings/statement-on-esg-in-credit-ratings/77.article.
8 IPE: Carbon footprints: Only so deep. November 2017.
9 17 key goals aimed at tackling among others hunger, climate change, gender inequalities, access to clean sanitation and education.

NUMBER OF ELECTRIC CARS IN CIRCULATION



Source: OECD/IEA, Global EV outlook 2018, 30 May 2018.

As in China, Europe’s shift towards EVs has been largely policy driven, says Goguen, impelled by targets to reduce carbon emissions. “The US’s less aggressive CAFE (Corporate Average Fuel Economy) standards were to be toughened up, with new requirements to boost fuel efficiency and cut greenhouse gases from passenger cars but the Trump administration has watered the amendments down.”⁴

“However, California and 16 other states have said they want to stick with the tougher fuel efficiency standards so in the US there is still progress on climate change and electrification.”

Mass adoption

Yet, despite generous public handouts, it is not government policy that will drive mass adoption of EVs, says Mills.

“Part of Tesla’s success as a brand is that it just makes a good-looking car. It has good performance, a very advanced cockpit and offers over-the-air software updates. People don’t buy Teslas because they are electric, though that may change as costs come down.”

Even with subsidies, for most consumers EVs remain less cost-effective than gasoline or gasoline-electric hybrid

vehicles. The high cost of batteries is a key factor. However, battery prices are coming down with all eyes on the US\$100/kwh threshold, commonly cited as the point at which electric vehicles will compete with internal combustion engine vehicles on a cost basis.

“It is likely we will get there between 2023 and 2025” says Goguen, adding: “though China’s electric car battery maker CATL says it can get there earlier. Battery raw materials such as cobalt, graphite, lithium and nickel are key inputs. Pricing of these commodities is an important factor that can mean achieving the goal within the timeframe we assume or being pushed out further. Bringing down the battery cell costs is a key area of focus for all battery makers.”

Automation, the other major trend in the auto market, also has the potential to be transformational in ESG terms, though here the benefits are less environmental and more societal. There were an estimated 40,100 motor vehicle deaths in the US last year,⁵ and 93% were the result of human error, says Mills. As vehicles become more connected, automation has implications for both public safety and traffic management, adds Goguen.

Companies recognise this trend is going to alter the landscape of their industries and are ramping up spending in hopes of becoming a leader in the new technologies. As this plays out, there will be significant investment implications across a wide array of industries, says Mills.

“Most obviously, there will likely be winners and losers within the automotive industry. Within technology, companies will stand to benefit from increased content per vehicle. Many industrial companies will also stand to benefit as the power grid will need to be upgraded to handle increased demand.”

Challenges ahead

However, alongside the benefits, there is a potential darker side to the push towards vehicle electrification and automation. For example, what happens to the lithiumion batteries used to power EVs when they die?

The potential strain on government finances from a loss of fuel duties is also a concern. The International Energy Agency predicts a tax shortfall of between US\$47bn and US\$92bn by 2030.⁶ New ways to tax consumers would have to be implemented to compensate governments for the income gap from a loss of fuel duties.

The other challenge for governments, both municipal and national, is how to develop the necessary infrastructure. Mills says: “If everyone has an electric vehicle, comes home from work at the same time and starts charging, that is going to put huge pressure on the grid.”

Technologically, we may be ready for electric vehicles, self-driving cars and robo-taxis. But, from an environmental and social point of view there are still fundamental questions that need to be answered. As electric and self-driving vehicles roll towards the motoring mainstream, ESG investors may need to tread with care.

Back to nature

After years of investor debate over its costs versus rewards, has renewable energy finally come of age? Here, Newton Investment, multi-asset manager Paul Flood surveys the market landscape, ESG considerations and some likely changes ahead.



4 CNBC: Trump EPA will revise Obama fuel efficiency, greenhouse gas emissions rules for autos, 2 April 2018.
5 CNBC: Traffic deaths edge lower, but 2017 stats paint worrisome picture, 15 February 2018.
6 International Energy Agency: Global EV Outlook 2018.

In a world increasingly focused on environmental protection and ecology, renewable energy providers can point to some recent landmark achievements.

In a small but important step forward, 2017 saw UK renewables and nuclear energy generate more power than gas and coal for the first time since records began in a move hailed as a milestone in the decarbonisation of the British power sector.¹ An unusually hot summer also saw solar energy break the UK record for weekly output in June, producing 533 gigawatt hours of power.²

Renewable energy generation costs have been falling and it has since gained major traction across a range of developed and developing markets, including the US and China. As such, many analysts and investment managers see growing potential in this area, believing the sector has reached an important, economically-attractive tipping point.

In turn, the drive to limit CO₂ emissions and slow global warming via

decarbonisation is an ambition of many governments and dovetails neatly with commitments forged during the 2015 Paris Agreement on climate change.

Newton Investment multi-asset manager Paul Flood says renewables offer attractive returns and diversification but while they seem environmentally friendly (in comparison to fossil fuels), their ESG credentials still bear analysing.

Flood points to concerns about bird strikes at wind turbines and wider ecological concerns about the noise and unsightliness of some large scale renewable energy plants.

He adds: “With wind assets there has always been concern around the impact it has on the bird population. However, most companies active in this area tend to be environmentally focused and we know of at least one which has its own onsite ornithologist. Any dead bird that is found near its wind turbines is given a post-mortem to establish its cause of death. In most cases everyday pollution is identified as the cause.”

While renewable energy production is often viewed as a developed market trend, it is also growing fast in some emerging markets such as China. Although itself often seen as a major polluter, China is significantly increasing its commitment to renewables. In early 2017, it announced it would invest US\$360bn in renewable energy by 2020, while scrapping plans to build 85 new coal-fired power plants.³

Flood believes renewables can offer some ESG-friendly gains in developing markets. “From an ethical standpoint we are now seeing huge projects being built in Africa bringing electricity to many who have never had access to it before. New business models are emerging where individuals can rent the solar panels. This important plank in basic infrastructure can now be applied more cheaply and easily to many parts of the developing world,” he says.

Yet for all its potential benefits, the renewables sector continues to face mixed fortunes and a range of challenges. Critics point out wind and solar power still need the wind to blow and the sun to shine to consistently generate electricity.

Question marks also remain over the sustainability and green credentials of biomass – essentially burning wooden pellets in a controlled environment. In turn, geothermal power has proved viable in markets such as Iceland and The Philippines but its adoption is patchy, expensive and only suitable for certain geographies.

In contrast, hydropower has been used since ancient times and to generate electricity, yet the widespread development of more innovative and complex tidal schemes has proved more problematic.

Earlier this year the UK government shelved ambitious plans to build a new £1.3bn tidal lagoon in Swansea

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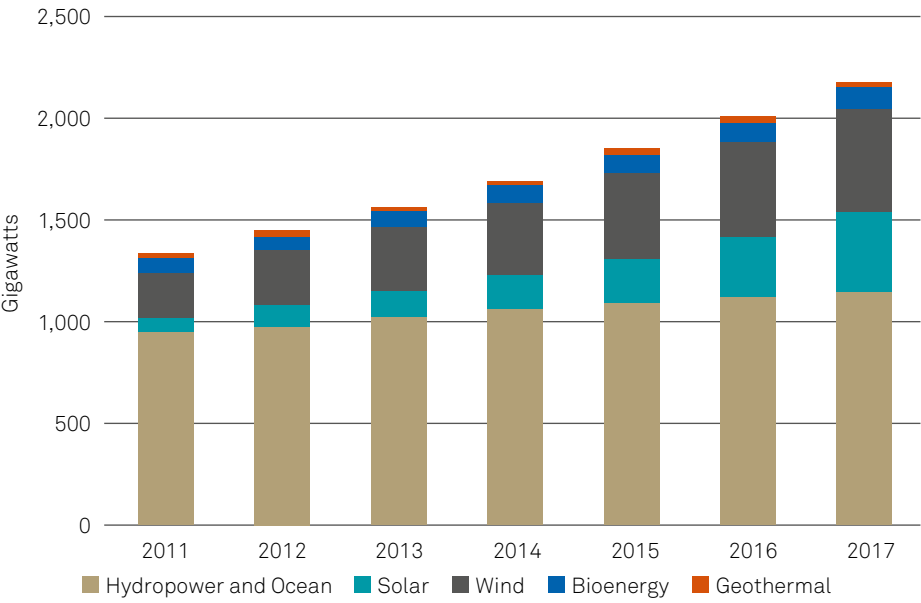
Bay on cost grounds⁴ in what some described as a “kick in the teeth” for Wales. Nevertheless, the International Hydropower Association says about US\$48bn of final investment decisions were committed to hydropower projects in 2017.⁵

While Flood believes it is too early to commit serious investment to such projects, he does see promise in tidal schemes and points to offshore floating wind turbines as a potentially worthwhile investment in future.

For now, however, he sees the strongest potential in existing wind and solar technology and points to falling costs making both an ever more attractive rival to fossil fuel-powered alternatives.

“An industry once dependent on subsidies is giving way to the production of unsubsidised solar energy in Spain and a significant reduction in subsidies for renewables in China. The cheaper and more efficient solar panels and wind turbines become, the more attractive this energy is to end users,” he concludes.

TOTAL RENEWABLE POWER GENERATION CAPACITY 2011-2017



Source: International renewable energy agency as at the end of 2017.

How green is green? Beyond renewable energy.

Despite recent growth in renewables, many nations are still heavily dependent on fossil fuels for their energy. Consequently, scientists and policy makers have long looked at ways to limit the environmental damage this can cause.

Carbon Capture and Storage (CCS) is a technology scientists claim can capture up to 90% of the carbon dioxide emissions produced when using fossil fuels in electricity generation and industrial processes.⁶

CCS projects have had mixed application and success but some major breakthroughs have been made. At the Hellisheidi geothermal power station in Iceland, scientists have found a way of successfully capturing and storing CO₂ and turning it into stone.⁷

In a separate project, a plant at the Indian industrial port of Tuticorin is capturing CO₂ from its own coal-powered boiler and using it to make baking soda. Its developer, Carbonclean, believes capturing usable CO₂ can deal with perhaps 5-10% of the world’s emissions from coal.⁸

While many CCS projects have presented major cost hurdles and received patchy government support, some UK and other international scientists believe CCS can nevertheless make a valuable contribution to cleaner energy and industrial production of the future.

Elsewhere, debate continues to rage over the ethical credentials of nuclear power.

Flood comments: “Nuclear is a trade-off. CO₂ is a ‘here and now’ problem for this century but nuclear waste will be with us for many generations to come. The difficulty is how you ensure that you can store it safely without it being forgotten about it or accidentally unearthing it. The cost of nuclear energy is also much more expensive than renewables. That said, it will almost certainly need to play a part in the energy mix in the future.”

4 FT. UK government pulls plug on Swansea tidal lagoon project. 25 June 2018.
5 POWER. Hydropower Grows but Industry Is Changing. 07 January 2018.
6 Carbon Capture and Storage Association. As of July 2018.
7 BBC. Turning carbon dioxide into rock – forever. 18 May 2018.
8 Guardian. Indian firm makes carbon capture breakthrough. 04 January 2017.



Ahead of the game?

Are emerging markets leading or lagging the developed world in the ESG agenda? Standish senior sovereign analyst Aninda Mitra considers the evolving global landscape.

It is now generally acknowledged that material investment in environmental, social and governance concerns can create competitive advantage.¹ The resulting ‘gold rush’ for ESG credentials by governments, investors and companies in developed markets is also well known.

But what of emerging markets (EM)? Are they keeping pace with their global peers or are they being left behind? For Aninda Mitra, senior sovereign analyst, Standish, the stereotype of developed countries forging far ahead of their emerging counterparts no longer holds true. Instead, he says, EMs are setting their own pace and in some cases, taking the lead.

Here, the standout example is China, which stepped up as a key backer of the Paris Agreement on climate change after the withdrawal of the US in June 2017. Mitra believes this pivotal moment is wrapped up in a wider move in China away from growth-for-growth’s-sake in

favour of a more considered approach. “It’s increasingly evident that GDP is no longer the be-all and end-all in Chinese policy,” he says. “Now, the emphasis is more on the reduction of poverty, pollution and corruption.”

Mitra points to China’s recent drive to improve air quality as a prime example of ESG in practice and he notes how pollution targets have become a key criteria for reducing excess capacity in iron and steel production. “The aim is to close some of the less viable operations and merge them into larger national champions,” he explains.

Meanwhile, environmental pollution ahead of big events such as the Olympics or important party meetings remains a key focus. Typically, this means coordinated action to shut down the largest polluters, which in turn keeps the skies blue – even if only for a brief window. Elsewhere, Mitra highlights

China’s fossil fuel cap in the automotive sector. “Of course, you could argue China’s commitment is a good five or 10 years behind Europe’s but the point is that things are changing,” he says.

Cui bono?

Governance is another area where China is making progress. This is partly wrapped up in Xi’s well-publicised anti-corruption drive but it also feeds through into areas such as brand and intellectual property theft and even into areas like product malfeasance. Mitra notes how news flow from China used to focus on environmental disasters or faulty manufacturing. “We’ve heard a lot in the past about pollution in rivers or about defective infant formula affecting babies and children,” he says. “That seems to be happening less and less – and that’s largely down to tightening manufacturing standards across numerous industry sectors.”

That’s not to say the challenges have evaporated. In mid-2018, for example, scientists tracking the size of the hole in the ozone layer noticed its rate of shrinkage was behind trend. Further investigation revealed the discrepancy came from Chinese manufacturers using CFCs in home and office insulation. Similarly, a recent scandal over faulty vaccines highlights the need for vigilance. “We’ve seen reasonable progress but more needs to be done if China wants to be seen as a serious player,” observes Mitra.

The broader picture

Beyond China, Mitra points to a groundswell of small incremental gains bringing the ESG agenda to wider public awareness in other countries in the Asia Pacific region. One notable development is the gradual abandonment of low-grade subsidised automotive fuels in favour of cleaner alternatives with an octane rating of 92 or above.²

“I’ve witnessed a transformation over the past decade in countries like Indonesia, India and the Philippines,” says Mitra. “Where once you might have seen roads full of diesel-belching vehicles – these are now far less apparent than they used to be.”

Here, government initiatives to reduce subsidies for more polluting types of cooking fuel are also making a difference. In India, for example, the consumption of cooking gas rose by a tenth between 2016 and 2017 as more and more households abandoned kerosene in line with falling subsidies.³

Curtailling corruption

Corruption is one area where challenges remain. In Transparency International’s 2017 Corruption Perceptions Index the worst performing regions were Sub-Saharan Africa (with an average score of 32), Eastern Europe and Central Asia

(each with an average score of 34).⁴ Despite some progress (Singapore, for example, ranks 6th highest for transparency with a score of 84, ahead of Canada, the Netherlands, the UK and Germany), the Asia Pacific region also scores poorly. More than half of Asia Pacific countries score less than 50 on the index and, on average, the region scores just 44.

But Mitra believes there is an increasing appetite to tackle corruption and he points to digitisation as a significant enabler for governments and regulators. “The ability to pay taxes and make payments online – cutting out cash cheques and the associated opportunities for ‘under-the-counter’ payments is an important development,” he says. “It means transactions are recordable, transparent and ultimately taxable.”

For governments the benefits are twofold. First it means an increased tax take but it also creates data that can be used to target spending on areas such as education and healthcare. This means less waste but also a loss of influence for entrenched middle-men who hitherto may have corralled spending towards their own special interests. Adds Mitra: “As more and more people in the developing world gain national and online IDs and bank accounts, the potential to create ‘watertight’ welfare systems increases. When China and India begin to gain traction, the scope for change will be tremendous.”

One area that appears to be lacking specific focus, according to Mitra, is attention to the ‘society’ aspect of ESG. For all the progress movements such as #MeToo have made in the US and in Europe, for example, “in Asia it’s largely gone under the radar”, he says. “You don’t, for example, hear about big initiatives to reduce gender bias in the corporate sphere or even in society as

a whole. It hasn’t really had an effect, in spite of the clear evidence of the economic benefits of greater female participation in the workforce.” However, female enrolment in education is on the rise even in the less developed parts of South Asia – as they catch up with their East Asian counterparts.

Direct engagement between investors and management, likewise, is an area where, aside from Japan, progress tends “to come in fits and starts”. Even so, there are some examples where active engagement has been effective. Shareholder power, for instance, was successful in tackling regionwide smogs after Singaporean investors pressured Indonesian palm oil plantation owners to curtail slash and burn agriculture. “Air quality in Singapore has vastly improved as a result,” says Mitra.

Close scrutiny

So, given the myriad of challenges for ESG in emerging markets, how should investors respond? For Mitra, one route is to map internal environmental, social and governance scores as part of any investment process. “Screening for obvious red flags in corporate governance should be part of that,” he says. “If you have a company with a single-A credit rating, for example, but which only comes up with a double-B governance score, you might think twice.”

Venezuelan corporate or government debt is a good illustration of where this kind of screening might help. On the surface, says Mitra, the yields on offer in Venezuelan corporate or government debt might seem attractive – particularly given the prospect of Chinese financial assistance or an increase in the price of key Venezuelan commodity exports such as oil. “In this sense, ESG tends to feed into areas such as political risk,” he says. “A good starting point is the old adage: if it looks too good to be true, it probably is.”

1 See Khan, Serafeim, Yoon: ‘Corporate Sustainability: First Evidence on Materiality’, Harvard Business School, March 2015.

2 Low octane fuels tend to create more fine particulate matter since they cause engines to operate less efficiently. Developed countries generally sell petrol with a minimum octane rating of 92 or above. Countries where gasoline with an octane rating of 91 or below include India, Bangladesh, Colombia, Egypt, Russia, Thailand and Venezuela.

3 The Economic Times: ‘Prices of kerosene, cooking gas will keep rising while subsidy burden will reduce slowly’, 18 April 2017

4 On a scale of 0 to 100, where 100 means very ‘clean’ and 0 reflects a deep-rooted, systemic corruption problem.

Forward thinking



For many millennials, investing in companies or funds that have a positive social or environmental impact is not an option – it is a requirement. Here, Walter Scott’s Lindsay Scott and Paul Loudon consider what the rise of the millennial investor may mean for some investment processes and products.

No generation seems to have been so widely scrutinised, analysed and dissected as the millennials. Whether companies are hiring them, being led by them or trying to sell to them, millennials are key influencers on the corporate landscape, and with good reason.

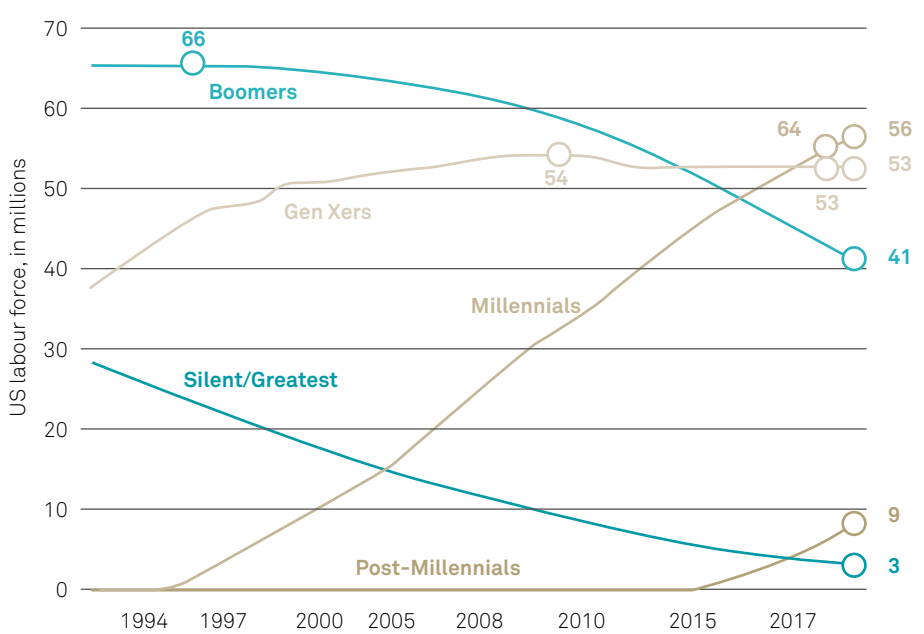
The oldest members of this generation, loosely defined as those born after 1982 and before 2004¹, are now entering their mid-30s. As the baby boomers retire, millennials have taken over as the largest generation in the workforce in the United States.² By 2020, millennials will make up over a third of the global workforce.³

The widely shared attitudes and beliefs of the millennial generation are helping to create as well as reinforce trends in the investment world. Research shows millennials are ethically minded, place great value on corporate social responsibility and have a healthy respect for the environment. Some 86% of millennials are interested in sustainable investing, defined as investing in companies or funds that aim to generate market-rate financial returns while having a genuine and positive social or environmental impact.⁴

The millennial generation’s investment preferences reflect wider trends that have been reshaping investment processes and products for some time. Faced with the realities of climate change and globalisation, growing interest in investing based on environmental, social and governance (ESG) considerations has been generally increasing, says Paul Loudon, investment manager at Walter Scott. “Millennials are playing a part in terms of rising interest in ESG investment but it is an area of investment that is of growing interest for all age groups. It is a long-term secular trend.”

Lindsay Scott, investment manager at Walter Scott, says: “There has been increased interest in the environmental aspects of investing, not just among millennials but among all investors, especially since the Paris climate

MILLENNIALS BECAME THE LARGEST GENERATION IN THE LABOUR FORCE IN 2016



Note: Labour force includes those ages 16 and older who are working or looking for work. Annual averages shown. Source: Pew Research Center analysis of monthly 1994-2017 Current Population Survey (IPUMS).

agreement of 2015. That is filtering through in terms of how investors and investment managers analyse companies.”

“**There has been increased interest in the environmental aspects of investing, not just among millennials but among all investors, especially since the Paris climate agreement of 2015.**

Lindsay Scott, Walter Scott

However, the strong commitment to sustainability issues expressed by many millennials, and their increased spending power as they age, is likely to push ESG investing even more into the spotlight.

Demonstrating change
Many millennials expect their investments to have a positive real-world impact: 75% of millennials believe their investments can influence climate change and 84% that their investments have the power to help lift people out of poverty.⁵ Consequently, companies are being forced to shake up their corporate social responsibility (CSR) strategies to meet the more demanding requirements of ESG-minded consumers.

“A growing number of investors want to see the impact companies are having, not just the numbers,” says Scott. “If you are sponsoring a school, they want to know how many children are advancing into higher education or employment. Donating to your local football team and writing about it in your annual report is not good enough anymore.”

Provenance is essential as consumers demand to know more about where their goods are sourced. The Rana Plaza disaster in Bangladesh was a wake-up call for many companies in this respect.

1 The Atlantic: Here Is When Each Generation Begins and Ends, According to Facts, 25 March 2014.
2 Pew Research: Millennials are the largest generation in the U.S. labor force, 11 April 2018.
3 ManpowerGroup: Millennial Careers: 2020 Vision, 24 May 2016.
4 Morgan Stanley: How Younger Investors Could Reshape the World, 24 January 2018.
5. Ibid.

More than 1,100 people were killed when the complex of clothes factories and shops, on the outskirts of the Bangladeshi capital of Dhaka, collapsed in 2013.⁶ The disaster brought calls for an overhaul of the supply chains of major fashion retailers, after it was revealed many had been supplied clothes from Rana Plaza.

Scott says: “Since then, we had seen many companies publish policies about suppliers and whether their clothes are made from ethically-sourced materials.”

However, as demand for ESG investment strategies continues to grow, a lack of comparable industry-wide data remains a problem. Financially, two companies may be easy to compare but from an ESG perspective it is much more difficult. More clarity is needed across the industry if the needs of the emerging generation of investors are going to be met.

“The way companies present ESG data is often very different,” says Loudon. “That can be confusing in terms of trying to identify what the most material aspects are for each business. Governance

tends to be easier to focus on, but good environmental disclosure is harder to come by, making it more difficult to assess long-term environmental risk.”

Data disclosure

Evolution towards more uniform data disclosure is still a work in progress. So are expectations of what investors, millennial or otherwise, want from an ESG strategy. Many of the early ESG investment products focused on negative screening. That usually meant excluding so-called ‘sin stocks’, those deemed unethical or environmentally damaging, from portfolios. The definition of ‘sin stocks’ varies but might include the likes of oil companies, arms manufacturers or tobacco firms. However, recently more investment managers have moved towards positive screening, says Scott.

Integrated investment

While there is some evidence sustainable investment based on negative screening often led investors to sacrifice returns, positive screening is seen to generate

performance that is in line with, or which can even exceed market benchmarks.⁷

As investments created around positive screening build an attractive performance record there is likely to be more demand for products aligned with broad-based environmental and social values. ESG investing could eventually move from being a separate investment theme to the norm.

Scott says: “Successful investing relies on an ability to discern all factors that might influence a company’s valuation, at both the time of purchase and in the future. One must hope that, longer term, sustainability will “be integrated into all investments products for all people,” she adds.

We might not be there yet, but millennials, with their professed interest in sustainable investing, are likely to encourage the move in that direction. With millennials making up an increasing proportion of the workforce, and also poised to receive more than US\$30 trillion of inheritable wealth⁸, the investment industry will soon be dominated by millennial investors.

However, they are not the only generation that everyone from marketers to politicians are keeping a close eye on. Generation Z, also called iGen, are already replacing millennials as the youngest members of the workforce. No generation remains dominant for long.

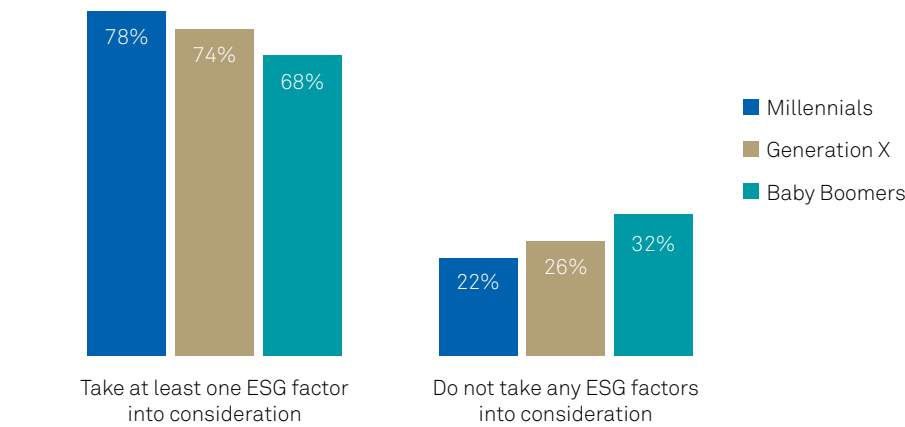
Generation Zers have a lot in common with millennials, tending to exhibit similar opinions and beliefs to the one before it – just more so. When it comes to environmental issues and having a positive impact on the world they may be even more committed. All of which points to a bright future for investment approaches incorporating ESG concerns.

Screen test

Fixed income investors are increasingly considering environmental, social and governance factors in their portfolios. For some, this means screens to exclude certain issuers and sectors – but many are moving on to more sophisticated approaches. Here, Joshua Kendall, ESG analyst at Insight Investment, explains.



PERCENTAGE OF RESPONDENTS TO CFA® INSTITUTE ESG SURVEY 2017 TAKING AT LEAST ONE ESG ISSUE INTO ACCOUNT, BY AGE SEGMENT



Source: CFA® Institute. Environmental Social and Governance Survey of the CFA portfolio manager members. May 2017.

6 Newsweek: World Environment Day: How the Rana Plaza disaster changed fashion forever, 5 June 2018
7 EY: Sustainable investing: the millennial investor, 2017.
8 EY: Sustainable investing: the millennial investor, 2017.
9 CFA® and Chartered Financial Analyst® are registered trademarks owned by CFA Institute.

In recent years, the global investment market has seen a marked increase in client demand for responsible approaches to fixed income investment. Some investors want to manage their reputation by avoiding certain sectors or issuers, while others want to have a positive impact with their investments.

Regulatory change is also encouraging a shift towards demonstrable progress on relevant issues. For example, the French Energy Transition Law, which came into force in 2016, requires institutional investors to report on how they take ESG risks into account, and more specifically, climate risks. Also, the Financial Stability Board’s Taskforce on Climate-related Financial Disclosures (TCFD) has explicitly called on asset owners to report on how they are managing climate change-related risks and opportunities.

Factors such as these have led many investors to apply exclusions to their portfolios. In 2016, it was estimated that exclusionary criteria were applied to about €10 trillion of all professionally managed assets in Europe.¹

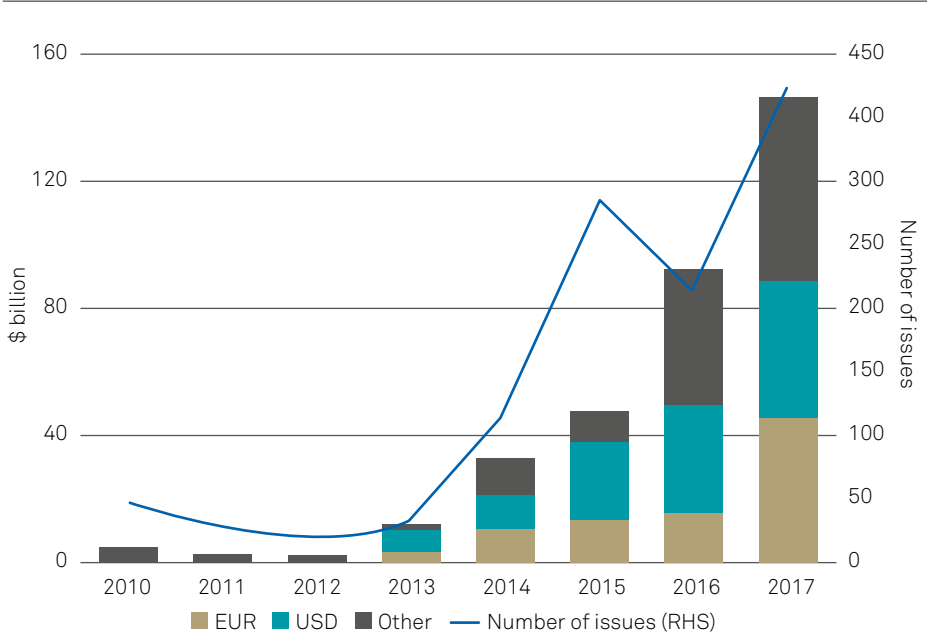
Material impact

Many corporate bond investors wonder whether excluding particular stocks, sectors or activities from their portfolios will have a material impact on performance. However, analysis suggests broad screens are likely to have a minimal effect on long-term returns – but more focused screens could have a larger impact.²

Generally speaking, however, we have observed that many investors are considering more sophisticated responsible investment approaches. These include strategies that aim for a positive impact on society or the environment, an emphasis on engagement with issuers to help identify risks or change business practice, and approaches that focus on specific factors such as climate change.

Investors can aim for a positive impact in various ways. For example, they may

GROWTH OF THE GLOBAL GREEN BOND MARKET



Source: Bloomberg. As at 31 December 2017.

specify an investment universe optimised according to ESG factors and then tilt their portfolio in favour of companies with higher ESG ratings. They may also seek to allocate to issuers deemed to have a positive social impact. Another approach is to identify an established framework or set of principles, such as the UN Sustainable Development Goals and to invest in a way that aligns with those principles.

The growth of green bonds, which identify a specific positive environmental impact, has been substantial in recent years. Sustainable bonds with other objectives have also become increasingly popular – for example, over the past year, gender equality and social impact bonds have been issued and demand has outstripped supply.

That said, we believe investors should still apply detailed analysis to green and social bonds – just as they would to other fixed income assets (see box).

Active engagement

Responsible investment is not just about identifying risks and managing them. Active ownership is a crucial part – and

not the preserve of equity investors. In many ways, equity investors are ahead of fixed income investors – the ability of equity investors to vote means they bear a specific responsibility with regard to how companies operate, and they can have a direct say in matters that affect long-term performance. But fixed income investors have become increasingly aware of the influence they can have. Companies need finance, and in that context, bondholders’ engagement with issuers is important. They can play an important role in encouraging companies to better manage their ESG-related risks and opportunities.

Climate risks

Investors are increasingly focused on specific issues. There has been a dramatic upswing in fixed income investors’ interest in climate change in the past two or three years. The reasons are obvious: the ratification of the Paris Agreement has signalled a step change in policy action and the TCFD is part of a drive to more reporting on related factors. Many investors are now asking more detailed and in-depth questions about the issuers they invest in, how these issuers manage climate-related risks and

opportunities and the actions managers are taking to manage climate-related risks in their portfolios.

Research integration

It is now widely acknowledged that to establish a foundation for fixed income strategies that can incorporate more sophisticated approaches, such as the above, it is necessary to embed analysis of ESG risks within fixed income portfolios.

For example, when it comes to corporate bonds, default risk should be the prism through which credit analysts consider every issue. In practice, a full investment analysis is required to inform an investment decision and investors expect ESG risk scores to be one part of assigning a credit rating that indicates the relative risk of default loss.

However, the availability of ESG-related data presents an issue for investors. Data from third-party providers is important, but not enough. For many smaller issuers, especially emerging market and high yield companies, the availability of relevant non-financial data often lags behind that available for larger issuers. Investors will therefore need a process to generate ESG risk scores.

Despite this challenge, investors’ growing interest in responsible investment approaches to fixed income has driven innovation and development in the strategies available, and also in the market, as growth in the availability of green and other sustainable bonds demonstrates. No longer the preserve of equity investors, bondholders are growing to realise how a responsible approach can support their objectives – and the power they can have to influence the companies in which they invest.

“
Bondholders’ engagement with issuers is important. They can play an important role in encouraging companies to better manage their ESG-related risks and opportunities.
”

Joshua Kendall, Insight Investment



Food for thought: green challenges

Despite their positive image there are various risks inherent within the green bond market for investors to consider:

Unclear definition: Despite more than 150 corporate bond issues, there is still no universally agreed definition of ‘green’. The transition to a low-carbon economy is happening quickly and energy companies need to be part of that change. However, when balancing the positive (carbon reduction) and negative (continued carbon output) factors, investors can find it difficult to assess the merits of any green bond.

No global standard: We may have reached a tipping point where the lack of an enforced global standard for green bonds may limit the market. If a company’s overall economic and business model remains largely unchanged, as is widely accepted is the current case with most energy companies, and investors cannot identify commonly-agreed green bonds from others, they may discount them all, thereby limiting the flow of

capital into these areas. There is also concern that bonds are being labelled as green simply to meet demand from institutional investors.

Mixed suitability for green portfolios: Carbon-intensive energy companies need to improve their carbon performance, but issuing green bonds (for carbon efficiency) does not necessarily make them suitable for green bond funds and strategies.

¹ See <http://www.eurosif.org/wp-content/uploads/2016/11/SRI-study-2016-HR.pdf>.
² ESG in credit: applying exclusion criteria to investment portfolios, Insight Investment, September 2016.



Return to gender

Improving workplace diversity holds a host of potentially lucrative macroeconomic benefits deserving of wider attention. Here, Newton Investment responsible investment analyst, Lottie Meggitt, writes about the potential impact of shifting attitudes in a changing world.

Gender equality has proved a high profile media topic in the past year, with the #MeToo and #TimesUp campaigns garnering global support and attention. Recent UK pay-gap figures have also revealed the stark pay inequalities that still exist between the sexes in most industries and companies. It also remains true that, despite similar levels of men and women leaving university and entering the workforce¹, at the executive level, women often seem absent.

While conversations about the importance of improving diversity and inclusion are springing up everywhere, most centre on the possible social impact of supporting gender equality in the workplace. However, research shows that along with having a positive social impact, increasing the number of women in the workplace (and supporting them once they're there), carries a host of potential macroeconomic benefits. This suggests working to achieve gender

parity should be on the agenda of all investors, not just those with a social impact focus.

Mind the gap

Research by a number of sources including global management consultant McKinsey and the World Economic Forum shows that global educational attainment is essentially very equal. For example, Saudi Arabia, where women have only recently been allowed to drive and enter

sports stadiums, has a marginally higher proportion of women than men enrolling in primary education than Iceland – a notably progressive country in gender parity terms.²

However, despite accounting for 50% of the global working-age population, women only generate 37% of global GDP,³ suggesting they are a seriously under-utilised economic resource given their comparable levels of education.

Much of this discrepancy can be explained by two key factors. Firstly the lack of women in leadership positions, both professional and political, and secondly the huge amounts of unpaid care work being done by women compared to men. Research from the McKinsey Global Institute (*The power of parity*) states the majority of countries still fall into the 'extremely high' level of inequality category on these two measures. Given the traditional care-giving role of women in society, this is perhaps hardly surprising.

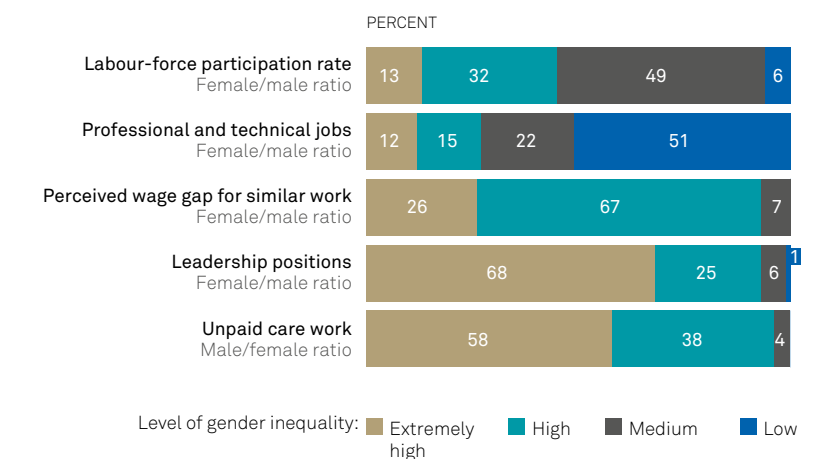
One controversial theory put forward by Harvard economist Claudia Goldin, is that the gender pay gap isn't driven by discrimination in the workplace but by female demand for 'temporal flexibility'. In less academic terms, this suggests women look for employment with flexible working arrangements and generous parental leave policies in place as they are the primary caregivers to children or other dependants.

Under this assertion, not only are women more likely to drop out of the workforce early to meet caring commitments but they also tend to work in less productive sectors and in less senior roles in order to accommodate flexibility needs. Consequently, they earn less.

Senior positioning

There are three primary benefits of increasing equality in female participation in the workforce – not just in terms of the numbers of women in work but also by improving equality in senior positions and across the sectors.

COUNTRY GENDER EQUALITY SCORES

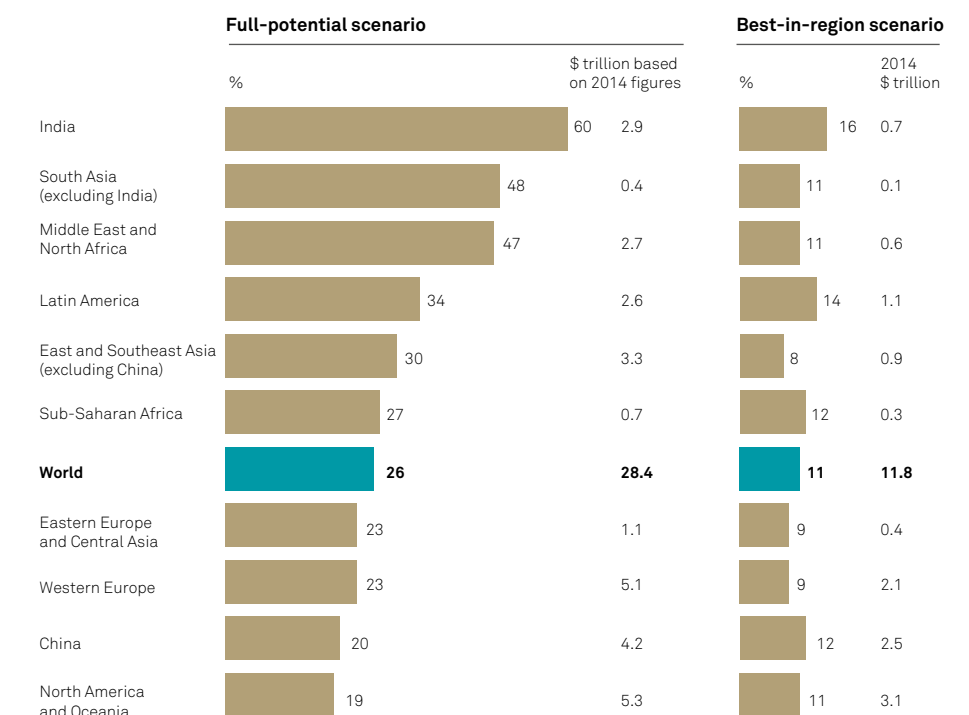


Source: McKinsey Global Institute, *The Power of Parity*: How advancing women's equality can add \$12 trillion to global growth, as at September 2016.

POTENTIAL CHANGES IN GDP

Global GDP opportunity by 2025

Incremental 2025 GDP to 2025 business-as-usual scenario



The graph above indicates the percentage increase in GDP if women participated in the economy identically to men and the value in US\$trn it would add to the economy.

Note: Numbers may not sum due to rounding.

Source: ILO; World Input-Output Database; Oxford Economics; IHS; national statistical agencies; McKinsey Global Growth Model, McKinsey Global Institute analysis.

¹ <http://reports.weforum.org/global-gender-gap-report-2017/dataexplorer/#economy=ISL>

² Ibid.

³ *McKinsey Global Institute*, *The Power of Parity*: How advancing women's equality can add US\$12 trillion to global growth, September 2016.

1 Bridging the gender gap is a GDP opportunity, globally

Gender equality and GDP do appear to be positively correlated. Research from McKinsey looked at potential changes in GDP in 95 countries if women participated in the economy identically to men – presuming no gap in participation rates, no gap in hours worked, and no gap in representation within each sector. In this ‘full-potential scenario’, McKinsey estimates it could add US\$28 trillion to GDP in 2025 versus a business-as-usual scenario (see GDP chart on page 21).

Obviously, this number is unrealistic, as the prospect of having women participate equally with men in the economy is rendered unachievable by a host of cultural, social and economic reasons.

However, the study also considered a ‘best-in-region’ scenario, where each country would perform at the level of the best-performing country in their geographic region on these terms. In this more achievable scenario, data still suggests such an improvement would add US\$12 trillion dollars to the overall world economy, an increase of 11%.

The study also considered the potential role for women in slowing down workforce shrinkage in developed countries suffering from ageing populations – for example, increasing women in the workforce in Japan is expected to slow the reduction of Japan’s workforce from 65 million in 2014 to 63 million in 2025.

While there are nuances, this study may not take fully into account for example, the displacement of men as more women enter the workforce, the research suggests there is still huge potential in harnessing the female labour force.

2 Progressive and flexible working practices (for both genders) can save money and retain talent

There are significant savings to be had by retaining female employees after their maternity leave ends and it seems logical to extend this point to both genders. According to a study by KPMG and Vodafone⁴, recruiting and training new employees in companies to replace women who do not stay in their workforce after having a baby costs global businesses US\$47bn every year.

In contrast, it would cost business an additional US\$28bn a year to offer the 16 weeks of fully paid maternity leave common in developed markets.⁵

Furthermore, there are 96 million skilled women worldwide aged 30-54 on career breaks⁶, with 55 million having middle-manager experience or above. If such women had manager level employment – assuming other employees are not displaced – they could generate some £151bn per year of economic activity.⁷

3 Women are an untapped resource in a global economy with a growing skills gap

Technology is just one sector with a marked skills gap and a huge gender gap which is reflected in the labour market. Unless the entire working-age population has the chance to acquire new technology-based skills this could have a serious economic cost. Take the UK as an example, with 72% of large companies reporting they are suffering a digital skills gap and where tech related jobs are linked to one in five of all vacancies.⁸

There are a variety of reasons for this gap; women (as well as men) appear to

“
Despite accounting for 50% of the global working-age population, women only generate 37% of global GDP, suggesting they are a seriously under-utilised economic resource given their comparable levels of education.
”

Lottie Meggitt, Newton Investment

be put off by the stereotypes associated with the sector and there is a general lack of awareness of the opportunities available in the sector.

Luckily, there’s an obvious solution for companies – those who do the most work to combat those stereotypes and who work to improve the pipeline of graduates available to them will have access to the widest possible talent pool, and should in theory attract the best talent.

As research increasingly indicates, getting more women to participate in the economy holds huge economic potential and also genuine investment potential. Furthermore, diversity is increasingly seen as one of the most tangible factors by which we can judge the wider corporate culture of a company. Given the correlation cited above, we believe, this can be an important criteria to measure for many investments both today and in the future.

4 Vodafone/KPMG. Women’s empowerment 2017. 01 June 2017.
5 RSA Action and Research Centre: The Flex Factor – Realising the value of flexible working. July 2013.
6 Vodafone. Vodafone launches world’s largest recruitment programme for women on career breaks. 03 March 2017.
7 Ibid.
8 UK government/Ecorys UK. Digital skills for the economy. As of end January 2016.

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