Investment **Leaders Group**

shelter, sanitation Security and basic

treedons to all

Enhanced health. education, justice

> ÷

and equality of

opportunity for all

Secure, socially inclusive jobs and working

conditions for all

Preserve stocks of natural resources through efficient and circular use

Maintain ecologically

sound landscapes and seas for nature

and people

Limit GHG levels 1 to stabilise glob temperature under 2°C

Food, Water,

\$\$\$

In search of impact

Measuring the full value of capital



Investment Leaders Group

The Investment Leaders Group (ILG) is a global network of pension funds, insurers and asset managers committed to advancing the practice of responsible investment. It is a voluntary initiative, driven by its members, facilitated by the Cambridge Institute for Sustainability Leadership (CISL), and supported by academics in the University of Cambridge.

The ILG's mission is to help shift the investment chain towards responsible, long-term value creation, such that economic, social and environmental sustainability are delivered as an outcome of the investment management process as investors go about generating robust, long-term returns.

Cambridge Institute for Sustainability Leadership

For 800 years, the University of Cambridge has fostered leadership, ideas and innovations that have benefited and transformed societies. The University now has a critical role to play to help the world respond to a singular challenge: how to provide for as many as nine billion people by 2050 within a finite envelope of land, water and natural resources, whilst adapting to a warmer, less predictable climate.

The University of Cambridge Institute for Sustainability Leadership (CISL) empowers business and policy leaders to tackle critical global challenges. By bringing together multidisciplinary researchers with influential business and policy practitioners across the globe, it fosters an exchange of ideas across traditional boundaries to generate new, solutions-oriented thinking.

Rewiring the Economy

Rewiring the Economy is CISL's ten-year plan to lay the foundations for a sustainable economy. The plan is built on ten interdependent tasks, delivered by government, finance and business co-operatively over the next decade to create an economy that encourages sustainable business practices and delivers positive outcomes for people and societies.

Publication details

Copyright © 2016 University of Cambridge Institute for Sustainability Leadership (CISL). Some rights reserved.

Disclaimer

The opinions expressed here are those of the authors and do not represent an official position of CISL, the University of Cambridge, or any of its individual business partners or clients. This report is not, and should not be construed as, financial advice.

Acknowledgements

The lead authors of this study were Dr Jake Reynolds (CISL), Clarisse Simonek (CISL), Hervé Guez (Mirova) and Mathilde Dufour (Mirova). The work benefited from invaluable contributions from the participating members of the ILG, especially Manuel Lewin (Zurich Insurance Group), Andrew Mason (Standard Life Investments), Rebecca Maclean (Standard Life Investments), Alix Chosson (Standard Life Investments), Khalid Husain (TIAA Global Asset Management), and Manica Piputbundit (TIAA Global Asset Management). Expert contributors included Carbone 4, Dr Kirsten Sehnbruch, Chris Tuppen, Dr Gemma Cranston and oekom.

Reference

Please refer to this report as University of Cambridge Institute for Sustainability Leadership (CISL). (2016, May). *In search of impact: Measuring the full value of capital*. Cambridge, UK: Cambridge Institute for Sustainability Leadership.

Copies

This full document can be downloaded from CISL's website: www.cisl.cam.ac.uk/publications

Foreword

Hervé Guez

Director, Responsible Investment Research, Mirova

Investment is on the verge of a big leap forward.

Investment is on the verge of a big leap forward. In the past it was possible to describe a fund as responsible if it excluded certain types of assets – typically arms, alcohol and tobacco – while retaining practically all other features of conventional funds. More recently it has been necessary to show some degree of outperformance on environmental, social or governance (ESG) issues, more progressively than the competition. But are such funds truly responsible? By what standard would that be judged?

Investors understand their returns in far greater detail than their socalled 'non-financial' performance. As a result they have very little to say to beneficiaries about the wider impacts of their investments on society. It is not an exaggeration to say that in the main investors do not actually know whether the flows of capital they are responsible for do good or harm in society. And of course, if they were to make claims in this area they may be contested: good for one stakeholder may very well be regarded as harm by another.

This is where this impact framework, developed as a co-operation between the ILG and the University of Cambridge Institute for Sustainability Leadership (CISL), comes in. The framework takes as its starting point the United Nations Sustainable Development Goals (SDGs), the closest thing that the world has to a strategy. Through a considered process, the goals have been converted into a set of six impact metrics for investors – metrics that do not measure intent or process in the asset base, but impacts, both positive and negative, of those assets on important social and environment topics. These are not transient metrics: with the help of Cambridge and its partners we are building them from first principles, drawing on robust science and ideas. In applying the framework we shall be looking at our portfolios in a fundamentally different way. We will be exploring their impact on the critical challenges of our generation – poverty, health and wellbeing, job creation, use of resources, protecting ecosystems and stabilising the climate. We have no doubt we shall find some surprising results, and be inspired to tell more compelling stories to our beneficiaries about the value of our work. We may also discover areas where our work is holding progress back and face difficult decisions, with our beneficiaries, about how and where to realign.

With crisis after crisis engulfing the world, the era of sustainable development is long overdue. Many of our clients and beneficiaries are there already. They are asking us to explain how we are using their money to create a better world, and we are struggling to respond. Open this report, take a look, and be empowered to view your investments in a different way. Most importantly join with the ILG to take a big leap forward in responsible investment.

1 and the second se

Investment Leaders Group (ILG) members 2016



Contents

Executive summary	3
Foundations of investment impact	5
What do we mean by impact?	5
Why is a framework needed?	6
Why this framework is different	7
Applications of the framework	8
Making impact meaningful to investors	9
Impact theory: the SDGs as a reference	9
Impact themes	11
Measuring investment impact	12
Proposed metrics	12
Categorisation	14
Understanding performance	15
The methodologies	15
Environmental example: climate stability	16
Social example: decent work	18
Remaining themes	20
Basic needs	20
Wellbeing	20
Resource security	21
Healthy ecosystems	22
Disclosure to beneficiaries	23
Next steps	27
Annex A: United Nations Sustainable Development Goals (SDGs)	28
Annex B: Value exchanges in an economy	29
Annex C: Notes on climate stability	30
Annex D: Notes on decent work	32
References and bibliography	
Consolidating three years of leadership	37

This report is part of a series of related outputs on responsible investment published by the ILG and CISL:



The moral, financial and economic justification for responsible investment, and the academic evidence underpinning future action.



Analysis of the short-term risks stemming from how investors react to climate-related information.



Guidance on the characteristics of mandates that encourage long-term, sustainable investment management.



Assessment of the impact of carbon-related regulation on asset profitability.



A framework to help investors measure and communicate their contribution to sustainable development.

Executive summary

While the financial performance of funds is readily accessible, their social and environmental impacts remain largely opaque, not only to the public but to the investment industry itself. It is time to change that.

As fiduciaries, investors gain by helping beneficiaries make informed choices about the management of their savings and investments. The consequences of investment for society should be no exception. The Investment Leaders Group (ILG) believes that economic, social and environmental sustainability should be delivered as an outcome of the investment management process as investors go about generating robust, long-term investment returns. To this end, the ILG has prepared a framework to help the industry measure its non-financial impacts, interpreted here as its contribution to sustainable development.

The framework is intended to help investors address the question: "What information should be communicated to beneficiaries, and in what form, to allow them to determine whether their interests in non-financial outcomes are being realised?" In this way the beneficiaries of investment – *individual savers and investors, pension funds, insurance companies, family offices, sovereign funds and all other forms of asset owner* – will be empowered to make up their own minds as to whether their money is doing harm or good, and allocate it in line with their beliefs and values.

The ILG is confident that the investment industry can and will improve its measurement and communication of non-financial impacts to clients and beneficiaries if offered a conceptually rigorous and empirically sound framework. Two years ago, the group set out to design such a framework, engaging with sustainability reporting organisations, information providers and academics in order to refine its development and application.

> The ILG is confident that the investment industry can and will improve its measurement and communication of nonfinancial impacts to clients and beneficiaries.

The framework has three defining characteristics:

- It focuses on non-financial outcomes rather than intentions or policies. In a world of volatile environmental risks, scarcities and increasing income inequality, it is not enough to know simply that a company is improving its social and environmental performance. It has become essential to understand the impact a firm has on society.
- 2. It focuses on impact on the environment and society, not financial materiality. Many frameworks assess the materiality of environmental, social and governance (ESG) issues to financial performance, and the ILG does not wish to add to this list. What is lacking is a simple way to understand non-financial *impacts* that is standard across the industry. It is worth noting that sustainability and (long-term) financial performances are correlated, but that is not the lens taken by this framework.
- 3. The information derived from the framework is transparent, simple and relevant to help beneficiaries make practical choices about how they allocate their money. All the evidence points to clients and beneficiaries having a low appetite for (and tolerance of) complexity.

Underpinning the framework are the United Nations Sustainable Development Goals (SDGs) agreed by world leaders in 2015. Owing to the large number and diversity of the goals, they have been distilled into six themes relevant to investors, from which metrics, methodologies and test reports are being derived. One social theme ('decent work') and one environmental theme ('climate stability') have been developed most fully to date and are presented later in this report.

Executive summary continued

Impact information can be disclosed in fund factsheets to inform beneficiaries' choices about fund selection. It can also be used by institutional investors to specify their interests and expectations about impact in 'request for proposal' processes, mandates and policy statements. Fund managers, consultants and investment platforms can use the framework to form a clearer view of the impacts of asset choices, both to meet the expectations of clients and beneficiaries *and* to optimise the deployment of capital for societal, as well as financial, benefit.

As a next step the ILG is committed to researching methodologies and for the remaining four themes in the framework, as well as exploring how beneficiaries respond to different forms of impact information – and ultimately how they allocate capital. On the other side of the value chain, the ILG will engage with the information industry to continue to improve both the quality and availability of the data underlying impact reporting across asset classes.

The long-term vision of this work is to enable a revolution in 'consumer choice' in financial services, where the social and environmental impact of money is transparent to investment beneficiaries in the same way that it is apparent to food and energy consumers today. Those sectors have been obliged to act on transparency in order to retain trust with their customers. This framework allows the financial services sector, starting with investment, to embark on a similar path.

The framework is not a complete solution, but a first step towards grappling with an extremely complex reporting challenge. We hope it will help financial institutions to better understand the contribution they are making to sustainable development and in doing so better represent the interests of their clients and beneficiaries.

Acronyms

AD	Anaerobic Digestion
CSPO	Certified Sustainable Palm Oil
ESG	Environment, Social and Governance
EV	Enterprise Value
GHG	Greenhouse Gas
FSC	Forest Stewardship Council
IEA	International Energy Agency
IPCC	International Panel on Climate Change
MCI	Material Circularity Indicator
MSC	Marine Stewardship Council
SDGs	Sustainable Development Goals
UN	United Nations

The long-term vision of this work is to enable a revolution in 'consumer choice' in financial services, where the social and environmental impact of money is transparent to investment beneficiaries in the same way that it is apparent to food and energy consumers today.

Foundations of investment impact

What do we mean by impact?

Investing has consequences for society, the economy, and the environment. One might call the environment and social consequences an 'ESG dividend'.

Since they are not usually included in financial analyses, investment impact may be described as the non-financial consequences of investing, a definition applicable to all asset classes. All investment produces non-financial impact irrespective of conscious effort: it is just not generally measured. If the impacts of a portfolio are intentionally positive, one might describe the process as impact investing.

Investment impact should not be confused with *ESG integration*, which is the process of taking into account environmental, social and governance (ESG) risks and opportunities in investment decisions. Many frameworks exist to assess the materiality of ESG issues to financial performance. The ILG has developed two models that shed light on the potential impacts of climate change on portfolio value arising from, firstly, shifts in market sentiment¹ and, secondly, policy responses.² While that is an important consideration to investors, this is not the principle concern of this report. We define investment impact as the social and environmental outcomes of investment rather than the intentions or processes underlying it. In a portfolio context, impact is therefore made up of the combined impacts of a portfolio's constituent assets – the stocks, bonds, projects and other classes of asset typically present in a fund. In a world of volatile environmental risks, resource scarcities and social inequalities impeding economic progress, it is not enough to know simply that an asset is improving its social and environmental performance. It has become necessary to know whether it is doing enough to be considered part of the solution to the ambitions for the next fifteen years agreed by world leaders in 2015 under the auspices of the United Nations.

Why is a framework needed?

This report explores how investors can track and report their non-financial impact, and ultimately, relate it to their investment practices.

A simple and effective framework for reporting impact would enable investors to make transparent how they optimise their deployment of capital for societal, as well as financial benefit. While investors may choose to measure impact for a variety of reasons (for example engagement), this framework is concerned with the measurement and reporting process rather than its application to fund management.

Fundamentally, the purpose of this framework is to empower beneficiaries to understand, and make choices about, the social and environmental impacts of their investments alongside their use of traditional financial data. The revolution in disclosure, which is now second nature in much of the consumer industry, has barely permeated financial services. One of the reasons is the underlying complexity of the task. And yet the basis on which responsible investment must be judged is whether or not it generates benefits for society above and beyond the financial benefits accruing to the industry and its beneficiaries. A framework is needed for the four main reasons detailed below.

Increased demand for impact reporting

Pension funds are witnessing growing demand for impact information, both from members and regulators, ILG member. TIAA-CREF, has been offering a 'social choice' pension option to its members since 1990. More recently, in 2015 the Dutch General Pension Fund for Public Employees (Pensioenfonds ABP) revised its responsible investment policy to address the interest of its fund members in a pension plan that contributes to a sustainable society.³ Other pension funds, such as PFZW, Vic Super and Local Government Super, have also started to report impact to their beneficiaries. In 2015, the US Department of Labor, responsible for regulating voluntary pensions, provided guidance recognising the legitimacy of pension members' interests in environmental and social concerns, alongside financial returns⁴ (the ILG contributed to this important development through its workstream on fiduciary duty). Similarly, France became the first country to introduce mandatory climate change-related reporting for institutional investors.⁵

Systemic risks

A further reason why institutional investors (and their regulators) are starting to look at impact is the link between social and environmental performance and long-term financial returns. This is particularly relevant to 'universal owners' – large institutional investors whose holdings are so broad and diverse that they own, in effect, a slice of the economy as a whole and thus have an interest in maintaining a stable, well-functioning and well-governed social, environmental and economic system.⁶ The negative 'externalities' of certain industries and corporate behaviours may threaten returns by burdening other industries with risks or costs (for example climate change or depletion of resources), or saddling governments with increased costs (for example in health, security or environmental protection).

If left unchecked, regardless of short-term financial returns from individual assets, this can produce systemically damaging risks to the economy.⁷ The UK economist, Sir Nicholas Stern, described climate change in 2007 as the greatest market failure of all time.⁸ Managing impact is therefore not purely an altruistic matter. In fact, financial regulators in many parts of the world, as well as global fora such as the Financial Stability Board and the G20, are explicitly recognising the relationship between environmental risks and financial stability.^{9,10,11}

ESG integration, as currently performed, does not fully incorporate the fact that the economy – the 'benchmark' – may be affected by such risks or, conversely, shaped by the opportunity of their solutions. As an example, the ILG's report, *Unhedgeable Risk: How climate change sentiment impacts investment*, reveals that long-term economic growth is highest when society deals successfully with climate change.¹² While portfolios will continue to underperform or outperform their financial benchmarks, investors in aggregate will perform better in a healthier economy. Therefore, contributing to sustainable development is complementary to short-term financial materiality of social and environmental factors, and necessary to address underlying drivers of risk.

Guidance for the information industry

Not all of the data underpinning impact measurement are readily available. If investors are to disclose the aggregate impact of their assets they will require access to high-quality asset-level impact data. This framework provides an indication of what data are likely to be needed, and hence what datasets and services information providers may wish to build in order to meet future demand. For this reason the ILG engaged with a number of information providers and reporting bodies in the development of the framework.

Clarity for beneficiaries

A common standard for reporting investment impact would improve the credibility of impact claims, allow comparability across datasets and build trust with beneficiaries and other users. A plethora of reporting schemes exists, sitting alongside commercial ratings and information services. With the exception of carbon footprinting,¹³ in general these allow judgements to be made on the quality of corporate management processes rather than hard sustainability outcomes. While diversity is to be welcomed, it can breed confusion among non-specialists. For example, it may not be apparent to the end user that a fund rated better environmentally than a competitor does not mean it is making a positive impact – it may simply be less negative than the other fund. Similarly, it may not be apparent that a fund that is emphasising its social benefits (for example job creation) is not performing as well in other sustainability areas. A more comprehensive view of impact would reveal this.

Why this framework is different

This framework focuses on environmental and social outcomes rather than policies, processes or materiality.

Reporting on ESG issues has grown steadily over the last 30 years into a global endeavour led by a large number of research and information providers. The responsible investment 'information industry' is a reflection of client demand from financial institutions, driven by public demand for increased transparency and consumer choice on matters of global concern. This framework builds on current practice, while emphasising three important differences.

Financial materiality versus social and environmental impact

This framework focuses on social and environmental impact, not financial materiality. Social and environmental issues interact with investment in two ways. First, they can affect the financial health of an asset (for example a company) as a consequence of its dependency on natural resources, reputational damage, vulnerability to new regulation, loss of market or poor productivity. Where such factors have the potential significantly to affect the success of the investment, this is known as *financial materiality*. Second, the operations, supply chains and outputs of an asset can affect people, resources and the environment both positively and negatively without necessarily affecting the asset's short-term value - this is what we refer to as *impact*. The two differ conceptually: for example, a mining company that violates indigenous rights in a country with no relevant enforcement might not experience short-term financial risk, but the impact on its community could be significant. Similarly, a company impacts the planet through its consumption of resources and emissions, but the materiality of these impacts varies according to local regulation, supply and scarcity.

Norms versus outcomes

Many existing frameworks utilise norms-based analyses, meaning that they assess an asset's compliance with standards and conventions (with the exception of important controversies). While the information generated by this process helps investors to understand whether assets are mitigating social and environmental risks, this information is generally only a poor proxy for impact. Normsbased analyses also tend to focus on the operational footprint of an asset rather than how its products or services contribute to or hinder sustainable development. Rather than focus on policies and processes, this framework examines outcomes relevant to sustainable development across value chains.

Applicability across investment styles and asset classes

Since all investments have impacts, impact measures should be applicable in a standard way to all forms of investment, irrespective of investment style, asset class or geography. Developed by the ILG members – insurance firms, pension plans and fund managers – this framework has been designed with this in mind. This first version is applicable across different investment styles and geographies, and particularly pertinent to equities and corporate bonds.

Simplicity for beneficiaries

Beneficiaries are a key audience for impact information, but current information is either inaccessible or too complicated for non-specialists to understand. All the evidence points to clients and beneficiaries having a low appetite for (and tolerance of) complexity.¹⁴ For disclosure to help beneficiaries make practical choices about how they allocate their money, it should be transparent, simple and relevant. A dilemma lies in the fact that the nature of the effects being measured is inherently complex; nonetheless reporting must bring simplicity or risk excluding the very people it is intended to serve. The approach taken here is to identify a small number of simple-to-understand proxies for investment impact, some social and some environmental (six in total). The proxies are chosen for their intrinsic relevance to people and society – jobs, health, poverty, climate, nature and resources.

Applications of the framework

This framework is intended to empower beneficiaries to make choices about the social and environmental impacts of their investments in tandem with existing financial data.

In practice this means using impact information to inform how capital is allocated.

Impact information can be included in fund factsheets. Beneficiaries select investment funds directly with a financial institution (for example a pension fund, bank or insurance company), or indirectly through investment consultants, advisers and research platforms. A key document is the fund fact sheet. Key Investor Information Documents (KIIDs) or Simplified Prospectus are also used, but given the similarities between them we refer to them here simply as fact sheets.¹⁵ Although the look and feel of fact sheets varies from firm to firm, the information they contain is largely similar: fund objectives and investment policy, past performance, risk and reward, and charges, along with other practical information.

Impact information can be embedded in 'request for proposal' documents and investment mandates set by institutional investors, either to reflect their beneficiaries' interests (eg pension plans) or as an expression of their own values, beliefs and risk assessments (eg insurers). The majority of investment decisions are currently based entirely on economic grounds. While it is acknowledged that institutional investors will always strike their own balance between impact, risk and return of assets and funds,¹⁶ their expectations about impact can be specified in 'request for proposal' documentation, policy statements, monitoring processes and communications with stakeholders and beneficiaries. Expectations about impact can be formalised in the instructions or mandates institutional investors provide to fund managers. A parallel ILG workstream on mandates, Taking the long view: A toolkit for sustainable investment mandates, has identified the key characteristics of such agreements that encourage long-term, social and environmental performance to be enhanced.¹⁷

Fund managers, consultants and investment platforms can use the framework to form a clearer view of the social and environmental impacts of asset choices, both to meet the expectations of clients and beneficiaries *and* to enhance their position in a growing market for responsible investment products. These are important actors in educating and helping beneficiaries (both individuals and institutions) understand the impact of their investments, and the choices available to them should they wish to switch. Studies have shown that investment consultants, for example, play a key role in shaping institutional investment strategies, practices and fund manager selections.¹⁸ Clearly, fund managers interested in maximising the social and environmental performance of their funds can use the framework to guide the construction of portfolios and influence the management of assets through engagement processes.

In the long term, the ILG's vision is that this framework will form a compass bearing for impact measurement along the investment supply chain, from companies wishing to highlight their contribution to society to savers wishing to align their capital with the beliefs and values they hold; and similarly from fund managers balancing risk, return and impact in their portfolios to governments aligning the financial system with policy objectives.

Making impact meaningful to investors

Impact theory: the SDGs as a reference

Investment is a key driver of economic activity. Different sets of costs and benefits result from how and where capital is invested.

The underlying assets – in the main, companies and projects in which investors acquire equity and debt – are to different degrees dependent on labour, natural resources and ecosystems as *inputs* to their businesses. In turn, those assets produce goods and services, wealth, wastes and emissions as *outputs*. The economy is an assemblage of inflows and outflows, some of which are accounted for as financial transactions while others – such as drawdowns on the global commons – sit outside public or private monetary balance sheets.

In taking an economy-wide view it is obvious that an asset such as a company has more significance in impact terms than the immediate consequences of its operations. Companies impact sustainable development throughout their operations, supply chains and products and services. In some cases the product impact may be more significant than the operation or supply chain – for example emissions from vehicle usage.

Impact theory: the SDGs as a reference continued

Figure 1 illustrates a set of typical inflows and outflows from an economy (see Annex B for a more complete description of each element). In general the value to society of each flow is contested. For example, labour is an essential input to an economy, with employment sustaining livelihoods all over the world. However, not all jobs can be considered 'good jobs': quality varies according to pay, job security and working conditions. Similarly, the fruits of an economy – goods and services – in theory meet the needs of society, but in practice many people are excluded from their benefits as a consequence of income inequality and other forms of disadvantage.¹⁹ Likewise, the production of goods and services can result in significant drawdown on natural resources that may be of value to future generations, or less empowered sections of society today. Combined with large-scale pollution and destruction of nature, all of these factors place a spotlight on the public value of corporations. Is the tax they pay consistent with the costs and benefits to society created, or indeed the profits generated?

To avoid the need to take a subjective view on what is 'good' and 'bad' for society, the United Nations Sustainable Development Goals (SDGs) are adopted here as an internationally agreed reference point.²⁰ These goals were agreed by world leaders in New York in 2015 following five years of discussion amongst almost 200 governments. They are the closest thing to a strategy for planet Earth over the next 15 years that humanity has ever generated (for further information on the 17 goals see Annex A). As such they offer an excellent lens through which to measure the impact of an asset and ultimately a fund.

In taking an economy-wide view it is obvious that an asset such as a company has more significance in impact terms than the immediate consequences of its operations.



Figure 1: Inflows and outflows from an economy

Impact themes

Owing to the large number and diversity of SDGs, they have been distilled into six themes relevant to business and investment.

The framework draws on a model of economic transition published by CISL in July 2015 (*Rewiring the Economy*), which takes the SDGs as its starting point.²¹ Metrics, methodologies and test reports were then derived (see Figure 2). To date, methodologies and test results have been developed for two of the themes (decent work and climate stability).

The six impact themes bring simplicity to a complex agenda for global change. They capture most of the purposes of the SDGs while having the advantage of being small in number. They focus on the outcomes that the economy should deliver to meet the goals, and hence the outcomes that beneficiaries thinking about the goals might reasonably wish to see generated through their investments. Impact, then, can be viewed as the contribution of an asset (or fund) to the SDGs.

A note on governance

Governance refers to the set of rules, practices and processes by which an entity is controlled and balances the interests of its stakeholders. It is not itself a social or environmental impact and therefore lies outside the scope of this framework. That said, good governance is central to the delivery of sustainable development at both an asset and fund level: an adequate balance of power, a well-functioning board, robust internal controls, and executive remuneration that integrates environmental and social issues into business practice are key to ensuring that companies deliver a positive impact on society. Good governance of public institutions is equally necessary to deliver wellbeing for citizens.



Figure 2: Impact themes and their relationship to the Sustainable Development Goals

Measuring investment impact

Proposed metrics

There is value in developing both quantitative and qualitative methods, and in relating performance to the targets set by the SDGs.

The measurement of impact is highly complex and data-demanding. A three-step approach to quantitative measurement is proposed for each of the six themes:

- **Base:** a quantitative measure of the impact on an asset (or fund) across its life cycle.
- Stretch: an enhanced measure to be implemented when the required data becomes available.
- Ideal: an enhanced measure allowing comparison of performance with the level required by the relevant Sustainable Development Goal(s).

A set of six metrics is proposed in Table 1. Given the themes are broad and high level it is impossible to capture their full extent in a single number or judgement. Simple proxies of each theme are therefore captured to convey their main essence. Being quantitative in nature, the base metrics provide objective, comparable, consistent and reproducible results. However, it is well recognised that the current level of disclosure by companies across the six themes is limited at present, with much of the information being anecdotal. Other than in relatively well developed areas, such as GHG emissions reporting, existing sources of impact data lack rigour and consistency across issues, countries and sectors. The ILG welcomes interest from information service providers wishing to utilise the metrics in the design of their products.

Over time, the base metrics will give way to the stretch and ideal metrics as it becomes possible to build up a more accurate picture of impact at an asset and fund level. A number of potential refinements to the base metrics are highlighted in Table 1. They include *contextual weightings* (eg purchasing power adjustments), *qualifiers* (eg jobs above a certain level of pay) and *enabling effects* (eg indirect job creation or 'avoided' emissions downstream). The use of weightings and qualifiers helps to quality assure the results, while the inclusion of enabling effects²² seeks to highlight positive downstream impacts that may otherwise go unreported.

Over time, the base metrics will give way to the stretch and ideal metrics as it becomes possible to build up a more accurate picture of impact at an asset and fund level.

Table 1: Description of metrics

Theme	Metric	Rationale	Refinements
Basic needs	Revenue from products serving low-income groups (\$)*	Proxy for addressing needs of low-income groups	 Purchasing power Restriction to 'basic needs' products Fair dealing Product ethics
Wellbeing	Total tax burden (\$)*	Proxy for public value contribution	 Corruption record of government Negative externalities (alcohol, air pollution, tobacco, sugar) Revenue from health, care, education, justice and environmental protection
Decent work	Number of jobs	Proxy for livelihoods supported in operations + supply chain	 National level of unemployed and vulnerable workers Living wage Stable (open-ended) contracts Labour conditions Indirect job creation
Resource security	Consumption of virgin material (tonnes)*	Proxy for resource burden and waste of operations + supply chain	Scarcity of hard commodityRegeneration of soft commodityToxicity
Healthy ecosystems	Land footprint (hectares)*	Proxy for ecosystem burden of operations + supply chain	Level and trend of national ecological deficitFull ecological footprintRestoration of ecosystem services
Climate stability	Scope 1–3 GHG emissions (tC0 ₂ e)	Proxy for climate burden of operations + supply chain + product use	 Avoided emissions from product use Sector-specific targets and contributions Alignment with 2°C scenario

* Proposals only, subject to further definition

Categorisation

Quantitative results such as numbers representing job intensity or GHG emissions performance communicate impact in its rawest form. They can also be placed in categories representing different levels of impact such as the five-colour scheme shown in Figure 3. Each of the six impact themes in this framework can be treated in this way, with the colours representing the contribution of an asset (or fund) to the SDGs across the range: highly negative, negative, limited or no contribution, to positive and highly positive. The approaches used to categorise the results obtained from the metrics (base through ideal) are highlighted in the methodologies that follow. For example, across all themes the base metric is categorised by comparing the performance of an asset (ie job or carbon intensity) with that of the assets with highest performance in the economy. Qualitative assessments of impact can also be presented in colourcoded schemes, based on research into, for example, an asset's forward strategy, capital investment, operating standards, past track record, and so on. Clearly these assessments can supplement historic quantitative results with a fuller analysis of the asset's likely future impact. The categorisation method proposed for the stretch and the ideal metrics reflects this, combining quantitative and qualitative results to produce a judgement on the asset's contribution to the SDGs. Note that when quantitative data are absent, sparse or of insufficient quality or consistency to be used meaningfully, qualitative assessment may be the only usable method of analysis. The development of a uniform approach to quantitative and qualitative impact measurement, sharing the consistency of financial performance reporting and credit ratings, will undoubtedly increase investors' confidence in the use of impact information.



Figure 3: Five-way categorisation of impact

Understanding performance

The methodologies

An important question for all of the themes is what level of performance can be said to be 'sufficient'.

In the main, the three social themes produce positive results representing the contribution of investment to meeting basic needs, wellbeing and decent work, respectively. The three environmental themes generally work as a negative counterbalance: it is simply difficult for an asset to manage its operations or supply base without some adverse impacts on the environment. The narrative of social positives and environmental negatives should not be taken as constraint however. It is quite possible for a company to undermine its social license through corruption, wrongdoing and exploitation; likewise, it is technically feasible for a company to deliver positive environmental impacts (as opposed to incrementally improving negative ones). Moreover, some businesses can act as 'enablers' of positive impact through products, services, solutions and innovations which create significant downstream gains in the wider economy.

In the case of the three environmental themes, science-based targets can be identified to relate an asset's performance (or that of a fund) to, respectively, specific levels of global warming, resource depletion or ecosystem degradation that are consistent with the SDGs. In the case of climate stability that level might be 2°C, allowing investors to assess whether an asset is in alignment with the upper limit of global warming agreed by governments.²³ Similar science-based targets could be identified for the resource and ecosystem themes to assess whether assets are operating within the limits of the Earth's restorative capacity.

Unfortunately the three social themes are not amenable to sciencebased target setting as there is no objective answer to what should be considered 'sufficient' in the context of decent work, wellbeing and basic needs. Instead, an asset's contribution to these themes may be judged in comparison with a reference level, such as the highest performance found regularly elsewhere in the economy. In the case of decent work, for example, the job richness of a fund would be compared to that of a notional fund consisting of assets from the highest job intensity sectors. To encourage a shared understanding of impact measurement within the investment industry, the ILG is developing methodologies and test results for each of the six impact themes. Thus far, methodologies have been prepared for one social theme (decent work) and one environmental theme (climate stability), selected for their ready association with economic activity, importance to governments, and resonance with the general public.

Methodologies for the two pilot themes are summarised below, alongside test results for selected indices. Please note:

1. The metrics measure the intensity of an impact in relation to enterprise value (EV):²⁴

Impact intensity = Impact interprise value

Enterprise value is used to enable the metric to be applied equally well across equity and fixed income asset classes. The impact allocated to a portfolio is calculated by multiplying the resulting intensity by the amount invested (in US\$m):

Impact portfolio = Impact intensity x Amount invested

2. The metrics work at both an asset level (ie an individual company or project) and a fund level when aggregated across a portfolio. Aggregation methods should avoid the practice of 'double counting', which can occur when a variable (eg jobs or emissions) is recorded more than once within a value chain. A simple example would be the risk of triple counting greenhouse gas emissions in a portfolio containing a transportation company, vehicle manufacturer and fossil fuel producer working in the same value chain.

Environmental example: climate stability

Background

Since the first report from the International Panel on Climate Change (IPCC) in 1990, a consensus has been building among scientists, policymakers, business leaders and the general public that the world must transition to a low (perhaps even a zero) carbon economy to address the vast and adverse effects of anthropogenic climate change. The consensus is now overwhelming, with the latest (2014) assessment from the IPCC suggesting a 41–72 per cent reduction in global greenhouse gas (GHG) emissions will be needed by 2050 to hold global average temperature rise to below 2°C above pre-industrial temperatures by the end of this century.²⁵ To this end, a breakthrough agreement was reached between the world's nations in Paris in December 2015. Due to come into force in 2020,²⁶ it will commit all 195 members of the United Nations to hold temperature rises to "well below 2°C", with an aspiration to limit warming to 1.5°C.²⁷

Achieving a rapid and successful low carbon transition will rely on investing in green infrastructure, large-scale energy efficiency solutions, and a radical change in the energy mix so that the upstream and downstream emissions of companies, as well as their operational footprints, are brought on to a steeply downward path. This impact theme explores how investors should determine whether their portfolios are aligned with this goal so that investors can communicate this to beneficiaries who are increasingly concerned about climate change.

> A breakthrough agreement was reached between the world's nations in Paris in December 2015. Due to come into force in 2020, it will commit all 195 members of the United Nations to hold temperature rises to "well below 2°C", with an aspiration to limit warming to 1.5°C.

Measuring climate stability

A large part of the emissions burdens of some firms occurs indirectly as a consequence of the use of their products and services. For this reason, a methodology that seeks a comprehensive view of a firm's impact on climate stability must go beyond operational *carbon footprinting* to capture its broader upstream and downstream performance.²⁸

The methodology presented here²⁹ considers the greenhouse gas emissions (GHG) arising from a company's operations (known as scope 1), its use of bought energy, including electricity, for production (scope 2), and emissions from its suppliers and customers (scope 3). Please note that all greenhouse gases emitted by a company (including carbon dioxide and methane) are expressed in tonnes of carbon dioxide equivalent (tC0₂e).

Base metric:

GHG emissions from operations, supply chain, and clients' use of products, per \$m (tC0,e)

Emissions from a company's operation (scope 1) and purchased electricity (scope 2) are generally well understood and reported today. Emissions from supply chains and especially product use require more complex calculations based on industry averages and technical data, and have been largely overlooked by the investment industry. This methodology considers scope 3 emissions. The innovation relies in computing the emissions from the combustion of fuel produced or sold in a year for energy producers, transporters and distributors, and calculating the future emissions due to products sold during a year for equipment manufacturers. The methodology could be expanded in the future to calculate the scope 3 emissions of financial institutions, which would include their lending, for example. When aggregating emissions at a portfolio level, the methodology reprocesses total figures of GHG emissions across and within 'macro sectors' to avoid double counting emissions (for more detailed notes on the methodology see Annex C).

The simple five-way categorisation shown in Figure 3 is applied to the results by comparing the carbon intensity of an asset to those with highest carbon intensity in the economy.

Stretch metric:

GHG emissions and mitigation from operations, supply chain, and clients' use of products, per $m (tC0_2e)$

In addition to measuring the emissions intensity of the portfolio, this metric looks at the extent to which a company is mitigating climate change. Mitigation considers carbon intensity reductions accumulated in the past five years. It is important to highlight that for energy producers, transporters and distributors, mitigation takes into consideration the fuel mix carbon intensity and how it compares to that of a 2°C scenario as defined by the International Energy Agency (IEA). Finally, for equipment manufacturers, the reduction in GHG emissions achieved among customers is considered (for example by wind turbines or energy efficient appliances). Though it may be tempting to net emissions and mitigation it makes little sense in practice as current carbon emissions are a reflection of past diversification, efficiencies and innovation.

Numeric results from the stretch metrics can be combined with qualitative information on the asset's forward strategy into the fiveway categorisation highlighted in Figure 3. Emissions and mitigation figures reflect historical performance, whereas a company's pathway towards a 2°C warming scenario also requires an understanding of its forward strategy. Capital expenditures, research and development (R&D) and credible³⁰ emissions reduction targets are therefore included in the qualitative assessment.

Ideal metric:

Alignment of portfolio with specific level of global warming (°C)

The ideal metric compares an asset's future emissions intensity across scope 1, 2 and 3 to the level required for it to be consistent with a 2°C global warming scenario. Any differences are translated into an estimate of what warming scenario (in °C) the asset – or in aggregate, the portfolio – is aligned with. The translation of emissions estimates into warming scenarios carries significant uncertainties, yet without doubt offers a compelling view of climate change impact. The categorisation of impact for the ideal metric in this case is merely a representation of the asset or portfolio's consistency with a 2°C world.

Table 2: Impact on climate stability: results

Stoxx600 contribution to climate stability (stretch metric)

GHG emissions intensity	(scope 1 + 2 + 3)	224.5 tCO ₂ e/\$m
GHG emissions intensity	(scope 1 + 2)	46.2 tCO ₂ e/\$m
GHG mitigation intensity		-12.7 tCO ₂ e/\$m
Categorisation		Negative contribution to climate stability
Very positive		
Positive		
Limited		
Negative	224.5 tCO ₂ e/\$m	+
Very negative		

Test results from basket of stocks (Stoxx600 Index)

To demonstrate how this methodology can be applied to a portfolio, a basket of stocks (the Stoxx600 Index) was selected for testing. Emissions intensity at scope 1 + 2 is shown alongside the base metric (scope 1 + 2 + 3) in Table 2 to highlight the effect of including indirect emissions on the results. Results are also included for the stretch metric due to the relative richness of data available on emissions performance in comparison to the other social and environmental themes.

Based on the methodology, the GHG emissions intensity is 225 $tCO_2e/\$m^{32}$ and the mitigation intensity is -13 $tCO_2e/\$m$. To put 225 $tCO_2e/\$m$ into context, investing one million dollars in the fund would have a similar carbon impact as driving 43 passenger vehicles for one year based on US Environmental Protection Agency (EPA) data.³³ This result is very different from a typical scope 1 + 2 emissions intensity which comes to 46 $tCO_2e/\$m$ in this example, equating to only nine vehicles driven for one year per million dollars invested.

By way of example, if an investor wished to contribute to climate stability by adjusting asset allocation (reducing sectors related to fossil fuel) and stock picking (selecting companies with low emissions and high mitigation potential), it could achieve an emissions intensity of 72 tCO₂e/\$m,³⁴ equivalent to a reduction of 32 passenger vehicles per year in comparison to the original index. Interestingly, if optimisation was based only on scope 1 + 2, the emission intensity achieved would be of 188 tCO₂e/\$m (for further details see Annex C).

Social example: decent work

Background

Job creation by the private sector plays an important role in sustaining livelihoods, and in combatting inequality and underemployment. This theme therefore examines an asset's contribution to providing secure, socially inclusive jobs and working conditions for all.

There is currently no standard on what constitutes decent work. Quality jobs are universally recognised as being an important contributor to human wellbeing and long-term economic development.³⁵ In Maslow's hierarchy of needs,³⁶ decent work corresponds to the higher bands of the pyramid, capable of engendering a sense of belonging, esteem and self-actualisation.

Yet not all jobs are equal, with varying levels of pay, job security and working conditions. Since the International Labour Organisation (ILO) introduced the term decent work in 1999 in response to international concern over employment conditions,³⁷ an increasing amount of policy and academic attention has focused on this concept.³⁸ As a result, the SDGs recognise that "poverty eradication is only possible through stable and well-paid jobs" and set the goal of "full and productive employment and decent work for all" by 2030.³⁹ However, the SDGs do not put forward any kind of definition as to what is meant by decent work and no standard has yet emerged among international bodies (for a more detailed review see Annex D).^{40,41}

Measuring employment outcomes

Decent work can be understood as having two dimensions: the *number* of jobs supported by an asset and the *meaningful characteristics* of those jobs (for example wages, job security and labour conditions).⁴² A company can contribute *directly* to decent work through formal employment contracts, or *indirectly* through the use of contractors and in its wider supply chain. In some cases it can also contribute to job creation indirectly through its products and services – a financial institution offering loans to start-ups is one example. Data on the quality of jobs are largely unavailable for most invested assets at present, even in relation to direct employment. Metrics are therefore proposed at three increasing levels of refinement starting with a 'base' metric that is actionable today, proceeding to improved 'stretch' and 'ideal' metrics as data become available in future.

Base metric:

Total number of direct jobs, adjusted for national rates of unemployment and vulnerable employment, per \$m

This metric represents the number of jobs (direct employment) sustained by an asset per million dollars invested, adjusted by the rates of unemployment and vulnerable employment in the labour market(s) where it operates (this reflects the view that greater impact can be achieved by sustaining jobs in difficult labour market conditions). The base metric does not take into account the quality of the jobs offered, nor does it extend to indirect (contracted and supply chain) labour. The simple five-way categorisation of impact shown in Figure 3 is applied to the results by comparing the job intensity of an asset to the assets with highest job richness in the economy (for further details see Annex D).

The next level of sophistication is the stretch metric, which is proposed for implementation over a five-year horizon with the assistance of information providers.

Stretch metric:

Total number of jobs, direct and contracted, with compensation above 60 per cent of the national median wage, adjusted for national rates of unemployment and vulnerable employment, per \$m This indicator includes only the workers earning an income level that is at least equivalent to 60 per cent of the country's median wage, a readily available threshold used throughout the OECD as a measure of relative income poverty (compensation should not include overtime). Wages are not a proxy for working conditions, but they are a key important quantitative factor.⁴⁴ Contracted labour is included in this metric. The exact definition of contracted labour shows some variation by country and sector, but is taken here to mean individuals who do not have a formal contract of employment, but are dependent on or subordinate to the asset being analysed.⁴⁵

Impact is categorised using the same five-way scale as the base metric, the difference being that the categories incorporate a qualitative assessment of working conditions, principally labour rights, discrimination and working hours. The assessment of a company's contribution to decent work is negatively affected if jobs are found to offer poor conditions.

The most complete or ideal metric requiring considerable development of data is as follows.

Ideal metric:

Total number of jobs, direct and indirect (contracted workers and suppliers acting on behalf of the company or manufacturing its branded products, plus jobs sustained through products/services), in formal open-ended contracts with compensation above the living wage, adjusted for national rates of unemployment and vulnerable employment, per \$m

This metric has a more granular data requirement and requires a methodology to limit double counting within supply chains and clarification of how suppliers' provision of employment should be considered. Nonetheless, it offers a longer term destination for investors, information providers and companies interested in measuring employment impacts. Note also that in preference to "60 per cent of the national median wage", the concept of 'living wage' is introduced – a more sophisticated measure designed to address differences in standards of living and household sizes across countries.⁴⁶ Impact is categorised by combining the quantitative results with analyses of working conditions and forward strategy to form a qualitative assessment of the asset's contribution to decent work, both within its operations and within key areas of its supply chain.

Test results for basket of stocks (CAC40 Index)

To demonstrate how the base metric can be applied to a portfolio, a basket of stocks (the CAC40 Index)⁴⁷ was selected for testing. The nominal jobs (not adjusted for unemployment rate) are shown in Table 3 alongside the base metric (jobs adjusted by national unemployment) to demonstrate the effect this weighting has on the results. Job intensity can be located within a five-way categorisation covering the range very low, low, limited, positive and very positive. This assessment is based on the magnitude of the job intensity of a fund in comparison to a notional fund consisting of securities from the highest job intensity sectors (for further details see Annex D).

Table 3: Impact on decent work: results

CAC40 contribution to decent work Job intensity 4.6 jobs/\$m Normal job intensity (no unemployment rate adjustment) 3.4 jobs/\$m Categorisation Very low contribution to decent work Very positive Positive Limited Low Very low 4.6 jobs/\$m

Remaining themes

Good progress has been made in identifying metrics and high-level methodologies for the remaining four impact themes. In advance of detailed methodologies, a preliminary description of each metric is offered below to illustrate their potential.

Basic needs

This theme examines an asset's contribution to tackling poverty through the lens of addressing the needs of low-income groups for basic services such as food, water, energy, shelter, sanitation, credit, communications, transport and health. Since we expect to pay for these goods and services in general, it is not surprising that they are less well accessed by low-income groups. In Maslow's hierarchy of needs, the 'basic needs' theme corresponds to the lower bands of the pyramid – the physiological needs that must be satisfied in order to enjoy other opportunities in life.

According to the World Bank, 12.7 per cent of the world's population lived at or below US\$1.90 a day in 2012, equating to 896 million people. Even though the share of the population living under that threshold nearly halved from 66 per cent in 1990 to 35 per cent in 2012, as the World Bank says, "far too many people are living with far too little."⁴⁸

Few companies have a direct relationship with this theme in that their markets serve better-off sections of society, or institutions such as other businesses and governments. However, some companies do manage to serve low-income groups in both higher and lower income countries. One way to measure the contribution of an asset to meeting basic needs is to find a proxy for the range of affordable benefits it unlocks for low-income people based upon the volume of business done with those groups directly or via intermediaries.

An illustrative metric is:

Revenue from products serving low-income groups, per \$m (\$)

To maintain consistency with the decent work metric, 'low-income group' is defined as the section of society with average income less than 60 per cent of the national median wage.

Potential refinements include:

- Adjusting for purchasing power in the markets where business is conducted with low-income people.
- Restricting scope to product categories that truly can be regarded as meeting essential needs (ie which are not diverting money which might otherwise be invested in poverty reduction, are not controversial or contested in terms of their value to lowincome people).
- Excluding revenues from companies with a poor record on human rights or exploitative practices with vulnerable customers (for example unethical money lending).

Wellbeing

This theme examines an asset's contribution to enhanced health, education, justice and equality of opportunity for all – in general the things we expect the state to provide. In Maslow's hierarchy of needs, wellbeing corresponds to the bands in the middle of the pyramid that relate to growing degrees of satisfaction based on good health, educational achievement, safety, opportunity and freedom.

Not all companies have an obvious relationship with wellbeing. In the case of providers of health, care, education, justice and environmental protection, it is perhaps more obvious than in other industries since their services directly contribute to the quality of life of individuals and communities. Beyond these sectors it is difficult, potentially impossible, to unravel the relationship between goods and services and levels of wellbeing among the population. A more general way to measure the contribution of a company to wellbeing stems from the recognition that governments are the national guarantors of the public good and raise money, principally through taxation, to deliver policies and services to achieve this. A company's total tax burden, comprising taxes on profits, people, production, property and environment (but not sales), therefore offers a proxy for its contribution to the public good.⁴⁹

An illustrative metric is: Total tax burden, per \$m (\$)

Potential refinements include:

- Weighting by the corruption record⁵⁰ of the tax-receiving government(s) (on the basis that tax revenues may not be reliably or efficiently spent on national wellbeing).
- Deduction of the costs of negative 'externalities' caused by a company's activities (for example respiratory health burdens on public health services from coal-fired power stations and vehicle emissions; disease and behaviour burdens from tobacco and alcohol products; diabetes and obesity burdens from highsugar products).
- Addition of revenues from products and services that directly support wellbeing objectives such as health, education, justice and environmental protection, which enable wellbeing impacts to be achieved.

Resource security

This theme examines the asset's contribution to preserving stocks of natural resources through sustainable, efficient and circular use. Most models of production can be described as linear: virgin materials are extracted from the ground (or grown) and used to make products that are consumed. This gives rise to chronically high levels of waste and creates a non-sustainable dependence on inputs of new natural resources. In a world of finite resources this model cannot work in the long run, and there are signs that it is reaching its limits.⁵¹

In contrast, 'circular' models aim to decouple production from any sources of unsustainability in the supply chain. In the case of 'hard' commodities (ie mined or extracted), such as metals and hydrocarbons, any flow of virgin material is unsustainable as the resources in question are finite. In the case of 'soft' commodities, such as crops, biofuels and timber, virgin materials are in theory renewable but in practice production methods do not achieve this.

Circular models are restorative by design. For manufactured goods, circular methods often involve repair, reuse, refurbishment and material recycling processes. In biological cycles, loops are closed by returning non-toxic materials to the soil and, of course, by sustaining the health of the production environment.

The circularity of a company can be measured in terms of the tonnage of non-sustainable material it consumes within a value chain. The smaller the tonnage the less wasteful the company is within its value chain, and the more resilient it will be to material price fluctuations. Slightly different approaches are required for hard and soft commodities.

An illustrative hard commodity metric is:

Tonnes of virgin material in product, per \$m (tonnes)

Only materials sourced from virgin inputs are measured, reflecting the inherent value of the refined material and by inference the value lost when any waste leaves the system (eg to landfill).

Potential refinements to the hard commodities metric include:

- Weightings by scarcity of material (to reflect its value to current and future generations); and by toxicity of material (to reflect the relative risk of it flowing through the environment).
- Full application of Material Circularity Indicator (MCI) to capture the efficiency of production processes, destination of wastes and smartness of return loops.⁵²
- Positive effects of products and services that enable circularity (reuse, repair, remanufacture, recycling).

Where 'sustainably produced' soft commodities are assured through globally recognised standards such as Forest Stewardship Council (FSC), Marine Stewardship Council (MSC) and Certified Sustainable Palm Oil (CSPO).

This metric works particularly well with fibre-based soft commodities such as timber and cotton which can follow similar pathways to hard commodities in that they can be recycled and products can be repaired and, in some circumstances, remanufactured. Food is quite different however: the generally accepted sustainable route to recover value from surplus (waste) food is anaerobic digestion (AD). The consumption of virgin food materials cannot be reduced through techniques such as repair, reuse and recycling, requiring the following modification to the metric to reflect the restoration of nutrients back into the environment:

An illustrative soft commodity metric is: Non-sustainably produced virgin material minus tonnes of restored waste, per \$m (tonnes)

Potential refinements to the soft commodity metrics include:

- More scientifically robust (and reliable) definitions of sustainable production.
- Full application of Material Circularity Indicator (MCI) to capture the efficiency of production processes, destination of wastes and smartness of return loops.

Remaining themes continued

Healthy ecosystems

This theme examines the asset's contribution to maintaining ecologically sound landscapes and seas for nature and people. Since the 1970s, the demands placed on the Earth's natural systems by humanity (its 'ecological footprint') have outstripped the planet's ability to regenerate its 'biocapacity'.⁵³ In other words we are living off the planet's capital rather than its interest, a state known as ecological deficit⁵⁴ (see Figure 4).

This is the situation today. Before long, however, we can expect the human population to move closer to 11.2 billion, with a resulting sharp increase in demand for food, water and energy.⁵⁶ On current trends, many of these people will be eating more than at present, and differently: in particular a diet that is richer in dairy, meats and processed foods – in short, energy- and waterintensive foods.

Most large companies have goals to reduce their environmental impacts. However, few companies have worked out how to lessen their dependence on natural systems such as forest, soil, wetlands, atmosphere and oceans in such a way that they retain their ability to regenerate. None have discovered how to enhance or at least sustain those systems through their business operations, resulting in a clear source of systemic risk in the global economy. While it is rare to see companies addressing the downward trend in biocapacity in relation to spiralling global demands, we can measure the burden they place on ecosystems. The crudest measure of an asset's ecosystem burden is the area it has removed from natural processes.

An illustrative metric is: Land footprint of operations and supply chain, per \$m (ha)

Potential refinements include:

- Weighting by level and trend of national biocapacity deficit (on the basis that over time, high-deficit countries are less resilient to land pressure).
- Weightings for specific high impact sectors (eg food, fibres, feeds and biofuels).
- Ecological footprint a more complete measure of an asset's demand on nature, measured in global hectares (gha).⁵⁷
 Ecological footprint can also be expressed in terms of the 'number of planets' required to sustain a particular activity, potentially a more meaningful measure.
- Subtraction of areas of land restored to their wild state.



Figure 4: Global trend in ecological footprint and biocapacity per capita⁵⁵

Disclosure to beneficiaries

Easy-to-understand information that connects with the user and can be acted on without the need for a time-consuming process is a prerequisite for empowering people to make choices.

In the main, the public has a low tolerance for complexity. Investment impact information is no different in this respect.

Impact information enables compelling stories to be told about the value of investments. While a saver could be informed that their fund has a positive contribution to decent work, being able to say that their money has sustained 60 jobs in the previous year or provided \$10,000 of services to lowincome communities will be more meaningful for some people. Similarly, it might be less meaningful for some beneficiaries to communicate a carbon footprint abstractly in tonnes of carbon dioxide, and more helpful to describe it in terms of years of vehicle travel or, as knowledge of climate change grows, alignment with the globally agreed target of limiting warming to under 2°C in order to avoid dangerous climate change. Alongside quantitative information, qualitative judgements can help contextualise impact performance. Beneficiaries can be advised whether or not the numbers should be considered 'good' or 'enough' in absolute terms – in other words whether or not their fund is supportive of the globally agreed Sustainable Development Goals.

One of the key documents in which investors disclose fund information to beneficiaries and clients is the fact sheet. While the look and feel of a fact sheet will always vary from firm to firm, it would be relatively easy to integrate impact information within their typical formats. Figure 5 shows a simple graphic combining fund-level information on all six impact themes. In this representation both quantitative information (the numbers) and qualitative or categorical information (the colours) are revealed to the reader, alongside a benchmark at the centre of the graphic.



Figure 5: Combining information on the six impact themes

Disclosure to beneficiaries continued

Figure 6 shows the same impact graphic situated within a stylised fact sheet containing many of the elements typically presented to beneficiaries.

Many opportunities exist to convey impact information to different elements of the investment value chain. In all cases, the information should tell an understandable story to whoever receives it. The story told to a non-expert beneficiary is unlikely to be the same as the one told to an ESG analyst or professional investor since they would use the information for different purposes. Once the impact of a company is calculated in each of the six themes, data can be presented at a fund level, by asset class, sector or geography, and in comparison to a benchmark.



Figure 6: Example of fact sheet showing impact information

Trends can also be shown, either by presenting results from past years, or by indicating (for example with an upward or downward arrow) how results compare to the previous year. Information can be quantitative or qualitative ranging from very positive to very negative as previously discussed, or for example derivatives of A–G or RAG⁵⁸ ratings.

Detailed analysis for

Figure 7 contains some illustrative examples of the use of impact information based on different applications. $^{\rm 59}$

Figure 7: Different applications of impact information



Impact calculated per million dollars invested

Analysis for client briefing

Disclosure to beneficiaries *continued*

- **Portfolio management.** Disclosure could include charts comparing the impact of a fund with its benchmark on themes of interest (here, decent work and climate stability), as well as breakdowns of the most- and least-positive performing assets. This could encourage optimisation of portfolio impact.
- **Engagement and ESG analysis.** For analysts and others interested in detail, impact information can be shared across all six themes at a company level, with trends over time. Results could also be compared to sector norms for context.
- Annual report to clients. Greater detail can be provided in an annual report including, for example, how a fund has performed in comparison to a benchmark over time. Case studies can be presented to enhance the clients' understanding of a fund's objective regarding impact, if appropriate.
- **Briefing for clients.** Data such as '4.85 jobs per \$ million invested' or '225 tCO₂e per \$ million invested' can be presented to beneficiaries directly or, preferably, in comparison to a benchmark. Data can be made more tangible to the audience by, for example, translating tonnes of carbon dioxide equivalent into numbers of passenger vehicles on the road or numbers of intercontinental flights. If a fund is composed of different asset classes or of subfunds, impact can be presented in those sub-categories.

These are just some examples of how impact information can be conveyed to different audiences. Over time, greater standardisation will help the industry grow its capability to empower beneficiaries to make effective choices, while allowing investors to adopt their own style of presentation in factsheets, reports and other communications.

Next steps

Investors gain by helping beneficiaries make informed choices about the management of their savings and investments, especially as demand rises for transparency, including on sustainability.

The long-term vision of this work is to enable a revolution in 'consumer choice' in financial services, where the social and environmental impact of money is transparent to investment beneficiaries in the same way that it is apparent to consumers of food and energy products today. Those sectors have been obliged to act on transparency in order to retain trust with their customers. This framework allows the financial services sector, starting with investment, to embark on a similar path.

The framework is not a complete solution, but a first step towards grappling with a complex and emergent reporting challenge. The ILG hopes it will help financial institutions to better understand the contribution they are making to sustainable development and, in doing so, better serve the interests of their clients and beneficiaries.

As more investors seek to understand their impact, information providers will respond with more compelling, complete and granular datasets to allow the investment industry and its many beneficiaries to make more informed judgements about how to allocate capital. If a clearer view of social and environmental impact was to emerge in the industry, based on common standards and reporting processes, then a step change in societal trust could follow. The ILG members have begun to apply the framework to their portfolios and are committed to extending this work appreciably as new methodologies and information become available. In dialogue with the information industry, fuller methodologies and test results will be developed by the ILG for all six themes of the framework over a two- to three-year period.

The ILG is also committed to exploring the best ways to represent impact information to beneficiaries. To this end, research will be undertaken by the University of Cambridge to study how members of the public respond to different forms of impact information and, in particular, how such information affects their investment choices.

> As more investors seek to understand their impact, information providers will respond with more compelling, complete and granular datasets.

Annex A: United Nations Sustainable Development Goals (SDGs)

- 1. End poverty in all its forms everywhere
- 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- 3. Ensure healthy lives and promote wellbeing for all at all ages
- 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- 5. Achieve gender equality and empower all women and girls
- 6. Ensure availability and sustainable management of water and sanitation for all
- 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- 10. Reduce inequality within and among countries
- 11. Make cities and human settlements inclusive, safe, resilient and sustainable

- 12. Ensure sustainable consumption and production patterns
- 13. Take urgent action to combat climate change and its impacts
- 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

For more information see: https://sustainabledevelopment. un.org/?menu=1300 $^{\mbox{\tiny 20}}$

Annex B: Value exchanges in an economy

Economic activities can be broken down into a series of exchanges between an economy and its supporting society and environment. The major inflows and outflows from an economy are highlighted below in Table B1.

Table B1: Major inflows and outflows from an economy

Inflows	Description
Labour	The skills and labour required by the economy. The resulting jobs can be poor, average or high quality, depending on pay, job security and working conditions.
Natural resources	The materials, energy and water demanded by the economy. These can be sourced within a 'linear' model leading to losses ('wastes') or within a 'circular' model in which materials are maintained at high value through reuse, remanufacturing, recycling and other restorative processes.
Ecosystem services	The support system provided to the economy by nature, often at no cost. Includes fundamental services such as soil formation, photosynthesis, primary production, nutrient and water cycling; provisioning services such as food, fibre, fuel, genetic resources, biochemicals, natural medicines, pharmaceuticals, ornamental resources and fresh water; regulation of air quality, climate, water, erosion, water purification, disease, pests, pollination and natural hazards; and cultural services such as spiritual enrichment, recreation and reflective or aesthetic experiences in landscapes.

Outflows	Description
Goods and services	The principal output of the economy – goods and services for humanity. A distinction can be drawn between goods and services that meet basic human needs (such as access to food, water, shelter, sanitation) and ones that meet 'wants' rather than needs. The SDGs require the basic needs of all sections of society to be met.
Private wealth	The wealth created by the economy through provision of labour and ownership of assets. Wealth creation is a major engine of the economy. It is rarely distributed fairly due to ingrained imbalances in opportunity, capability and power within society. Excessive inequality can act as a drag on economic progress.
Public value	The economy's contribution to the public good. Governments extract money from economic activity through various forms of taxation, levies and publicly operated businesses. In principle the money is spent on policy and services that serve the public interests, including health, education, justice, crime, welfare, culture, security and environmental protection.
Waste and emissions	Emissions to land, water and air from the economy. Waste can be minimised, eliminated or returned for reuse; emissions can be managed through processes such as pollution control and decarbonisation.

Annex C: Notes on 'climate stability'

Understanding scope 3 emissions

In order to understand a company's impact on climate stability, the full lifecycle of its product or service must be considered (see Figure C1). For many firms, a good proportion of greenhouse gas (GHG) emissions are scope 3, attributable to purchases and the end use of products sold. Unless these emissions are included within carbon analyses, the results at an asset level (and when aggregated at fund level) will be misleading. For example, when analysing a power utility, the carbon emissions associated with its product – electricity – will only be accounted for if its scope 3 emissions are included in its carbon footprint.

Base metric

Results for the base metric are calculated simply by adding scope 1, 2 and 3 GHG emissions. Data on scope 1 and scope 2 are available from annual reports and the CDP.⁶¹ Scope 3 data are

extrapolated based on company-level technology and efficiencies, as well as industry averages, using a published method.⁶² For energy producers, scope 3 is considered in the upstream for electricity producers (eg energy generation) and downstream for fossil fuel producers (eg combustion). For equipment manufacturers, scope 3 takes into account future emissions due to the products sold.

To sum emissions across a portfolio of assets, recalculation is needed to avoid double counting (ie emissions within a value chain being included more than once). The majority of double counting occurs among three actors in the value chain: energy suppliers, manufacturers and users. One-third of total emissions is reallocated to each of these actors. To address double counting within a sector, the methodology considers the sum of all emissions associated with the final product and allocates emissions based on the financial added value of each company involved in that process. By applying these principles, the methodology avoids the majority of prevalent doublecounting problems (for further details see the original methodology).⁶³

Figure C1: Scope of emissions across the value chain⁶⁰



Stretch metric

To judge how well a portfolio is contributing to climate stability, the stretch metric extends the base metric in two important ways. The first relates to the contribution of an asset to climate change mitigation, defined as the improvement in carbon intensity made by an asset over a five-year period, or the difference between its carbon intensity and a reference scenario set by the International Energy Agency (IEA) – an approach derived from the Clean Development Mechanism of the Kyoto Protocol. The second relates to the forward strategy of the asset, in particular its ability to face the challenges of climate change over a future five-year period. This assessment is based on the analysis of capital expenditure, research and development, as well as public commitments (supported by past achievements) regarding emissions reductions. These three assessments of an asset - its carbon intensity, contribution to mitigation and forward strategy - are combined into a single qualitative assessment which itself can be aggregated with other assets into a portfolio assessment.

In order to understand a company's impact on climate stability, the full lifecycle of its product or service must be considered ... For example, when analysing a power utility, the carbon emissions associated with its product – electricity – will only be accounted for if its scope 3 emissions are included in its carbon footprint.

Annex D: Notes on 'decent work'

Definition of decent work

Since the ILO introduced the term 'decent work', an increasing amount of policy and academic attention has focused on the concept. Two fundamental elements of decent work can be agreed on: the quantity of jobs in an economy and the quality of those jobs judged from a wide range of perspectives (for example wages, levels of stability and formality, working conditions, or employee rights).⁶⁵ Recently, the OECD proposed measuring and assessing job quality based on three dimensions: earnings, labour market security and quality of the working environment.⁶⁶ The definitions used by international agencies broadly support this understanding of the quality of employment. However, no single, practical definition exists for investors to use as a starting point for their analyses. Moreover, the current academic literature on job quality refers to data at the macro rather than at the company level. Investors who are interested in understanding, reporting and potentially contributing to decent work should therefore identify two core components of employment: the number of jobs supported by a company and the characteristics of these jobs such as income level, job security, or working conditions.

Calculating the three proposed metrics

Base metric

A key factor in the design of the base metric is data availability. At the moment, company annual reports provide information on the number of employees at times broken down by country or region and total cost of wages. Details on wages are provided only for board-level directors. Quantitative or anecdotal information on issues such as gender, age, vocational training, etc also exist. For that reason, the base metric is limited to that which depends only on the number of jobs per geography and the rate of unemployment and vulnerable employment in a country. All direct jobs are considered, not only full time, in recognition of the value of part-time employment.

Vulnerable employment is considered alongside unemployment because it is composed of informal self-employment with low income and no social security benefits or insurance, leaving it highly exposed to economic or personal shocks. Together, the unemployment and vulnerable employment rates are used as proxy indicators of the overall health of a country's labour market. While simple, challenges still exist as companies often aggregate the number of employees according to geographical areas that are relevant to their operations. This makes the calculations required difficult, as the averaging of regions with diverse employment features results in values that are not representative of realities at the country level. Improvement could be obtained if companies limited aggregations to regions that amount to a very low percentage of their workforce.

The methodology for quantification of the base metric consists of the following steps:

- Identify the number of jobs supported by a company in each country or region of operations. If jobs in multinationals are not broken down by geography, they are assumed to be sustained worldwide. Note that total employment, not full-time equivalent (FTE), should be considered, as FTEs are reflective of the numbers of hours worked, not the number of individuals working.
- Add the unemployment and vulnerable employment rates for the relevant geographies using UNDP data.⁶⁷ Regional averages may need to be calculated. When employment data is not available, the average of countries with similar level of development is used.
- 3. Rank levels of unemployment and vulnerable employment scores from lowest to highest, and subdivide into deciles.
- 5. Weight the number of jobs sustained by a company according to the deciles, from 1.0 to 1.9, with an increase of 0.1 per decile.
- 6. Add up the scores for each geographical region to calculate a weighted total number of jobs.

For an illustrative example of company XYZ, see Table D1.

Table D1: Jobs intensity per company

Country	Jobs	Weight	Weighted Jobs
France	70,719	1.1	77,791
Spain	3,825	1.4	5,355
Poland	19,094	1.2	22,913
Rest of the World	62,595	1.6	100,152
	Total weighted jobs:		206,211
	Enterprise value (\$m):		64,043
	Jobs/\$m:		3.2

The qualitative assessment is based on the magnitude of the job intensity compared to that of the highest job intensity sectors. The intensity of many companies range from approximately zero to five jobs per million dollar invested, although some surpass 40 jobs per million invested. As a result, for the base metric, assessments include very low (zero to 10 jobs/\$m), low (10 to 20 jobs/\$m), limited (20 to 30 jobs/\$m), positive (30 to 40 jobs/\$m), and very positive (above 40 jobs/\$m) contribution to decent work.⁶⁸ Note that, as the number of direct jobs cannot be negative, the base metric ranges from very low to very positive.

Stretch metric

This indicator considers only the workers earning an income level that is at least equivalent to 60 per cent of the country's median wage (excluding overtime). The median wage can be sourced from ILOStat.⁶⁹ The calculation of the threshold for part-time employees should consider the proportional value to 60 per cent of the median wage.

> Studies show that indicators with more variables are at times less econometrically robust as the correlations between the variables tend to introduce biases that cannot be easily controlled for.

Ideal metric

The indicator considers indirect jobs sustained by (a subset of the company's) suppliers, recognising that companies' demand for products and services are contributors to employment. While supply chains may include dozens of layers of suppliers between the extraction of raw material to the distribution of the final product, arguably, a company's responsibility may extend across the entirety of its supply chain. Detailed knowledge of the quantity and quality of jobs across the full supply chain is however unrealistic. For that reason, the indicator delimits jobs in the supply chain to those where the responsibility of the company is the highest - among suppliers acting on behalf of the company or manufacturing its branded products. The ideal metric also considers jobs that may be indirectly associated to the product or service of a company. The methodology for the ideal metric will need to address the challenge of defining, potentially per sector, these two subsets of the value chain, as well as issues regarding double counting.

The indicator also takes into consideration a strong proxy for employment conditions, namely open-ended contracts. Formal open-ended contracts are correlated with job stability, identified by the OECD as a key indicator for job quality.⁷⁰ Furthermore, in most countries, employment with open-ended contracts is covered under the social security system, ensuring some level of a safety net, as well as future income after employment years.⁷¹

It may seem surprising that the ideal indicator includes so few dimensions, especially in comparison to the many metrics used by the ILO. Studies show that indicators with more variables are at times less econometrically robust as the correlations between the variables tend to introduce biases that cannot be easily controlled for.⁷² This is a particularly relevant for indicators that which capture several dimensions of a particular subject such as employment. Note that the indicator relies strictly on administrative data, not on workers' input, because adaptive preferences make subjective data a highly unreliable source of information on employment outcomes.⁷³

References and bibliography

¹ University of Cambridge Institute for Sustainability Leadership (CISL). (2015, November). *Unhedgeable risk: How climate change sentiment impacts investment*. Cambridge: University of Cambridge Institute for Sustainability Leadership. Retrieved from http://www.cisl.cam.ac.uk/publications/sustainablefinance-publications/unhedgeable-risk

² Financial impact of carbon-related regulation. (2016). Retrieved 15 April 2016, from University of Cambridge Institute for Sustainability website, <u>http://www.</u>cisl.cam.ac.uk/business-action/sustainable-finance/investment-leaders-group/ programme/financial-impact-of-carbon-related-regulation

³New responsible investment policy at ABP. (2015). Retrieved from Pensioenfonds voor overheid en onderwijs website, https://www.abp.nl/english/ press-releases/new-responsible-investment-policy.aspx

⁴ New guidance on economically targeted investments in retirement plans from US Labor Department. (2015). Retrieved from United States Department of Labor website, http://www.dol.gov/opa/media/press/ebsa/EBSA20152045.htm

⁵Orienter le système financier vers une économie durable. (2015). Retrieved from Document15 http://www.economie.gouv.fr/cop21/orienter-systeme-financiervers-economie-durable

⁶Responsible investment and public policy. Retrieved March, 2016 from Principles for Responsible Investment website <u>http://unpri.org/wp-content/</u>uploads/2.Responsibleinvestmentandpublicpolicy.pdf

⁷ The World Economic Forum's Global Risks Report (2016) identifies many such risks: greater incidence of extreme weather events, failure of climate change mitigation and adaptation, water crises, severe income disparity, structurally high unemployment, and so on. World Economic Forum. (2016). The Global Risks Report 2016. Geneva: World Economic Forum. Retrieved from https://www. weforum.org/reports/the-global-risks-report-2016

⁸Stern, N. H. (2007). The economics of climate change: The Stern Review. Cambridge, UK: Cambridge University Press.

⁹G-20. (2015). G-20 Climate Finance Study Group – Report to the Finance Ministers – 2015. Turkey: G-20. Retrieved from http://g20.org.tr/wp-content/ uploads/2015/11/G20-Climate-Finance-Study-Group-Annual-Report-2015.pdf

¹⁰ Carney, M. (2015). Breaking the tragedy of the horizon - climate change and financial stability. Retrieved from the Bank of England website <u>http://www.</u> bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx

¹¹ Financial Stability Board. (2015). FSB to establish Task Force on Climaterelated Financial Disclosure. Retrieved from <u>http://www.fsb.org/2015/12/fsb-to-</u> establish-task-force-on-climate-related-financial-disclosures/

¹² University of Cambridge Institute for Sustainability Leadership (CISL). (2015, July). *Rewiring the Economy: Ten tasks, ten years*. Cambridge: University of Cambridge Institute for Sustainability Leadership. Retrieved from <u>http://www.cisl.cam.ac.uk/publications/low-carbon-transformation-publications/rewiring-the-economy-ten-tasks-ten-years</u>

¹³The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tonnes of carbon dioxide (CO₂)

¹⁴ Tweedie and Reynolds' (2016) survey of Australian pension policy holders showed that the key barriers to moving money from conventional to responsible investment funds are: (a) lack of available options; (b) lack of information on impact; and (c) lack of time by individuals to look and compare alternatives. The complexity that beneficiaries encounter holds back the exercise of good intentions.

Tweedie, L. & Reynolds, J. (2016). Climate change: Implications for superannuation funds in Australia, University of Cambridge Institute for Sustainability Leadership (CISL), Working Paper 01/2016. Retrieved from <u>http://</u> www.cisl.cam.ac.uk/publications/working-papers-folder/climate-changeimplications-for-superannuation-funds-in-australia

¹⁵ Although the format for fact sheets and KIIDs varies from investor to investor, the main information found on a fund factsheet are the same: funds objectives and investment policy, past performance, risk and reward, and charges, along with other practical information.

¹⁶ J.P. Morgan. (2012). A Practical Guide to Building, Analyzing and Managing a Portfolio of Impact Investments. Retrieved from <u>https://www.jpmorganchase.</u> com/corporate/socialfinance/document/121001_A_Portfolio_Approach_to_ Impact_Investment.pdf ¹⁷ Report to be published at the Investment Leaders Group Forum, 17 May 2016: University of Cambridge Institute for Sustainability Leadership (CISL). (2016, May). *Taking the long view: A toolkit for long-term, sustainable investment mandates.*

¹⁸ Investment Consultants & Responsible Investment. Retrieved March, 2016 from the Eurosif website: http://www.eurosif.org/publication/investmentconsultants-responsible-investment/

¹⁹ Low-income groups often shoulder the less desirable consequences of economic activity such as the effects of climate change, pollution and scarcity of water and other resources.

²⁰ Sustainable Development Goals. Retrieved April 18, 2016, from United Nations Sustainable Development Goals website, <u>https://sustainabledevelopment.</u> un.org/?menu=1300

²¹ University of Cambridge Institute for Sustainability Leadership (CISL). (2015, July). *Rewiring the Economy: Ten tasks, ten years*. Cambridge: University of Cambridge Institute for Sustainability Leadership. Retrieved from <u>http://www.cisl.</u> cam.ac.uk/publications/low-carbon-transformation-publications/rewiring-the-economy-ten-tasks-ten-years

²² Arising from products, services, solutions or innovations that support a significant improvement in an impact across the wider economy.

²³ Science Based Targets. (2015). Sectoral decarbonisation approach (SDA): A method for setting corporate emission reduction targets in line with climate science. Carbon Disclosure Project, World Resources Institute, WWF. Retrieved from http://sciencebasedtargets.org/wp-content/uploads/2015/05/Sectoral-Decarbonization-Approach-Report.pdf

²⁴ Market capitalisation plus debt, minority interest and preferred shares, minus total cash and cash equivalents. According to Investopedia, "often times, the minority interest and preferred equity is effectively zero, although this need not be the case".

²⁵ Intergovernmental Panel on Climate Change (IPCC). (2014). Summary for Policymakers. Cambridge: IPCC. In, Intergovernmental Panel on Climate Change. (2014). Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate. Cambridge: IPCC. Retrieved from <u>http://</u> www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-forpolicymakers.pdf

²⁶ Entry into force requires at least 55 countries, accounting for at least 55 per cent of global emissions, to ratify the Paris Agreement.

²⁷ COP 21 Paris. (2015).Retrieved 15 April, 2016 from United Nations Framework Convention on Climate Change website, http://newsroom.unfccc.int/paris

²⁸ GHG emissions are associated with all stages of a product's life from cradle to grave (ie from raw material extraction through materials processing, manufacture, distribution, use and end of life).

²⁹ Methodology developed jointly by ILG member Mirova (a wholly-owned subsidiary of Natixis Asset Management dedicated to responsible investment) and expert group Carbone4. The methodology can be found here: <u>http://www.carbone4.com/sites/default/files/CarbonImpactAnalytics.pdf</u>

³⁰ Public commitment made by company judged to be reasonable.

³¹ This index was selected in preference to more widely used indices such as MSCI World due to the relative availability of information – many European countries require corporate disclosure on climate change.

³² The data used to calculate the intensity are the enterprise values of companies, except where this information does not exist in which case market capitalisation is used.

³³ Greenhouse Gas Equivalencies Calculator. Retrieved March 2016 from United States Environmental Protection Agency website, <u>http://www.epa.gov/energy/</u> greenhouse-gas-equivalencies-calculator

³⁴ This was achieved by excluding companies with the highest ratio of emissions (scope 1, 2, 3) and lowest mitigation, including fossil fuel producers, equipment manufacturers, services and distribution, as well as coal mining companies.

³⁵ References from Wilkinson, R. & Picket, K. (2009). *The Spirit Level: Why More Equal Societies Almost Always do Better*. London: Allen Lane.

³⁶ Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4) 370–96. ³⁷ For a discussion of the conceptualisation of decent work see Sehnbruch, K., Burchell, B., Agloni, N. & Piasna, A. (2015). Human Development and Decent Work: Why some Concepts Succeed and Others Fail to Make an Impact. *Development and Change* 46(2): 197–224.

³⁸ See International Labour Office (ILO). (2009). Decent Work Country Profile: Brazil. Geneva and Brasilia: ILO.

For a discussion of the different concepts related to decent work, see Burchell, B., Sehnbruch, K., Piasna, A. & Agloni, N. (2014). The Quality of Employment in the Academic Literature: Definitions, Methodology and Ongoing Debates. *Cambridge Journal of Economics* 1: 459-77.

³⁹ Sustainable Development Goals. Retrieved April 18, 2016, from United Nations Sustainable Development Goals website, <u>https://sustainabledevelopment.</u> un.org/?menu=1300

⁴⁰ Organisation for Economic Co-operation and Development (OECD). (2014). OECD Employment Outlook 2014, Paris: OECD Publishing.

⁴¹ The ILO's definition of 'decent work' according to recent country profiles published is based on 61 individual variables that compose decent work. However, this is not a useful definition for policymakers or analysts, not to mention companies or individual investors. See for example: International Labour Office (ILO). (2009). Decent Work Country Profile: Brazil. Geneva and Brasilia: ILO.

International Labour Office (ILO). (2010). Decent Work Country Profile: Tanzania (mainland). Dar es Salaam and Geneva: ILO.

International Labour Office (ILO). (2011). Decent Work Country Profile: Ukraine. Geneva: ILO.

⁴² These two dimensions are based on a broad agreement put forward by the academic literature, such as:

Alkire, S. (2007). Missing Dimensions of Poverty Data: Introduction to the Special Issue. *Oxford Development Studies* 35(4): 347-59.

Burchell, B., Sehnbruch, K., Piasna, A. & Agloni, N. (2014). The Quality of Employment in the Academic Literature: Definitions, Methodology and Ongoing Debates. *Cambridge Journal of Economics* 1: 459-77.

International Labour Office (ILO). (2009). Decent Work Country Profile: Brazil. Geneva and Brasilia: ILO.

United Nations Development Programme (UNDP). (2015). Human Development Report 2015: Work for Human Development. New York: United Nations Development Programme. Retrieved from http://hdr.undp.org/sites/default/ files/2015_human_development_report_1.pdf

⁴³ According to the UN, "own-account workers and contributing family workers" (see *Millennium Development Goals Indicators*. Retrieved 15 April 2016 from the official United Nations website for the MGD indicators, <u>http://mdgs.un.org/unsd/</u> mdg/Metadata.aspx?IndicatorId=0&SeriesId=772)

⁴⁴ See for example: Sen, A. (1999) *Development as Freedom*. New York: Oxford University Press. Alkire, S. (2007). Missing Dimensions of Poverty Data: Introduction to the Special Issue. *Oxford Development Studies* 35(4): 347-59.

Lugo, A. M. (2007). A Proposal for Internationally Comparable Indicators of Employment. Oxford Journal of Development Studies 35(4): 361-78.

Sehnbruch, K., Burchell, B., Agloni, N. & Piasna, A. (2015). Human Development and Decent Work: Why some Concepts Succeed and Others Fail to Make an Impact. *Development and Change* 46(2): 197–224. Muñoz de Bustillo, R., Fernández, U., Macías, E., Antón, J. & Esteve, F. (2011). *Measuring More Than Money*. Cheltenham: Edward Elgar.

Organisation for Economic Co-operation and Development (OECD). (2015). OECD Employment Outlook 2015, Paris: OECD Publishing. Organisation for Economic Co-operation and Development (OECD). (2014). OECD Employment Outlook 2014, Paris: OECD Publishing.

⁴⁵ International Labour Office (ILO). (1998). Contract labour. Geneva: ILO. Retrieved from http://www.ilo.org/public/english/standards/relm/ilc/ilc86/repv2b.htm

⁴⁶ Living wage calculations do not replace workers' rights to social dialogue on collective agreements, including on matters regarding compensation.

⁴⁷ This relatively small, but widely recognised index was selected in preference to more global indices such as MSCI World in order to facilitate the calculation of this illustrative example.

⁴⁸ Overview. (2016). Retrieved from the World Bank website, <u>http://www.</u> worldbank.org/en/topic/poverty/overview_

⁴⁹ PwC's Total Impact Management Measurement and Management (TIMM) model breaks down tax contributions in this way. *Understanding Total Impact Measurement and Management (TIMM)*. Retrieved 15 April, 2016, from the PwC website, http://www.pwc.co.uk/who-we-are/corporate-sustainability/totalimpact-measurement-management.html

⁵⁰ For example the Corruption Perception Index (CPI) of Transparency International: *Corruption Perceptions Index 2015*. (2015). Retrieved from the Transparency International website, <u>www.transparency.org/cpi2015</u>

⁵¹ For example, McKinsey Global Institute. (2013). Resource Revolution: Tracking global commodity market. McKinsey Global Institute. Retrieved from <u>www.</u> mckinsey.com/business-functions/sustainability-and-resource-productivity/ourinsights/resource-revolution-tracking-global-commodity-markets

⁵² Ellen MacArthur Foundation (2015). Circularity Indicators: An Approach to Measuring Circularity. Retrieved from http://www.ellenmacarthurfoundation.org/ programmes/insight/circularity-indicators

⁵³ Global Footprint Network. (2014). Retrieved from Global Footprint Network website www.footprintnetwork.org

⁵⁴ 1950 marked the beginning of a massive acceleration in human activity and large-scale changes in the Earth system. Steffen, W., Sanderson, R., Tyson, P., Jäger, J., Matson, P., Moore III, B. et al. (2005). *Global Change and the Earth System*, Springer, pp 132–133. Retrieved from <u>http://www.</u> igbp.net/download/18.56b5e28e137d8d8c09380001694/1376383141875/ SpringerIGBPSynthesisSteffenetal2004_web.pdf

⁵⁵ World Wide Fund for Nature (WWF). (2014). Living Planet Report 2014: Species and spaces, people and places. Eds: R. McLellan, L. Iyengar, B. Jeffries & N. Oerlemans. Gland, Switzerland: WWF. Retrieved from <u>https://www.wwf.or.jp/</u> activities/lib/lpr/WWF_LPR_2014.pdf

⁵⁶ United Nations Department of Economic and Social Affairs. (2015). The World Population Prospects: Key findings & advance tables. New York: United Nations. Retrieved from www.un.org/en/development/desa/publications/worldpopulation-prospects-2015-revision.html

⁵⁷ Global Footprint Network (2016). Glossary. Retrieved 15 January 2105 from http://www.footprintnetwork.org/en/index.php/GFN/page/ glossary/#globalhectare

58 Red-Amber-Green

⁵⁹ Impact information can also be written into 'request for proposal' documents and investment mandates to reflect their beneficiaries' interests (eg pension plans) or as an expression of their own values, beliefs and risk assessments.

⁶⁰ Overview of scopes. Retrieved April 18, 2016, from the GHG Protocol website, http://www.ghgprotocol.org/files/ghgp/public/overview-of-scopes.JPG

⁶¹ Search company & city responses. (2016) Retrieved April 18, 2016, from the CDP website, https://www.cdp.net/en-US/Results/Pages/responses.aspx

⁶² Methodology developed jointly by ILG member Mirova (a wholly-owned subsidiary of Natixis Asset Management dedicated to responsible investment) and expert group Carbone4. The methodology can be found here: <u>http://www.</u>carbone4.com/sites/default/files/CarbonImpactAnalytics.pdf

63 Ibid.

⁶⁴ This does not mean the results should be associated with 'certified emission reductions'.

⁶⁵ These two dimensions are based on a broad agreement put forward by the academic literature, such as: Alkire, S. (2007). Missing Dimensions of Poverty Data: Introduction to the Special Issue. *Oxford Development Studies* 35(4): 347-59.

Burchell, B., Sehnbruch, K., Piasna, A. & Agloni, N. (2014). The Quality of Employment in the Academic Literature: Definitions, Methodology and Ongoing Debates. *Cambridge Journal of Economics* 1: 459-77.

References and bibliography continued

International Labour Office (ILO). (2009). Decent Work Country Profile: Brazil. Geneva and Brasilia: ILO.

United Nations Development Programme (UNDP). (2015). Human Development Report 2015: Work for Human Development. New York: United Nations Development Programme. Retrieved from http://hdr.undp.org/sites/default/ files/2015_human_development_report_1.pdf

⁶⁶ Organisation for Economic Co-operation and Development (OECD). (2014). OECD Employment Outlook 2014, Paris: OECD Publishing.

⁶⁷ United Nations Development Programme (UNDP). (2015). Human Development Report 2015: Work for Human Development. New York: United Nations Development Programme. Retrieved from http://hdr.undp.org/sites/default/ files/2015_human_development_report_1.pdf

68 The ranges may be subject to further definition in later stages.

⁶⁹ Median nominal monthly earnings of employees (Local currency). Retrieved April 18, 2016, from International Labour Organization website, <u>http://www.ilo.</u> org/ilostat/faces/help_home/data_by_subject/subject-details/indicator-detailsby-subject?subject=EAR&indicator=EAR_MNEE_NOC_NB&datasetCode=GW R&collectionCode=GWR&_afrLoop=406363568755261#%40%3Findicator%3 DEAR_MNEE_NOC_NB%26subject%3DEAR%26_afrLoop%3D40636356875 5261%26datasetCode%3DGWR%26collectionCode%3DGWR%26_adf.ctrlstate%3Dices2i3yz_329

70 Ibid.

⁷¹ See for example: Anker, R., Chernyshev, I., Egger, P., Mehran, F. & Ritter, J.A. (2003). Measuring Decent Work with Statistical Indicators. *International Labour Review* 142(2): 147-78.

Bescond, D., Chataignier, A. & Mehran, F. (2003). Seven Indicators to Measure Decent Work. An International Comparison. *International Labour Review* 122(2): 197-232. Bonnet, F., Figuereido, J. & Standing, G. (2003). A Family of Decent Work Indexes. *International Labour Review* 122(2): 233-62.

Ghai, D. (2003). Decent Work: Concept and Indicators, International Labour Review, Special Issue: The Measurement of Decent Work 122(2): 125-60.

European Union, Luxembourg. Retrieved from https://www.eurofound.europa.eu/ sites/default/files/ef_files/pubdocs/2012/28/en/1/EF1228EN.pdf_

Piasna, A., Burchell, B., Sehnbruch, K. & Agloni, N. (2016). Job Quality in Comparative Social Policy Analysis, Working Paper.

Muñoz de Bustillo, R., Fernández, U., Macías, E., Antón, J. & Esteve, F. (2011). *Measuring More Than Money*. Cheltenham: Edward Elgar.

Ramos, J., Sehnbruch, S. & Weller, J. (2015). Quality of employment in Latin America: Theory and evidence. *International Labour Review*, 154(2), 179–194.

⁷² Ward, M. (2004). *Quantifying the World: UN Ideas and Statistics*. Minneapolis, MN: Indiana University Press. Organisation for Economic Co-operation and Development (OECD). (2008). Handbook on Constructing Composite Indicators. Methodology and User guide. Paris: OECD Publishing.

⁷³ For a discussion of subjective evaluation criteria see: Eurofound. (2012). Trends in job quality in Europe, Publications Office of the European Union, Luxembourg. Retrieved from https://www.eurofound.europa.eu/sites/default/ files/e_files/pubdocs/2012/28/en/1/EF1228EN.pdf Piasna, A., Burchell, B., Sehnbruch, K. & Agloni, N. (2016). Job Quality in Comparative Social Policy Analysis, Working Paper.

Bibliography

Brundtland, G. H. (1987). Our Common Future: Report of the World Commission on Environment and Development. Oxford: Oxford University Press.

Davoine, L., Erhel, C. & Guergoat-Lariviere, M. (2008). Monitoring Quality in Work: European Employment Strategy Indicators and Beyond. *International Labour Review* 147(2/3): 163-98.

Dreze, J. & Sen A. (1989). *Hunger and Public Action*. Oxford: Oxford University Press.

Global Impact Investing Network (GIIN). (2014). Impact Reporting and Investment Standards (IRIS) Metrics (2014). Retrieved 15 January 2105 from <u>https://iris.</u> thegiin.org/metrics

Global Reporting Initiative (2014). Global Reporting Framework. Retrieved 15 January 2015 from https://www.globalreporting.org/Pages/default.aspx

Leschke, J., Watt, A. & Finn, M. (2008). Putting a Number on Job Quality? European Trade Union Institute Working Papers. Brussels: ETUI.

Maslow, A. H. (1968). *Toward a Psychology of Being*. New York, Van Nostrand Reinhold.

Novethic. (2013). The 2014 overview of ESG rating agencies. Retrieved 10 January 2015 from http://www.novethic.com/fileadmin/user_upload/tx_ausynovethicetudes/pdf_complets/2013_overview_ESG_rating_agencies.pdf

Nussbaum, M. (2011). *Creating Capabilities: The Human Development Approach*. Cambridge, MA and London: Belknap Press of Harvard University Press.

Porritt, J. (2006). Capitalism as if the World Mattered. London: Earthscan.

Sen, A. (1979). Equality of what? [Tanner lecture on human values]. Stanford University. May 22, 1979. In MacMurrin, S. (Ed). (2011). *The Tanner lectures on human values*. Cambridge: Cambridge University Press.

UN Conference on Trade and Development. (2014). World Investment Report: Investing in the SDGs: an action plan. Retrieved from <u>http://unctad.org/en/</u> publicationslibrary/wir2014_en.pdf

UN Department of Economic and Social Affairs. (2014). Outcome Document – Open Working Group on Sustainable Development Goals. Retrieved from http://sustainabledevelopment.un.org/focussdgs.html

UN Department of Economic and Social Affairs. (2014). Sustainable Development Goals. Retrieved from http://sustainabledevelopment.un.org/?menu=1300

UNECE/ILO/Eurostat. (2007). Towards an international quality of employment framework, Working Paper. Geneva: UNECE/EUROSTAT/ILO.

World Bank. (2013). World Development Report: Jobs. Washington DC: World Bank.

Consolidating three years of leadership

The Investment Leaders Group (ILG) is three years old. Over that time we have taken a fresh look at some of the most interesting challenges and opportunities thrown up by investment. We'd like to share some of the highlights of this journey with you.

The group started by clarifying the purpose of its work in the 2014 report, *The Value of Responsible Investment*. This explored the ethical, financial and economic cases behind responsible investment, concluding that it is not only consistent with fiduciary responsibilities but, done well, can improve long-term returns while reducing systemic risks.

We then turned our attention to *fiduciary law*, particularly in the United States where pension fund trustees and beneficiaries have struggled to relate social and environmental issues to investment decisions. A presentation was published to explain why these are legitimate concerns of fiduciaries. It was gratifying to see the US Department of Labor concur with this position in recent guidance.

Three areas were then selected for more work:

• **Investment impact.** While the financial performance of funds is readily accessible, their social and environmental impacts remain largely opaque to the public and the industry itself. To change that, we have developed a framework to help investors measure and communicate their contribution to sustainable development (this report).

Philippe Zaouati CEO, Mirova and Chair, Investment Leaders Group (ILG)

- **Investment mandates.** In our report, *Taking the long view*, we identify the characteristics of mandates that encourage long-term, sustainable investment management. By adopting this guidance, investors strengthen their ability to make capital work in the long-term interest of beneficiaries and society.
- **Risk and opportunity.** While many investors recognise social and environmental risks in portfolios, they lack tools to integrate them into existing financial models. Climate change poses a clear and present risk (and opportunity) to investments and was therefore our starting point. Our report, *Feeling the heat*, guides the industry in assessing the impact of carbon-related regulation on asset profitability, while our research, *Unhedgeable Risk*, published in 2015, examines the effects of climate-related shifts in market sentiment on portfolio value.

It would not be an overstatement to say that if the proposals in these reports were implemented, the investment industry would evolve into a force for positive social and environmental impact in the world, a true partnership with our clients and beneficiaries.

This would be some accomplishment. We hope you will join us on this journey.

Dr Jake Reynolds Director, Sustainable Economy, Cambridge Institute for Sustainability Leadership (CISL)



Cambridge insight, policy influence, business impact

The University of Cambridge Institute for Sustainability Leadership (CISL) brings together business, government and academia to find solutions to critical sustainability challenges.

Capitalising on the world-class, multidisciplinary strengths of the University of Cambridge, CISL deepens leaders' insight and understanding through its executive programmes; builds deep, strategic engagement with leadership companies; and creates opportunities for collaborative enquiry and action

Over 25 years, we have developed a leadership network with more than 7,000 alumni from leading global organisations and an expert team of Fellows, Senior Associates and staff.

HRH The Prince of Wales is the

Head Office

Cambridge, CB2 1QA United Kingdom T: +44 (0)1223 768850 E: info@cisl.cam.ac.uk

EU Office The Periclès Building Rue de la Science 23 B-1040 Brussels, Belgium T: +32 (0)2 894 93 20 E: info.eu@cisl.cam.ac.uk

South Africa

PO Box 313 Cape Town 8000 South Africa T: +27 (0)21 469 4765 E: info.sa@cisl.cam.ac.uk



