



Sustainable investment



‘There has been a clear direction of travel, but progress has accelerated’



Hani Kablawi, head of international and chairman of EMEA, BNY Mellon

SUSTAINABLE investment is high on the agenda at meetings I have with BNY Mellon’s central bank, sovereign fund and public pension fund clients.

Increasingly, global public investors have incorporated ESG factors into their investment strategies and the majority now have specific ESG investment policies in place. There has been a clear direction of travel for many years, but progress has accelerated through initiatives such as the United Nations Principles for Sustainable Investment and the Central Banks and Supervisors Network for Greening the Financial System.

So, this report is timely – and made even more so by the Covid-19 pandemic, which has highlighted the systemic threat from non-financial risks. OMFIF, with its network of relationships with central banks, sovereign funds and public pension funds, continues to be the ideal partner with whom we can explore the evolving role and impact of public investors in the global economy. In embarking upon this fourth joint report, we were keen to understand not only the dynamics driving sovereign and pension funds’ towards ESG strategies, but also the limitations and barriers, and how these might be overcome.

One of the biggest challenges for ESG investment is the ability for investors to analyse their investments against sustainability factors. Though concerns remain around lack of standardisation, this is where technology is increasingly becoming an enabler – using data and data analytics to measure the non-financial performance of investments. This will be an area of heightened interest and development over the next few years.

As some of the world’s largest investors, the impact of the public institutions surveyed in our report goes well beyond their individual investment strategies. Their approach to sustainability has a significant influence across the global investment industry and beyond that into the wider economy and society. This report provides valuable insights into how public investors’ ESG strategies will develop. •

‘Global public investors are rising to the challenge’



Sabine Mauderer, member, executive board, Deutsche Bundesbank and chair, scaling up green finance workstream, Central Banks and Supervisors Network for Greening the Financial System

IF there were a need for evidence of how natural hazards can threaten the global economy – our markets, our investments and our wealth – the pandemic is a perfect case in point.

Societies around the world have taken immediate action required by this crisis. However, as we confront this tremendous challenge, we face another major threat to the global economy: climate change. While its direct effects are not yet visible on a global scale, we need to take action, because the next generation will not be able to reverse the effects of global warming. Unlike Covid-19, climate change will be permanent. The best we can do is to mitigate its adverse effects and adapt. The earlier we act, the better we will fare. In investors’ terms: by acting now, we will reduce downside risks in the future.

This OMFIF-BNY Mellon report is a testament to global public investors doing just that. It highlights that environmental, social and governance aspects have become an essential element in their investment processes. With assets worth \$39.5tn under management, public investors wield significant financial power and can support the transition to a sustainable economy. Despite the many hurdles that remain, such as a lack of data and analytical capabilities, global public investors are rising to the challenge.

As investors, central banks have also started taking account of ESG considerations. They are focusing first on analytical work and gaining a common understanding. The Central Banks and Supervisors Network for Greening the Financial System, a global network of central banks and supervisors, published a guide on sustainable and responsible investment for central banks last year.

More work by the NGFS is underway: we will present a progress report later this year. In doing so, we hope to contribute to the joint efforts upon which the *Global Public Investor* will surely reflect once again next year. •



Emerging from crisis, preventing the next

In supporting the post-pandemic recovery, global public investors have a chance to build on the momentum of the sustainability agenda of the past years. However, they still face significant barriers in scaling up these efforts, write Danae Kyriakopoulou, chief economist and director of research and Brandon Chye, economist, OMFIF.

THIS year has highlighted the material and systemic threats that non-financial risks pose to economies, societies and investments. Global public investors – central banks, sovereign funds and public pension funds – are highly exposed given their large holdings, long-term investment horizons and commitment to the public interest.

As documented in previous editions of this publication, GPIs have gradually incorporated environmental, social and governance factors in their portfolio management and wider activities. Most of them now have specific ESG investment policies in place or are in the process of developing one, according to a study of sovereign funds and public pension funds conducted by OMFIF and BNY Mellon. The survey highlights that over the past

50%

More than 50% of global public investors see insufficient data or information as a barrier to ESG adoption and further integration

three years, ESG considerations have become a strong focus in the community. Heightened commitment to initiatives such as the Central Banks and Supervisors Network for Greening the Financial System (which now counts 68 members from an original set of eight in December 2017) and the United Nations Principles for Responsible Investment (grown to more than 3,100 from 86 investors since 2006), has demonstrated the genuine and increased efforts by GPIs to embrace ESG themes.

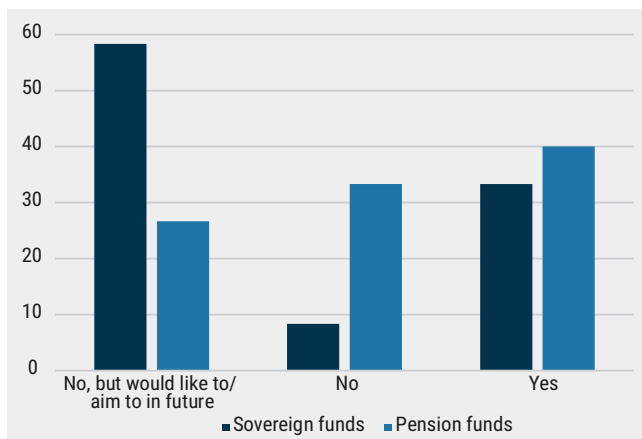
Motivations

Within the GPI community, investors are realising that adopting ESG criteria can protect portfolios from non-financial sources of risk. They are opting to integrate ESG considerations to mitigate the risk of reputational damage, and to better

1. Public investors struggle with measuring impact of ESG

Are you able to measure formally the impact and non-financial performance of your investment decision?, % of total responses

Source: OMFIF ESG integration survey



‘ESG is not a “nice-to-have”, it’s a definite “need-to-have”; we know that good ESG practice is the best barometer for companies that are well run. If you practise ESG well, your company is on the right trajectory to succeed. In making investment decisions, we strongly favour companies that focus on sustainable returns and also actively manage the ESG impact of their businesses. These are the types of enterprises and assets that we want as part of the EPF portfolio in order to achieve our vision of helping create a better world for all.’

Tunku Alizakri Alias, chief executive officer, Employees Provident Fund, Malaysia

align their values and investments.

The expectation of superior risk-adjusted returns was a predominant motivation for ESG criteria integration among GPIs, according to the OMFIF-BNY Mellon survey. Generally, GPIs are aware that ESG factors can present underlying investment risk. For example, non-sustainable investments might become ‘stranded’ or lose value over time, or a company’s operations could become compromised if subject to a climate-related disaster.

Survey respondents also cited the need to align investment strategies with organisational values or minimise reputational risks as a driver of ESG implementation. Given GPIs’ public relevance, the question of materiality of ESG themes extends beyond how these can translate into financial risks to their portfolios to how investments can negatively impact ESG areas or the institution itself.

For example, not just whether holding oil risks owning an asset that could become stranded in the future with damaged return prospects, but also whether the investment will worsen societies’ and economies’

climate vulnerabilities.

Public investors struggle to formally measure the impact and non-financial performance of investment decisions, even though many aim to do so in future (Figure 1).

Tailoring approaches

To protect their investments or prevent them from exacerbating non-financial risks, more investors are aligning their portfolios with sustainability objectives.

‘Do no harm’ strategies are the most popular across the GPI community. Among respondents to the OMFIF GPI Survey 2020, 28% of central banks, 58% of sovereign funds and 81% of pension funds apply exclusion or negative screening strategies. Tobacco, arms and coal are the sectors most frequently excluded. A minority of investors exclude oil and gas, though only partially, according to the BNY Mellon-OMFIF survey.

For central banks, whose portfolios are on average made up of just 8% of equities and 0.6% of alternatives, exclusion strategies apply mainly to their bond holdings. One central bank from Asia Pacific applies ‘internal negative screening rules for investment in corporates’, a statement echoed by central banks from Europe and Latin America. Publicly known examples of such practices include Sveriges Riksbank, which in November 2019 decided to divest from carbon-intensive municipal bonds from Canada and Australia.

Integration of ESG criteria across an entire portfolio is a common method used particularly among pension funds (93%) and sovereign funds (50%). However, only 10% of central banks integrate ESG criteria across their entire portfolio. Almost

Methodology

The information presented in this chapter is based on responses to two surveys conducted over the past year:

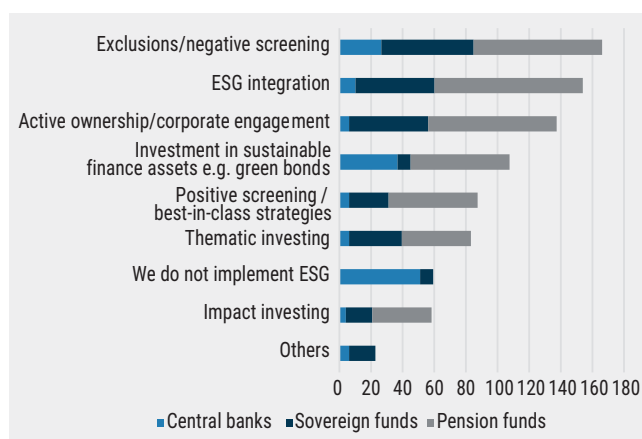
- OMFIF GPI Survey 2020: This was conducted between March-June, and reflects the responses of 50 central banks, 11 sovereign funds and 17 pension funds with combined assets under management of \$7.2tn. Five questions from the survey focus explicitly on sustainable investment issues.
- The OMFIF ESG integration survey: This more in-depth survey included 25 questions on ESG investment and was conducted in association with BNY Mellon between August-November 2019. It reflects the responses of 27 sovereign and pension funds with a combined AUM of \$4.7tn.

For both surveys, institutions responded under the condition of anonymity and were free to opt out of any question.

2. Public investors prioritise 'do no harm' strategies

In which of the following ways do you implement ESG investment?, % of total responses by institution type

Source: OMFIF GPI Survey 2020



half of the 50 central banks surveyed do not implement ESG measures at all. One respondent from Latin America says, 'When investing in an institution, the central bank focuses on the creditworthiness, the credit rating and the yield on investment offered by the institution. ESG is not among those key criteria.'

The relatively weak uptake of ESG criteria for reserves management among central banks compared with their GPI peers is in contrast to their activities as supervisors, where several institutions have taken steps or are planning to introduce regulatory measures such as climate stress tests. One central bank from Europe comments, 'Although carefully monitoring the situation and participating in some initiatives (such as the NGFS), at this stage we do not have an explicitly defined ESG investment policy.'

Among the central banks who do implement ESG policies, investment in sustainable assets is the most common strategy, with green bonds cited often. Sustainable assets are widespread among pension funds (62% of the sample say they invest in them), but less so among sovereign funds (only 8% do). On the other hand, thematic and impact investment strategies are well-established among pension funds, but less so among sovereign funds and central banks.

Managing complexity

Which approach to ESG implementation investors adopt tends

'If you are a global public investor and want to make a difference, active ownership is the way to go. The key to achieving results is to collaborate with global peers, and to use a combination of different engagement methods, such as voting, resolutions and dialogue; even blacklisting can be a part of this approach. The challenge is how to go about evaluating, measuring and reporting on this work, which takes place over several years, and can be expected to have impact at the portfolio level, when influencing specific, chosen companies. The methodology, standards and data to support are still underdeveloped.'

Johan Florén, head of communications and ESG, AP7

to depend on several factors:

- The composition of the existing portfolio: Where portfolios are made up mainly of government bonds (as with many central banks), there may be little scope for shareholder engagement strategies. Investors holding real assets can shift these into sustainable variants more easily. The varying time horizons associated with each asset class can also add complexity. For example, a company issuing both equities and bonds may be treated differently depending on whether the ESG assessment applies to the equity part of the portfolio (where the risk is perpetual) or fixed income (which will have different maturity horizons). Here, even if raw data from the company are available through disclosures, how investors analyse and apply them to portfolios will be critical in deciding which strategies are most appropriate.
- The data availability for different asset classes: Equities and corporate bonds typically have better data availability on ESG criteria given disclosure frameworks for companies, making it easier to perform negative screening or exclusionary strategies.
- The flexibility to invest across asset classes: Investors prioritising safety and liquidity may prefer to not invest in illiquid asset classes such as infrastructure and real estate unless these are available indirectly through a sustainable sovereign or corporate bond.
- In-house capabilities: Accessing more complex asset classes such as green bonds or sustainable real assets requires more sophisticated skills than many public investors have traditionally had access to. Similarly, public investors with more mainstream portfolios may lack the skills required to perform proxy voting for shareholder engagement.

The strategy followed will determine the lens through which investors assess the materiality of ESG data. Those engaging in sustainable, impact or thematic investments will require output or outcome data measuring the actual impact on the ground. Conversely, when performing

ESG integration or negative screening, investors will focus on ESG-related risk to financial performance. These diverging needs contribute to the fragmented nature of the ESG data landscape.

Measuring financial impact

Despite the trend towards more responsible investing and the growing familiarity with ESG strategies and their application to specific portfolios, the path forward is challenging.

Difficulties can arise in the early stages of the ESG integration process, including deciding to embark on it in the first place. When asked about the financial impact of ESG integration, respondents to the OMFIF-BNY Mellon survey are split between those that have seen a positive financial impact from ESG integration and those who claim it is ‘too early to tell’ (Figure 3). None have seen a negative or no impact. When discussing the barriers to scaling up investment, a minority (45% of sovereign funds and 19% of pension funds) fear that it would hurt financial performance.

However, perceptions among central banks can be more conservative. One respondent from Europe comments that ‘it is not entirely clear at this stage how well ESG aligns with our investment mandate of capital preservation and generating income versus potential costs (also in terms of possibly lower expected returns)’. A sovereign fund from Asia Pacific warns that there is a ‘perception of lower returns among

some investment managers’.

There are two probable explanations for the inability to acknowledge or measure the financial impact of ESG integration. First, the lag between integration and impact. Integrating ESG factors into asset selection or management can be a complex process, where the majority of costs are borne upfront while the benefits are not realised until much later. In the OMFIF GPI Survey 2020, all sovereign and pension funds, along with around one-quarter of central banks, cite the complexity of sustainable assets as a limiting factor to further investment (Figure 3).

Second, it can be a question of measurement ability, given constrained resources and data frameworks. Almost two-thirds of sovereign funds and more than 80% of pension funds in the OMFIF-BNY Mellon survey identify insufficient data as a barrier to further integration. These attitudes reflect the fractured nature of the ESG landscape. This is both in terms of the raw data provision and the lack of standardisation on how to disclose, measure and integrate non-financial data to inform sustainable investment decisions.

Defining materiality

These barriers to transparency, comprehensiveness and comparability in ESG reporting and measurement stand in stark contrast to the universally-defined metrics and concepts underpinning conventional

financial accounting measures, such as firm cost and revenue, capital expenditure, and discount rate adjustment. The data needed to successfully integrate the elements across ‘E’, ‘S’ and ‘G’ in the investment process are still at a relatively early stage.

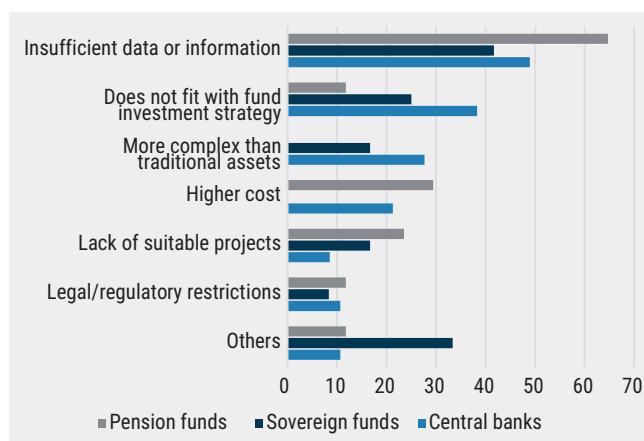
Approaches to determining what constitutes material ESG information vary. Some, such as the Sustainability Accounting Standards Board and the Task Force for Climate-Related Financial Disclosures, favour financial materiality criteria (how ESG themes affect companies). Others, such as the Global Reporting Initiative, have a wider focus including what matters to society more broadly (how companies affect ESG themes). A key question is whether supervisors should prescribe what constitutes material information or whether that should be arrived at through a market-driven, principles-based dialogue between companies and investors.

Internal capacity

ESG scoring is often facilitated by specialist data vendors such as MSCI, Bloomberg and Sustainalytics. Each tends to employ its own proprietary assessments, methodologies and metrics. This can result in divergent measurements of the same concept for the same company, depending on which framework is used. Moreover, ratings agencies may not adequately capture the actual sustainability performance and risks to a company. The unexpected bankruptcy from major California-based utility provider PG&E due to potential negligence from wildfire risks shows the potential blind spots from conventional ESG ratings providers. The shortcomings of uncritical ratings are likely to become even more apparent as systemic risks, such as long-term climate change and pandemic-related shocks, expose hidden company-level risks. One example is the discrepancy in sustainability scores assigned to major US companies, such as Google and General Motors. This can make it difficult for investors to

3. Complexity and data concerns top ESG barriers

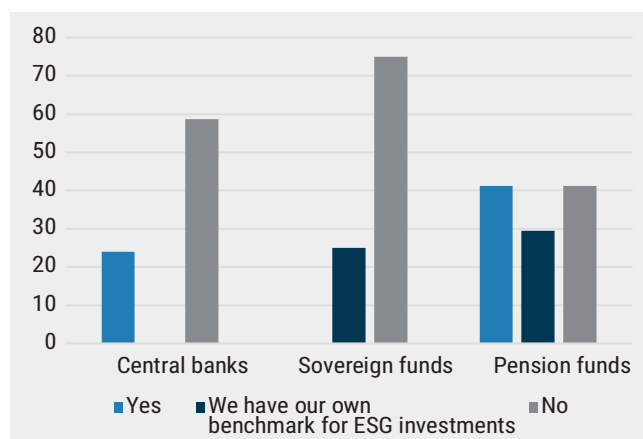
What do you see as the barriers to ESG adoption/further integration in your asset management?, % of total responses by institution type
Source: OMFIF GPI Survey 2020



4. Reliability concerns may discourage ESG benchmarking

Do you rely on an existing benchmark or ratings index for ESG investments?, % of total responses by institution type

Source: OMFIF GPI Survey 2020



comprehend the nuances of ESG investment, and may discourage them from engaging on such efforts altogether. One central bank from Europe says that, ‘The lack of standard definitions and ESG criteria as well as applied automated algorithms reduce efficiency of external ESG ratings and indices. But we may consider their implementation when the solutions will be further developed and tested.’

Perhaps reflecting similar concerns, most GPIs taking part in the OMFIF GPI Survey 2020 do not use ESG benchmarks or ratings indices for their investments. Those who do mostly use their own benchmarks (Figure 4). In the OMFIF-BNY Mellon survey, only around half of participants incorporate quantitative ESG data in their investment process.

The concerns about the reliability of external data providers, and the associated emphasis on internally produced data and benchmarks, can make it difficult for some investors to participate in ESG integration. It is much easier for those investors who – like most GPIs – can afford to purchase expensive data, patented analytical tools, or have sufficient in-house expertise to develop these functions independently.

‘Competence greenwashing’

The availability of skills and expertise presents another barrier to scaling up ESG investment. Even if access to data ceases to be an issue, it can still be a challenge for investors to use

the information to directly inform investment decisions. Embedded technological networks, such as the internet of things and social media, have generated a vast amount of data that can offer insights to investors. But converting these reservoirs of data into valuable resources to support investment activity requires analytical expertise to ‘translate’ non-financial data into actionable investment information. Investment teams need to learn how to adapt ESG data to each asset class and blend different areas of expertise in terms of the material threat that non-financial risks pose to investment portfolios, ranging from loss of biodiversity to social instability linked to inequality.

A sovereign fund from Europe highlights the need ‘to train investment teams and external fund managers’. But there is little understanding across the community of what constitutes proper training. The need to compete in the sustainability arena has given rise to fears of ‘competence greenwashing’, whereby asset owners, such as GPIs and external asset managers, falsely claim to have the appropriate levels of expertise to conduct these assessments. An industry standard for basic competence may be created, helped by professional and industry bodies who are already working to fill a gap in ESG skills training for investment teams. One example is the PRI Academy, set up to provide ESG education for investors as a pillar of the UN PRI initiative. However, as the

need to incorporate ESG continues to grow, it will be important for investors engaging with these efforts to begin integrating multi-disciplinary teams beyond the usual backgrounds in finance and economics and include natural scientists, medical professionals and others from relevant disciplines.

Investment horizons, size and supply

The disparity between fundamental fund structures and how long it could take for ESG risks to materialise threatens the ability of ESG to scale. According to a pension fund from Asia Pacific, a major hurdle to scaling up ESG investment is that, ‘At the industry level, fund structures and the way incentives have been set do not align asset managers’ time frame with a long-term investor’s mindset, which might hinder further ESG integration. For example, close-ended funds in private equity and infrastructure encourage businesses to think in a five- to seven-year time frame. A similar situation happens with listed equities managers, whose focus is more annual, and companies focus on quarterly reporting. ESG issues such as climate change require a longer term view as many of them play out in longer time frames. We as an industry must think how we can better align asset managers to our position as universal and long-term investors.’

Another impediment to scaling up ESG investment for GPIs is the size of their portfolios. It is not as easy for an investor with a portfolio of more than \$100bn to divest effectively from multiple industries and companies carrying high ESG risks, as there would be little left for them to invest in; more sustainable alternatives may be difficult to find at this stage.

In addition, investing in sustainable assets can run against the lack of supply of such investments in a form that large investors, such as central banks, can access. One Latin American central bank says, ‘There aren’t many green bond issues that conform to our investment

guidelines, and the ones that do are small.’ This is echoed by a central bank from Asia Pacific, commenting on a ‘lack of eligible securities that meet our investment guidelines (for example, corporates that meet our ESG rating criteria); our portfolios are of very high quality and concentrated on sovereigns, supranationals and agencies; the applicability and added benefit (return and diversification) from adding ESG criteria may not be very significant’.

Ways forward

This leaves shareholder engagement as the most promising strategy for investors with large portfolios. They are able to leverage their size to drive interactions with current or potential investees on ESG issues. This can take the form of influencing ESG practices or improving disclosures and can be preferred strategies to divestment, which carries the risk of leaving assets available to investors who do not have a sustainability mindset. Still, it is a difficult policy to implement as it requires engaging with bespoke firm-level or sector-level data, which suffer from challenges described earlier. Moreover, there can be potential reputational issues with using shareholder engagement strategies. One sovereign fund from Latin America says, ‘We follow passive mandates and have only small investments in many companies and as a result are limited in what we can do. Also, we believe that the state

‘The tools and mechanisms that facilitate ESG investing must account for the diversity of investor approaches taken to implementation as an important next step to more tightly align ESG analysis and the investment process. It is key to recognise that the implementation of an ESG investment program is an inherently individual exercise tailored to specific investor requirements and objectives.’

Frances Barney, CFA, head of global risk solutions, BNY Mellon Asset Servicing

engaging with companies may create reputational risk.’

GPIs have strong incentives to integrate ESG considerations into their investment strategies, linked to the need to protect portfolios from non-financial sources of risk and their commitment to maintaining public wealth by limiting their negative impact on areas that could present risks to economies and societies. However, there are no quick ways of doing this. Many ESG-related risks will require huge investments into climate mitigation and adaptation technologies or biodiversity preservation programmes among others, but these are not yet packaged in financial products that can be accessed by investors at scale. All investors cannot simultaneously divest entirely from sectors and companies; this would create financial instability and would only work if implemented gradually. Finally, stakeholder engagement and active ownership strategies, while holding the most promise, require advances in data availability, models and skills.

Optimising ESG investment practices

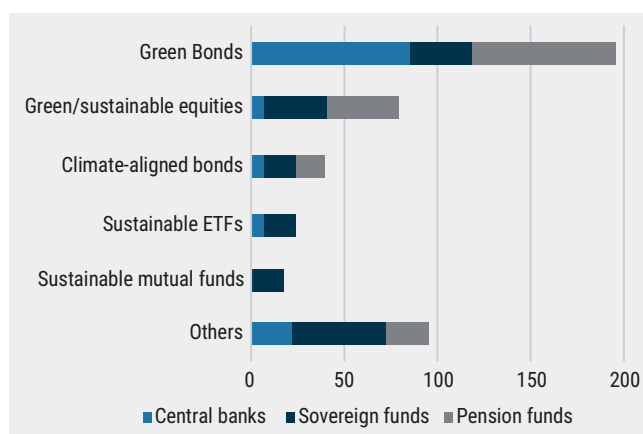
Optimising ESG investment practices will be a multi-stakeholder process which institutional investors will play a key role in advancing. An important dimension to developing ESG investment is improving institutional capacities to invest across a wider range of asset classes. As responses to the OMFIF GPI Survey 2020 indicate, asset classes that already have sustainability credentials, such as green bonds, attract the most capital from risk-averse and traditional GPIs, primarily central banks and pension funds. This preference for green bonds is projected to continue over the short term in respondents’ one- to two-year ESG allocation strategies (Figure 6).

Diversifying GPI investments into other areas will depend on developing investment teams’ confidence to evaluate a broad spectrum of sustainable assets, financial instruments and data. Four trends will shape GPIs’ ESG

5. Green bonds most popular sustainable asset class, central banks notably conservative

Which sustainable assets do you invest in?, % of total responses by institution type

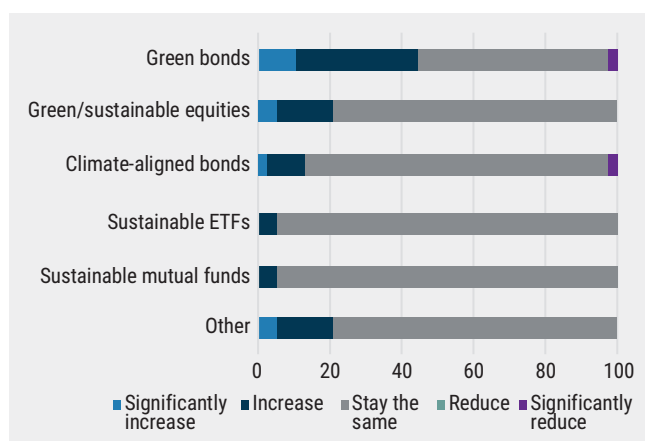
Source: OMFIF GPI Survey 2020



6. Gradual diversification into other sustainable instruments

Are you planning to increase your allocation to 'green' asset investments over the next 12-24 months?. % of total responses

Source: OMFIF GPI Survey 2020



investment strategies. First, progress on mandatory and principles-based ESG regulation, combined with advances in data capture and remote sensor technologies, will add more breadth and depth to primary data and corporate disclosures on material issues. Over the next few years, this will give GPIs much more potential information on material ESG issues.

Second, improvement in data analytics, such as machine learning, artificial intelligence and sentiment analysis, will enable more accurate pattern- and sense-making from combining financial and ESG data. This will enable more granular attribution of ESG impact to specific companies and assets, and facilitate actionable investment decision-making.

Third, to truly leverage these two trends, investment and human resource teams within GPIs will need to prioritise developing the human capital and technical capacity to blend financial and alternative data sets. Major sovereign funds have developed in-house capacity to evaluate unconventional assets, such as private equity. Similar specialisations are likely to develop to fully engage with different sustainable asset classes.

Finally, in the medium to long term, ESG investment stands to benefit from the movement towards understanding and using ESG data as a public good. GPIs should be a part of and respond to this. Comprehensive, widely-available data will promote more accessibility and greater

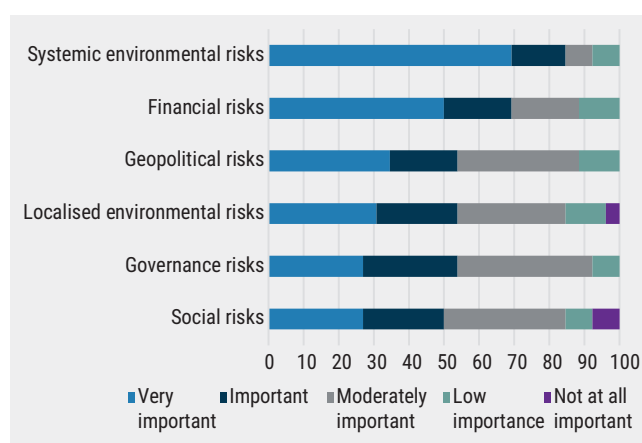
liquidity from increased participation in sustainable asset markets. Asset managers are collaborating with public institutions to develop a common trunk of public ESG data; the World Bank's Sovereign ESG Data Platform released in October 2019 is one step in this direction.

Beyond Covid-19

The pandemic has sharpened investors' awareness of and attention to the potential of non-financial sources of risk to materialise into systemic, global crises. Prior to Covid-19, climate change dominated the ESG agenda, consistently ranking as a top concern for investors. In the OMFIF-BNY Mellon survey, conducted prior to the pandemic, 69% of respondents list systemic environmental risks as 'very important', compared with less than 30% for governance and social risks (Figure 7).

But the pandemic is causing reappraisal and rebalancing, shifting attention to issues such as biodiversity, environmental loss and how these link to zoonotic diseases, as well as public health and social issues. This can create additional challenges, as it can overwhelm investors already struggling to access, understand and integrate the many ESG risks emerging into the public consciousness.

The pandemic shock is exacerbating data challenges in practical ways. Lockdown measures and breakdowns in supply chains and international co-operation are hampering data collection efforts on the ground. Disclosure commitments and associated regulations may slip through the cracks as companies and regulators focus on the immediate requirements of dealing with the crisis. For example, the Bank of England has postponed its climate stress tests to 2021 from 2020. At the same time, governments across the world are reviewing laws on social and workers' health protection and looking into accountability and scrutiny with regard to corporate governance. There is room for optimism that the pandemic may eventually reconfigure regulators' and investors' appetite to tackle these issues over the long term. The huge spending many governments are preparing to kick-start the recovery presents unparalleled opportunities to channel investments towards more sustainable growth. •



7. GPIs watch long-term environmental risks, yet ESG priorities might soon be rebalanced

How do you rank the following risks as material risk to your investment in the horizon of the next 10 years?. % of total responses

Source: OMFIF ESG integration survey

‘More transparency, flexibility and responsiveness to investor needs will yield advances in ESG standards in a post-pandemic world’

ONE of the key issues with ESG investing is that it is, by definition, reliant on a broad universe of information. ESG data encompass a huge number of factors that sit underneath the over-arching environmental, social and governance themes. As such, ESG can often mean different things to different people, and the dynamic and multifaceted nature of ESG is reflected in a dizzying array of ESG data and a lack of commonly accepted standards that define it.

Standardisation is a widely recognised problem within the realm of ESG investment. According to research from the Chartered Financial Analyst Institute and United Nations Principles for Responsible Investment, the lack of standards around ESG data verification and the demonstrability of the ESG factors shaping investment portfolios are among the key barriers to greater ESG integration into investment processes. At the investor level, individual preferences can mean handling ESG data can become complex and disparate; one investor may be interested in carbon emissions, while another may be interested in diversity. Anecdotally, we're seeing that investors are increasingly looking for evidence that their specific ESG objectives, preferences and values are reflected in their investments.

In practical terms, achieving greater alignment between investor objectives and the investment process will require a number of things. First, a deeper understanding of investors' interests and concerns when it comes to ESG investing on a mass scale would allow them to define relevance on their own terms, while being better informed. Moreover, the ability to 'open up the box' to explore and identify the underlying components of ESG investing, how they're scored, and how they can inform and support specific investment strategies and objectives would facilitate more rigorous ESG integration. A future state of ESG investing needs to be able to facilitate customised portfolio construction that reflects

investor preferences and needs on a granular level. Mechanisms that support demonstrability would ensure preferred ESG factors are represented in an investor's portfolio or the products they invest in on a more reliable basis.

When it comes to the future of standardisation, considering the disparity across the ESG data universe and lack of existing common standards, a consensus will probably only form through greater transparency into what investors are doing, which will, in turn, inform best practices. Crowdsourced guidance around the preferred ESG factors and priorities could help to determine the materiality of specific data sets and in the process create standards that both guide future ESG investments and continually improve and optimise the effectiveness of ESG metrics to complement

traditional fundamental analysis or facilitate non-financial goals.

BNY Mellon has developed an application that leverages the depth of its network to learn how portfolio managers, asset owners and other business users are using and interpreting ESG data. In time, and as these efforts achieve critical mass, we expect to see a consensus form around the most relevant factors to define certain sustainability themes

like socially responsible investing, as well as the most reliable and valuable data to support these themes, as informed by crowdsourced feedback, with the consequence that data may become more specialised over time. This clarity is likely to expose gaps in the market where current priorities are not being met. With greater transparency and a deeper understanding of how data are being applied, users will be better placed to shape, refine and optimise standards to meet their specific goals and produce the greatest possible impact based on their definition of success.

The benefits of opening the box, which the application facilitates, are also likely to play through into investment portfolio construction. As asset managers gain a deeper understanding of the

‘With greater transparency and a deeper understanding of how information is being applied, users will be better placed to refine standards to meet their specific goals’



factors their investors are interested in, they will take this cue and tailor their portfolios to better reflect these priorities. Ultimately, this has the potential to pave the way for mass customisation, in which a wider range of products tailored to the ESG profiles of individual investors are made available. This will represent a fundamental change in how institutions and individuals invest.

As portfolios are tailored to investors' needs, asset managers will be held more responsible for making sure that their funds are delivering performance and providing demonstrability to validate the factors most supportive of the goals. If fund managers prioritise diversity, for example, they will need to demonstrate the specific diversity factors included in portfolios and report that back to investors. In turn, investors will probably be expected to communicate more detailed information to their stakeholders.

The impact of mass customisation and demonstrability will be wide ranging, influencing everything from how funds and investment products are marketed and distributed, to providing evidence that proxy voting is consistent with the ESG factors that match investor or stakeholders' preferences. This would have a knock-on effect on companies as they would need to ensure the reliability, clarity and alignment of disclosures on relevant ESG factors.

'The impact of the crisis caused by Covid-19 on ESG investing will be interesting to follow. If ESG factors that individuals have always cared about, but never focused on, continue to be exacerbated in a post-pandemic world, this has the potential to heighten the need to understand investments through an ESG lens'

The impact of the crisis caused by Covid-19 on ESG investing will be interesting to follow. If ESG factors that individuals have always cared about, but never focused on, continue to be exacerbated in a post-pandemic world, this has the potential to heighten the need to understand investments through an ESG lens, with greater granularity and definition. It may also highlight that ESG factors are not static as some assume and that people's perceptions and priorities change.

There's an opportunity to better understand and integrate ESG data that could lead to the emergence of more tightly defined ESG standards, mass customisation of ESG products that better reflect investor preferences, as well as improved clarity and accuracy of corporate disclosures. Ultimately these improvements will help to embed ESG principles more fundamentally into the investment process. •

Corinne Neale, global head of business applications, BNY Mellon Data and Analytics Solutions.

To find out more about BNY Mellon's ESG Analytics capabilities, please contact Corinne Neale, head of business applications, BNY Mellon Data and Analytics Solutions at corinne.neale@bnymellon.com, and Frances Barney, head of global risk solutions for BNY Mellon Asset Servicing, frances.barney@bnymellon.com.

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Key sustainable investment developments involving public institutions in 2019-20

Institution	Description	Date
Hesta Super Fund	Australia's \$37.2bn superannuation fund launched its climate change transition plan. It committed to cut absolute carbon emissions in its investment portfolio by 33% by 2030 and be net zero by 2050.	June 2020
GIC	Singapore's \$440bn sovereign fund was the lead investor in a \$250m funding round for food waste company Apeel Sciences.	May 2020
Government Pension Investment Fund	Japan's \$1.6tn pension fund – the world's largest – raised its allocation to foreign bonds to 25% from 15%, enabling it to tap international green bond markets.	March 2020
European Commission	The technical expert group on sustainable finance released its final report and recommendations on the EU taxonomy, providing guidance on company disclosures.	March 2020
Australia Local Government Super	The LGS became the first superannuation fund to issue a certified green bond, raising \$38m to invest in low carbon office buildings with certification.	March 2020
AP1	Following last year's divestments from nuclear weapons, tobacco, coal and oil sands, Swedish pension fund AP1 decided to divest entirely from fossil fuels, citing the need to manage its climate risk exposure. It announced plans to develop a roadmap towards achieving a carbon neutral portfolio by 2050.	March 2020
ABP	Europe's largest pension fund, Dutch ABP, announced its commitment to make its portfolio climate-neutral by 2050. It will start with a 40% reduction in carbon emissions from its equity portfolio in the next five years.	February 2020
California State Teachers' Retirement System	CalSTRS issued its first green bond, raising \$272.6m with a 30-year deal. Proceeds will fund the construction of the first building owned by a pension fund to acquire certification for a green bond issuance.	December 2019
Sveriges Riksbank	Sweden's central bank decided to divest its reserves portfolio from carbon-intensive Canadian and Australian local bonds.	November 2019
Temasek	Singapore's \$373.1bn sovereign fund set 2030 as the target year to halve greenhouse gas emissions in its portfolio. It will start by reporting on its usage of water, paper, electricity and air miles starting this financial year.	November 2019
Central Banks and Supervisors Network for Greening the Financial System	The NGFS, now a group of 68 members, published a Sustainable and Responsible Investment Guide for Central Banks' Portfolio Management.	October 2019
APG and PGGM	Dutch pension fund PGGM and asset manager APG set up the SDI Asset Owner Platform, an artificial intelligence-powered platform for institutional investors to contribute to the United Nations sustainable development goals.	September 2019
Republic of Chile	Chile became the eighth country to issue a sovereign green bond, raising \$1.4bn. This was the Americas' first issuance of sovereign certified climate bonds (the only other two being the Netherlands and Nigeria). Proceeds will be used to finance and refinance electric transportation, solar projects, water infrastructure and reducing carbon emissions in real estate.	June 2019

About OMFIF

OMFIF - the Official Monetary and Financial Institutions Forum - is an independent think tank for central banking, economic policy and public investment. With a presence in London, Singapore, Washington and New York, it is a neutral platform for best practice in worldwide public-private sector exchanges.

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