From ESG to Sustainable Impact Finance: Moving past the current confusion

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Abstract

We argue that ESG/Sustainability is moving from being based primarily on ESG ratings and rankings which has caused significant confusion to sustainability (ESG) being based on mandated disclosure and analysis of externalities. We briefly examine the basis of ESG ranking and ratings confusion concluding that based on current methodologies of major providers results in neither significant change nor accurate disclosures by firms. Alternatively, we suggest an integration of externality data will significantly modify Modern Portfolio Theory as it does not account for externality effects either on 'systems' (think market beta) nor the interactive effects of firms' actions on other firms in various types of portfolios, both directly and indirectly. These dynamics are qualitatively important given the growth and dominance of universal owner type portfolios. Not accounting for externalities leads to sub-optimum economic system performance, reducing financial return both absolutely and sometimes relatively. In turn these dynamics redefine what financial 'materiality' means. Finally, we place these concepts and developments the context of global emerging regulatory and standard setting.

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Introduction

ESG (environmental, social, governance) factors in investing have become increasingly significant globally, in spite that in the last years they have received considerable political blow back in the U.S. from the Republican right. (Berg et al 2023b: 1) Yet as ESG becomes ever more influential, nevertheless including in the U.S., for investment decision making, as Edmans (2022) argues, it is 'not ESG investing; it's investing' using ESG factors and analysis. This is an important distinction which goes to the heart of globally widespread ESG confusion.

The first element of this confusion is that these three sets of factors (each one, especially E and S factors themselves having multiple component parts) have become increasingly difficult to find agreement about defining, measuring, weighting factors, and thus analyzing as they are sourced using a variety of both rating agencies and data sets competing in a large variety of paradigms. The result: increasing 'ESG confusion' by practitioners, academics and other analysts by both friends and foes of 'ESG investing' or investing considering ESG factors.

The second element of the confusion concerns the definition of materiality and what metrics capture various definitions. We look at the rating and rankings confusion first. A few recent examples (as of this writing, late 2023) suffice to give a flavor of both the analysis of 'ESG confusion' and some attempts to bring some standards and order as well as to move past what we see as the inherent ESG ratings muddle.

1. Confusion 1: Ratings and Rankings- Clarification and Limitation

Attempting to make sense of the ESG ratings muddle, the 'Aggregate Confusion Project' at MIT has pulled together research that critiques ESG 'confusion'. The project is one of many research undertakings focused on ESG ratings and rankings (e.g. MSCI, Sustainalyics, Refinitiv), the lack of correlation among raters and rankers, how they are used (or misused) and the implications for equity and bond prices and portfolio construction. All analysts agree there is little correlation among ratings, especially on S issues, but as well for E and G ones. For example, LaBella et al (2019) found low correlations among major raters and rankers both in the U.S. and globally, with a low of 0.16 (U.S. and global) for governance; 0.19 (U.S.) and 0.23 (global for social, and 0.29 (U.S.); and, 0.31 (global). (LaBella et al, 2019: 3).[i]

The MIT project provides one perspective on possible solutions analyzing six major ESG ratings providers, attempting to remove the noise inherent in these ratings while drawing on each raters' useful information. (Berg et al 2023a). They conclude that ESG firm ratings can be made useful, adjusting especially for geographical locations and the nature of specific portfolios.

The Berg et al (2023a) approach develops an earlier and highly influential paper (Berg et al 2022) focused on the problem of inherent noise in ESG ratings, summarizing the problems of major ESG raters individually, as well as when compared with each other, in addition to proposing a methodological way to deal with the divergence and noisy data problems.

To mention one example of how such diffusion of ratings might be used to find alpha or what Cremers et al (2023) call 'materiality' (meaning narrowly defined financial materiality) they create a metric called 'Active ESG Shares' which measures the relative importance of ESG information in portfolio construction and goes beyond the traditional approach – labeled by the authors as 'Directional ESG' – which assesses the impact on fund performance based on investing in stocks with high versus low ESG ratings. Active ESG Shares is calculated using a variety of ESG ratings (given low correlations) comparing the total fund's portfolio weights of ratings against the fund's ESG benchmark. (4) Cremers et al show that ESG funds that deviate from simply following ESG ratings perform better, with strongest results for funds that hold stocks with high level of ESG ratings disagreement. The hypothesis is that active funds with specialized and knowledgeable ESG managers will be able to use their expertise to sort through the diffusion of ratings to outperform. Active ESG considers the entire distribution in a portfolio - while Directional ESG considers the average ESG rating - and is the more useful metric for ESG outperformance. Underlying focusing on ESG ratings is the idea that they in themselves have little 'material' information but that Active ESG Shares can produce significant alpha by investing in stock with significant rating disagreement. The point of this quick summary Cremers et al. (2023) analysis, and there are others as well attempting to find alpha from the ESG confusion, is that ratings and rankings not only present complexity, but are at best indirect indicators of underlying ESG information. This underlying information, we argue, is overwhelming based on economic externalities although mostly absent in the ESG confusion literature. This is a striking omission.

Against this increasingly well-trod research on ESG ratings and rankings our purpose in this chapter is to suggest that while discussion has been useful, albeit at times 'confusing' and complex,

the focus on ESG ratings of individual firms needs to move on in two keyways. The first returns to the classic economic concern about externalities rather than ratings and rankings per se. The second, building on the first, focuses especially on large highly diversified investors' portfolios, rather than a firm by firm focus of nearly all ESG analysis to date. The latter looks for alpha opportunities which we consider useful at the margin for some investors and useful for price discovery under some conditions, but irrelevant for most large and all indexed investors.

In short, we foresee that ESG will move beyond a firm-by-firm, idiosyncratic risk approach to focus on a whole portfolio, universal owner system risk approach. We think this is already underway among many large institutional investors and to a degree practice is leading both theory and fully developed empirical analysis.

The historical background to this ESG muddle is put succulently by the High Meadows Institute. It divides sustainable finance (ESG) into three historical phases: socially responsible investment, ESG, and systemic investment and impact management, all of which are parts of sustainable finance (respectively labelled stages 1.0, 2.0 and 3.0 of sustainable finance). (High Meadows Institute, 2021: 3) Implicitly it argues that continuing to focus on ESG from a (purely) individual firm view based on equity (and/or bond) ESG performance (stages 1.0 and 2.0) misses critical system interactions and effects, stage 3. This is what we call Sustainable Impact finance (SIF), a system approach to sustainability. Several other terms capture this as well, such as system investing (TIPP 2021); holistic portfolio analysis/universal owner perspectives. (Hawley and Williams, 2001)

Thus, the MIT Aggregate Confusion Project and other analysis of ESG ratings and rankings while useful in looking at stages 1.0 and 2.0, are far less helpful when thinking about sustainable finance 3.0: how firms interact with systems and systems affect firms. System is used to mean both beta (the market as a whole) and the underlying economic (or more broadly socio-economic) system upon which all financial markets are both dependent on and which they interact. (Lukomnik and Hawley, 2021: 88-94)

In other words, the MIT and similar approaches, focusing on market equity/bond movements ignore whether ESG (however measured) makes a difference in what firms over time do in terms of E and S and G outcomes or impacts. They are restricted to how individual firms perform in a narrow financial sense, that is, how individual equity and bonds are valued even if with a focus on relevant 'material' ESG metrics. (High Meadows Institute, 2021: 9)[ii] A similar approach in a more comprehensive study focused on E and S ratings finds that financial performance is not harmed and may be helped. (Henisz et al., 2019) Yet this study like many others is not rigorously focused on outcomes and changes over time, that is, on impact especially including financial impacts on portfolios.

The financial performance in relation to impact problem is well summarized by a University of Zurich study. The authors write:

> For ESG metrics to reflect company impact, the focus should be on impact materiality. Historically, most ESG ratings have emphasized financial materiality, which is legitimate when the purpose is to identify companies that will do well in a changing environment. However, when the purpose is to drive change (rather than benefit from change), ESG ratings should focus on impact materiality. An easy way to think about it: If the company's ESG score improves, does the world become a better place? If the answer is yes, the score may serve as a reasonable proxy for company impact. (Heeb et al 2022)

Their conclusion as to whether ESG integration (one ESG method) affects the real economy: 'maybe a little bit'. Yet even with the emergence of 'impact materiality' (as discussed below) as a focus of 'change' this approach appears implicitly to assume that portfolio long-term risk adjusted values are separate from 'change.' A SIF/system perspective argues that they are intimately connected. It is critical to connect 'finance' to impact.

We think this is due, in part, as these are still early days of focusing on impact materiality, by both analysts and more importantly by market actors who are otherwise focusing on ESG and financial materiality. From our perspective the limitation in the sustainable finance 2.0 approaches is that it remains focused on how firms individually perform solely in terms of stock returns or bond ratings. As we discuss below, this approach assumes a modern portfolio theory and a Fama-French factor approach to idiosyncratic risk mitigation along with an efficient frontier, even when it becomes an ESG efficient frontier. While useful, we argue it is too restricted: it is unable to confront the challenges of sustainability as it does not consider economic externalities, especially

in the context of highly diversified portfolios. Additionally, it ignores the real-world connection between the financial (e.g. ESG performance measured solely by equity values and based primarily on ratings and rankings by leading providers such as MSCI, Sustainalytics) and the larger socio-economic system.

This systemic approach has rapidly developed since the late 20'teens. The relation between impact, finance and the larger socio-economic system is captured by the Impact Management Platform (2023) v) statement that, "The economy's reliance on the viability and stability of environmental and social systems is demonstrated by….climate change [and by other factors that are the foundation] of social systems…upon which business and finance depend." It continues arguing that a narrow financial approach focused on single entities is insufficient because, "…it does not take into account the *contributions* that enterprises make to the accumulation of system-wide risk…".

Hart and Zingales (2017:3-5) consider an element of the relation between what they call 'shareholder welfare' and market value. Their focus is primarily on firm specific market value, although they do mention the problem of universal owners (without using that term). They also note that there is some and perhaps significant overlap between stakeholders as shareholders as the former have stakeholders in their roles, for example, as consumers or are impacted by externalities. Their paper is important for its focus on externalities in relation to social responsibility of firms, specifically as a critique of Friedman (1970) for ignoring externality effects.

2. Confusion #2: Materiality and Impacts in Emerging Standards

Emerging standards are thus moving from relying (solely or primarily) on ratings and rankings to a more empirically based focus on 'impacts', although that term, too, is used in many different and often contradictory ways.

The CFA Institute, the Principles for Responsible Investment (PRI) and Institute for Global Sustainable Investment Alliance (2023) (hereafter, CFA) issued a white paper focusing on five areas of responsible (for our purposes, ESG) investment: screening, ESG integration, thematic investing, stewardship and impact investing. We briefly focus only a few points central to this chapter: risk-adjusted returns; impact investing and stewardship.

A core point the white paper makes is that most ESG analysis focuses on risk adjusted returns which is quite different than a single focus, for example, on equity prices or bond prices and ratings to judge a firm's ESG performance. This, too, is significantly different than discounted cash flow (DCF), advocated, for example, by Edmans (2022 and 2023). The distinction is that different investors have often very different definitions of risk, ways of measuring it and investment time horizons. Aside from time horizons, risk metrics are not explicitly considered in DCF analysis.[iii] Moreover, even when DCF analysis incorporates ESG performance by adjusting the discount rate, this could lead to a double counting if a company's higher (lower) risk attributable to a low (high)

ESG performance is widely known in the market and already incorporated in the discount rate through a higher (lower) company beta. (Bos, 2014)

The CFA paper discusses impact investing which we deal with below. Most importantly in our view is the CFA's discussion of stewardship, which is also the most detailed of the five elements of ESG they discuss.

Our purpose in this chapter is not to survey or analyze these ESG conceptual frames nor methodologies nor data inputs as this ground has been well covered by others. Rather we suggest an entirely different approach is needed, elements of which are in fact emerging among investors, regulators and law makers, and analysts. These concerns are often embedded in the stewardship concept.

What we suggest is twofold: first, without explicitly incorporating the impacts of externalities any ESG analysis falls short both economically and financially. Secondly, even when externalities are taken into account and valued (a difficult and inexact task by its nature), the financial model(s) which most these data are 'plugged into' fall short. Thus, there is a data and model problem.

We think the reason is straight forward: the models are based on modern portfolio theory (MPT) which, in a partial equilibrium framework, excludes the often-complex feedback loops between individual firm (and/or industry and/or sector) behavior and systemic risk. MPT assumes that non-

diversifiable risk (e.g. global warming, some market macro crises) is unaffected by investments in the firms which create externalities. This despite the findings that between 75-90% of variation on return are explained by the market as a whole, by beta. (Ibbotson: 18-20)

In turn, as all large and most small and medium size investors hold diversified portfolios (à la MPT), they are inherently exposed to and unwittingly or not contribute to systemic effects of their investments. Specifically, externalities affect various E and S factors, in addition to financial risk factors (too often excluded in most ESG analysis). In turn, as portfolio companies contribute to (negatively or positively) systemic (and sub-system) risk/opportunity, in turn such risk feeds back into portfolios creating systematic (portfolio-wide) risk/opportunity. (TIIP 2023: 15-21)

Indeed, the impact of the partial equilibrium framework becomes increasingly significant when externalities are taken into account. As highlighted by Edmans (2023), a company has the ability to improve its ES metrics at the expense of other firms, resulting in a net effect on aggregate externalities that is either neutral or negative. This observation also applies to investors, as many asset managers express their commitment to decarbonize their portfolios or align them with net-zero objectives. However, it is important to recognize that decarbonizing one's portfolio does not automatically lead to the broader decarbonization of society or indeed of other investor's portfolios. For example, the sale of shares in an energy company depends on another investor acquiring those shares, highlighting the complex dynamics and limitations involved in the pursuit of sustainable financial practices. It should be evident that in these circumstances there is an

overlap of (self) interests between holders of large portfolios (and some smaller ones as well) and 'society', or significant specific stakeholders.

We thus, suggest that to move beyond the current muddled state of ESG it is imperative to develop what we called a Sustainable Impact Finance (SIF) perspective.[iv] This begins with a focus on externalities in the context of highly diversified, universal owner type portfolios[v] And it involves quantifying and assessing how externalities impact financial return which is linked to the 'real' non-financial economy.

The focus on externalities' impact on universal owners' portfolio has at least two levels. One Taking a cue from climate change analysis, scope 1 is the direct and financial impact of externalities. Scope 2 is the indirect but in many cases no less important impact on (longer term) financial performance, e.g. on supply chains; social, natural and human capital formation (and maintenance). Taken together these constitute a socio-economic and financial focus on capital formation in the context of externalities over the long-term.

3. SIF, 'System Investing,' and Stakeholders/Stockowners

The concept of sustainability we adopt in this chapter posits sustainability as the pathway to sustainable development, defined by the 1987 U.N. Bruntland Report as: "Meeting the needs of the present without compromising the ability of future generations to meet their own needs." (U.N) Although this is the explicit and sometimes implicit goal of ESG investors, yet the implications of sustainability are far too often overlooked, as most ESG investing focuses on a firm-by-firm

evaluation of E and S and G factors. Sustainability inherently demands both a firm (or industry or sector) evaluation but as well necessitates a system approach looking at how individual firms, industries and sectors contribute to system effects, and in turn how system affect feedback. One must trace and calculate externality impacts, as well as model how these are valued (including on a net present value basis) in financial terms. That is the 'S' and 'I' in Sustainable Impact Finance. While the terms 'system investing' (and sometimes stewardship) are increasing used to capture these issues our approach to systems emphasizes the role of finance, albeit necessitating a broader view of what finance (and accounting) must become. (See TIFF on system investing)

The SIF perspective focuses on the financial implications of externalities. Indeed, there are a multitude of studies focused on externality effects, both in the S and E of ESG. There are some studies which attempt to value (in financial and economic terms) externality impacts. (see, for example, Impact Weighted Accounts; Serafeim and Trinh (2020)) But to our knowledge there are only selected case studies which look at these externality effects from the angle of whole portfolio impacts, what has been called by one observer 'systems materiality'.[vi] This means that from a portfolio-wide perspective the whole is greater than the sum of its (ESG externalities) parts.[vii]

Impact investing is not SIF

In the context of ESG investing focused on financial materiality (Sustainable Finance 2.0 in the High Meadows Institute's framework) and in the body of literature on the relationship between ESG and financial performance, ESG are often included in a Fama-French multi factor model (see for example Bennani et al (2018), Khan et al. (2016)) and an adjusted mean variance perspective

is what in practice ESG investing has adopted, rooted on an outside-in effect of ESG factors on financial performance. The inclusion of ESG factors into investment decisions has transformed the sustainability component from a distinct variable to an integral part, resulting in an "ESG-adjusted mean variance" framework.

Indeed, as Rober Eccles and Daniel Crowley write: "Modern portfolio theory allows investors to maximize expected return for a given level of risk. Of course, portfolio theory continues to evolve. Forty years ago, most business schools taught that the best way to manage portfolio risk is through diversification among equities with different return profiles (i.e., their covariance). Before long, it was observed that by adding other asset classes, the risk associated with a particular level of return could be reduced. Asset allocation models are growing ever more sophisticated, and many now include an ESG overlay. As the world becomes increasingly complicated, fiduciaries are compelled to adopt new analytic techniques. These developments have nothing to do with public policy debates. Instead, they pertain to investor need for material information about their investments" (Eccles and Crowley, 2022).

The term 'Impact' is often associated with 'impact investing', that is whether at market or below market rates of return (however calculated), an investment intended to have a very specific 'impact' explicitly focused on defined purpose and outcome. We, however, use the term 'impact' quite differently: i*mpact investing is not impact finance.*

Indeed, it should be obvious that *all* finance has impact, for good or ill depending on one's viewpoint and standards. In adding sustainable to impact finance (SIF) there are at least two elements. The first important but limited step is to develop (based on MPT) an impact/externality adjusted mean variance perspective (EAMVP) to the financial performance of a portfolio which considers the financial impact of externalities. By adjusted we mean consideration of relevant E or S or G factors which are not just financially 'material', but that are also material) because of their impact (See below).

In this regard, Farzamfar et al (2022) show that firms, under pressure to enhance environmental performance, concurrently experience a decline in social status, evidenced by an elevated frequency of compliance violations in areas such as employment, healthcare, workplace safety, and consumer protection. The study reveals a consistent trend where companies, on average, offset a complete elimination of environmental penalties with a 23% increase in social violations. Moreover, the propensity to reduce social responsibility is larger when firms operate in high emission industries (for which emission reduction is therefore financially material).

But it should not stop there as EAMVP, like its underlying MPT frame, neither accounts for a portfolio's own systemic effects nor feedback loops. (Lukomnik and Hawley, 2021) Indeed, within the confines of most MPT models, while systemic risk can affect portfolios, portfolios or their component parts do not affect systemic and other risk. (In MPT terms the focus is on idiosyncratic risk leading to an efficient frontier). Alternatively, Sustainable Impact Finance (SIF) analysis goes

beyond EAMVP by also accounting for the financial impact of externalities created by a specific firm (sector/industry), an inside out approach, complementing an outside in analysis.

Whilst an outside-in MPT approach leads to a firm-by-firm portfolio analysis which does not consider externalities created by the firm (sector or industry), an inside out approach recognizes the elementary yet critical and well-established economic analysis of externality effects, that is impacts, both pecuniary and non-pecuniary. Traditional finance models entirely ignore this long-established economic insight, especially from a portfolio-wide, holistic perspective, that is, a universal owner viewpoint. From this angle, a proportion of externality impacts (direct and secondary) are internalized within the portfolio itself, meaning sub-optimal economic performance by the internalizing firm if the externality is negative. Suboptimality of a firm or more realistically of many firms and sectors, logically suggests that the market as a whole (beta) operates in economic terms sub optimally. As a universal owner portfolio is a representation of the market, of beta, the portfolio performs sub-optimally. This has a host of important implications as discussed at the end of this chapter. (Lukomnik and Hawley: 28-45)

In a systemic approach, the logic is elementary yet surprisingly far too often ignored. If one considers only an outside-in (that is, the impact) the ‘outside’ comes primarily from other firms’ externalities. Hypothetically and simplistically if one owns a portfolio of only two firms, as firm A internalizes some proportion of a negative externality produced by firm B (outside in) then it is operating sub-optimally. If the market or significant sub-set of it (a ‘reasonable investor’) recognizes this impact, it is material. But what should the owner of the two firm portfolio do if it

cannot either hedge or sell?[viii] At minimum pressure firm B to document its externality so that firm A can know the extent of its internalization and attempt to value its damage. Additionally, the two firm portfolio owner can take other actions to attempt to get firm B to mitigate its negative externality through, for example, regulatory advocacy, public pressure campaigns, governance engagement or push in this simple case for a Coaseian negotiation based on tort liability law, if other conditions are satisfied (i.e. no or very low transaction costs). (Coase, 1960).

Thus, both outside in and inside out analyses are essential for understanding how a portfolio in the long run (but also in the medium and in some cases the short run as well) will behave financially. This is what we mean by 'impact finance'. It is two sided: dynamic and systemic, both contributing to system effects (risks or de-risking) and absorbing externalities. It is dynamic because it changes over time.

There is thus a need for an inside-out and out-side accounting. (e.g. Serafeim and Trinh (2020). This still developing approach is the logical outgrowth of both cost and financial accounting. It focuses on the direct impact (think of it as the pecuniary impact) of externalities created by portfolio companies. Yet there are also indirect and secondary impacts (non-pecuniary externalities). Externalities of course affect more than portfolio companies: that is, they impact non-companies, e.g. communities, the environment, employees. In turn these have both direct and often complex indirect effects as economic inputs on human, social, natural capital. All are from a socio-economic point of view essential to current and especially future economic activities, and of course to all human activities. Some elements of these are attempted to be captured by the

European Union's formulation of double or dual materiality, as we discuss below. From our point of view however while dual materiality captures important elements of the relation between the financial and what is characterized as 'stakeholders' (basically all of society), it is both incomplete and too general, hence somewhat misleading. (See as an example of multiple stakeholders World Benchmarking Alliance (16) making the general use of the term vague and difficult to understand outside of a specific context. The Benchmarking Alliance list fully seventeen different stakeholders.)

4. Materiality(ies)

Materiality is both an established financial, accounting, and legal term, yet about which is there much debate, important jurisdictional differences, and indeed like ESG, also much confusion in the use of the term. The OECD defines materiality from a very high and general level.

> Material information can be defined as information whose omission or misstatement can reasonably be expected to influence an investor's assessment of a company's value. This would typically include the value, timing and certainty of a company's future cash flows. Material information can also be defined as information that a reasonable investor would consider important in making an investment or voting decision. (OECD, 2023: 27)

Note the implicit assumption: this is in outside-in perspective. The term 'reasonable investor' originates in a U.S. Supreme Court decision in 1976, reaffirmed in 1999, and based on the long-standing U.S. 'reasonable person' standard dating back to the 1933 Securities Act. (The 'reasonable investor' standard for defining and judging 'materiality' is widely used in other jurisdictions (e.g. E.U., U.K., Canada) and among various standard setters (e.g. ISSB, GRI).[ix] (Katz and McIntosh) While in the U.S. the 'reasonable investor' is black letter law, as with all black letter law specific meanings and contexts are contested and change over time. From our perspective there are two key elements. The first is that markets have always had and must have different views on what is 'reasonable' or else buy and sell functions would decline and, *reductio absurdum,* cease entirely. Thus, what may be material for one investor's need (e.g. long-term E factors for example) would for another's less or not important (e.g. short-term traders or hedge funds). The second element is more important. The growth in almost all markets of large, diversified universal owner type investors have come to dominate markets. Whatever they may be called by various analysts, these investors in the last decades have if not changed the basis for what is 'reasonable' (as there have always been long term diversified investors, albeit not dominating markets) but made externalities' impacts on their portfolio's critical 'material' information, thereby expanding the parameters of 'reasonable'.

Thus, structural changes in markets due to large, diversified investors have created demand for additional disclosure beyond what was previously seen as 'financial.' Indeed, what from a regulatory point of view is 'financial' has itself been ever changing. What has been labeled 'non-financial' has often become 'not yet financial or pre-financial' and then 'financial' (that is, material even in a narrow sense). (See WEF, 2020:14) For example, prior to the turn of the last century

corporate governance was not seen as 'material', and was neither (accurately) reported on, nor reported on at all. Regulatory action (e.g. Sarbanes-Oxley in the U.S.) was a response to governance demands by (many) investors and others. Thus, neither governance nor more recently carbon disclosure are not 'extra' or 'non' financial factor but has become a necessary input into the financial analysis of a firm and of a portfolio (IAASB, 2011) A parallel response in the U.S. (and prior to that in the E.U and other jurisdictions) to governance regulation is the S.E.C.'s proposed enhancement to and standardization of carbon disclosure as material. (USSEC, 2022)

In the sustainability reporting space, the concept of materiality is far more complex given the multiple stakeholders -sometimes with conflicting interests- which can be interested in the information of a company's sustainability report, as we discuss below. Current approaches to ESG materiality within various frameworks and guidance fit into these two perspectives. The simple business case perspective (outside-in) posits that an ESG issue is considered material when it exerts a substantial (either positive or negative) influence on the financial performance of the company. Conversely, the societal impact perspective (inside-out) contends that a subject is deemed material when it holds significance for both society and the company, with the latter significantly affecting this subject.

The two perspectives are reflected in the differences, between two major non-governmental standard setting organizations: the Global Reporting Initiative (GRI) and the International Sustainability Standard Board (ISSB) and its parent organization, the International Financial Reporting Standards organization (IFRS). In general, the GRI gravitates to a inside-out materiality

view, and defines as ‘material’ “those topics that have a direct or indirect impact on an organization’s ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large.” (GRI 2011: 3). This definition has been recently revised to: “the organization prioritizes reporting on those topics that reflect its most significant impacts on the economy, environment, and people, including impacts on human rights”. (GRI, 2020:8). To date the GRI has not developed its views on the relation between the financial and impact on various stakeholders nor has it focused on the implications structural changes in markets dominated by large diversified universal owner type investors.

The ISSB has its origins in the U.S. based SASB (Sustainability Accounting Standards Board) and has focused on an outside-in single financial materiality from the point of view of the individual firm. This is formulated by the ISSB in its S1 standard: “This Standard requires an entity to disclose information about all sustainability-related risks and opportunities that could reasonably be expected to affect the entity’s cash flows, its access to finance or cost of capital over the short, medium or long term. . . . Sustainability-related risks and opportunities that could not reasonably be expected to affect an entity’s prospects are outside the scope of this Standard.” Its climate standard, S2, has similar language -as it is capital market focused- (ISSB 2023) (See ISSB 2018 for background to this language.) but it calls for disclosure on scope 2 and 3 emissions, which clearly are impact focused. It is not clear how ISSB reconciles this implicit difficulty with its generic definitions and foci in S2.

Until recently, with the introduction of the concept of 'double materiality' by the EU Corporate Sustainability Reporting Directive (CSRD), the two approaches to materiality have been considered competing. Double materiality recognizes the outside-in and inside-out nature of externalities, and in this regard moves beyond the generally accepted interpretation of U.S. (single) materiality. Although as noted, some interpretations of 'single' materiality recognize the inside-out/outside-in importance of data disclosure even if this is implicit as in the 2023 S.E.C. carbon proposal.

The E.U. view is summed up nicely in the CSRD, which requires companies to disclose information "to the extent necessary for an understanding of the development, performance, position and impact of [the company's] activities." This means companies should disclose not only how sustainability issues may affect the company, but also how the company affects society and the environment. (European Commission: 3) In particular the European Sustainability Reporting Standards (ESRS)[x] include a definition of these two materiality dimensions. "A sustainability matter is material from":

a. "an impact perspective when it pertains to the undertaking's material actual or potential, positive or negative impacts on people or the environment over the short-, medium- and long-term. Impacts include those connected with the undertaking's own operations and upstream and downstream value chain, including through its products and services, as well as through its business relationships." (ESRS 1 paragraph 43);
b. "a financial perspective if it triggers or could reasonably be expected to trigger material financial effects on the undertaking. This is the case when a sustainability matter generates or may generate risks or opportunities that have a material influence, or could reasonably

> be expected to have a material influence, on the undertaking's development, financial position, financial performance, cash flows, access to finance or cost of capital over the short-, medium- or long-term." (ESRS 1 paragraph 49). In this document the terms "risks and opportunities" are used to identify the financial risks and opportunities that are in the scope of financial materiality.

The often-complex processes by which financial material changes is beyond the scope of this chapter. But it is nevertheless important to note that one element change comes from development of social norms, which is considered right and wrong, acceptable or not acceptable. Such norm advocacy (the form it usually takes) also has impact on regulatory and legislative rules and law. From our perspective while all norm changes may not be financially material at any given point (indeed the majority may never be) some will affect what is financially material. There is not a clear demarcation between what is often called Values (norms) and value (financial). (Lukomnik and Hawley, 2021: 62-62)

Stark (2023) took a different approach in her important Presidential address to the American Finance Association, focusing on the confusion of what she called value and values, the former focusing on the pecuniary, the latter on the non-pecuniary. As discussed below both approaches have not looked at, or look at in any analytical depth, the relation between values (social norms) and value: what in a different context Milton Friedman called the 'rules of the game.' (Friedman, 1970) The point (which Friedman, too, did not consider) is that rules (both legal and norm-based)

change over time and place and these changes can and do lead to the dynamic nature of financial materiality. (Stark:1845)

This nature of investor useful and necessary information is ever changing. This is nothing new. There is debate about whether the term ‘dynamic’ or ‘emerging’ materiality is necessary under the U.S. reasonable investor standard as reasonableness itself is considered dynamic by some, hence materiality is as well. (Katz and McIntosh) These legal and definitional debates aside, what is important are the content changes themselves. What is apparent is that ESG is moving from overwhelmingly using rating and ranking data to a focus on externalities and their impacts using increasingly mandated self-disclosed firm data, along with reliable third-party data. Obviously, this can only occur with mandated standardization. Along with mandated disclosure will come mandated assurance functions.

Additionally, reflecting a view that materiality is dynamic, there is a limited if yet a highly abstract and ill-defined feedback mechanism between ‘society’ (read: stakeholders) and financial materiality. This attempts to capture the ‘net yet financial’ process as it may become directly financial. (Lukomnik and Hawley, 2021:70) [xi]

For example, if a norm shifts about animal rights due to stakeholder activities and general societal belief changes occurs, as in the U.K, these belief changes can feedback into risk and opportunities for various firms, a classic outside in effect. This has also been called a Value-to-value shift, norms

(Values) transmutation into financial functions (value). (Lukomnik and Hawley, 2021: 62-63; Starks: 1840 et seq) These shifts typically occur along with regulatory and legislative actions, changing what Milton Friedman called 'rules of the game.' (Friedman, 1970) Starks does not address the question of whether in her view and analysis Values can morph into value. For her there is a clear (and apparently not changing) divide between stakeholders (affected by externalities) and firms themselves, and by extension investors who hold assets in these firms. In this sense, the important question the relation between some stakeholders and value creation or destruction is avoided.

What is missing in the E.U. and some other dual materiality formulations is impact that universal owners have on the financial system itself, as they typically incorporate some stakeholders (and sometimes stakeholders' Values) as investors. That is these large, diversified investors represent citizens who invest for retirement or saving for childrens' education or to buy a house. These goals are clearly financial yet are organically tied to citizens status as both 'stakeholders' and investors (including beneficiaries of defined benefit pensions). We might call them 'financial stakeholders', they wear (at least) two hats. In short, what is too often presented as a demarcation line between financial and societal, is in fact a porous membrane: it leaks both ways and there are numerous feedback loops. These feedback loops are often the core of 'becoming material' process. Ignore them at one's peril.

How both the GRI and ISSB do and do not conform to existing E.U. (and some other regions') disclosure regulations, as well as on-going and emerging standards (e.g. in the U.S. re: climate change disclosure at the S.E.C.) is beyond the scope of this chapter. However, what is clear to date is that mandated disclosure standards, as well as some substantive mandates, focus on inside out and outside in types of materiality, often using the term impact materiality. The discussions between GRI and ISSB (and others especially regulators) about this is on-going, adding to confusion about the definition and uses (and use cases) of 'materiality'.[xii]

Despite their differences what is striking about both the ISSB and GRI approaches is that both accept a divide between the financial and the larger, in GRI's words, "…the economy, environment and people for the benefit of multiple stakeholders." (GRI: 2) A SIF approach closes this gap as it emphasizes a direct financial focus (in this regard similar to ISSB/IFRS), but with an inside out/outside in analysis which especially recognizes the importance of universal owner type investors. A SIF focus thus also intersects with a GRI approach but focused on externalities as financial factors, again going beyond idiosyncratic risk single firm focus to a holistic portfolio approach as well. In effect a SIF approach broadens the ISSB/IFRS view while focusing more narrowly a GRI perspective. In doing so it transforms both. To put it slightly differently, SIF connects the dots missing in both approaches by expanding the financial (to better reflect what we see as real world finance and where trends in finance and accounting are going), by rcognizing the paradigm shift necessary with the rise and dominance of universal owners; and by recognizing that stakeholders may also have influence on what becomes financial and material.

While a comprehensive survey of what different types of corporates and investors focus on regarding materialities is beyond the scope of this chapter, two surveys of large investors and corporate provide some indications that a stakeholder 'dual materiality' (E.U. definition) orientation is emerging among practitioners. An S&P study of firms found that 54% were interested in material issues for 'external shareholders', while 52% had metrics for that purpose while 71% were reporting on any form of materiality. (S&P Global, 2023: 19-20. See p.4 for methodology) Of those corporates tracking external impacts, 43% were reporting publicly. As would be expected there is significant variation by sector and by 'material' issue.

A survey by Institutional Shareholder Services (ISS) of large investors (asset managers, asset owners and others, in order of numbers surveyed) and corporates fills in the indicative picture of emerging materialities' scopes. About 75% of investors responded that materiality assessments should include a company's "…expected impact on the environment and society…[and] the largest part of that group (44 percent) said that these impacts can be expected to impact the company's financial performance in the medium- to long-term…" Although there was a significant regional difference, about 90% of non-U.S. firms responded that E and S impacts should be reported, and even 58% of U.S. firms that impacts should be reported as well. (ISS, 2023:7)

Both the S&P and ISS surveys did not ask nor discuss attempts to value either the external impacts nor value (even using, for example, scenario analysis or monte carlo stimulations) the value impact on firms themselves. Valuing externalities remains a significant relatively unexplored yet critical

dimension of the next phase of ESG/sustainability. Some examples stand out. For example, Schoenmaker and Schramade (2023: 408-24) provide both discussion and initial quantitative models of impact integrated into risk and cost of capital analysis and models indictive of the move away from ESG rating and rankings while confronting the challenges of focusing on impact, externalities integration into financial theories and models.

Additionally, Harris (2023) develops a model (with some empirical evidence) which attempts to provide, "…a foundation for quantitative models that address topics like universal ownership and impact investing including defining the concepts of contribution multipliers, prices of impact, impact returns, and impact frontiers." (1) While Harris focuses on what he calls 'non-pecuniary preferences' suggesting that dominant existing asset pricing models need to evolve his treatment of externalities (and to a degree their internalization) is an important contribution to pricing externalities, even if his primary focus is on what he sees as non-pecuniary aspects of 'impacts'. (2-3, 5, 47)

However, Starks (2023: 1854-55) appears to assume that it is values investors alone (e.g. non-pecuniary focused) who are most (entirely?) concerned about E and S externalities as they affect 'communities and society', despite, for example, the survey data just discussed. Her discussion moves from a brief mention of externalities into whether firms individually have significant tail risk if they create negative externalities, concluding that some research suggests they do, whether the market at a particular moment price these in (e.g. in bond ratings and prices). This approach while useful is nevertheless static, missing the multiple effects Values may have on value although

Stark recognized reputational and other forms of risk, but this is not integrated into nor developed in her conceptual framework.

Conclusion

As sustainable impact finance begins to replace older school ESG (based on ratings and rankings) logically this will lead to a holistic portfolio framework contrasted to a firm/sector/industry approach, as in an MPT idiosyncratic risk framework. The former accounts for (and must develop calculation methods for) two-sided externality effects, the 'impact' of finance: inside- out and outside-in. This quantification of these externality impacts remains an important challenge going forward. From this perspective we suggest that 'impact finance' brings us back to the original and core meaning of sustainability yet viewed from a financial return perspective what we have called Sustainable Impact Finance. [xiii]

In this regard, both inside-out and outside-in externality effects imply that some proportion of externalities impact a single portfolio while these effects also (by definition) affect other portfolios. That is, externalities have firm as well as portfolio specific effects in addition to beta (whole market) effects. As highly diversified portfolios tend to be representative of the market they are beta portfolios, subject more to performance of the whole market rather than to the sum of its component parts as is analyzed by MPT or better by EAMVP.)

The Principles for Responsible Investment formulation captures these ideas well. They call it 'Active Ownership 2.0' defined as follows:

> Systemic issues require a deliberate focus on and prioritization of outcomes at the economy or society-wide scale. This means stewardship that is less focused on the risks and returns of individual holdings, and more on addressing systemic or 'beta' issues such as climate change and corruption. It means prioritizing the long-term, absolute returns for universal owners, including real-term financial and welfare outcomes for beneficiaries more broadly. (PRI: 11)

Endnotes

[i] LaBella et al (4) suggest that the dispersion among ESG raters and rankers should be viewed as more akin to sell-side stock analysts' buy/sell recommendations rather than credit ratings.

[ii] It should be noted that the High Meadows' approach is at root a stakeholder one: Their Sustainable Finance 3.0 relies on stakeholder views to make their case, but we believe this misses: 1-feedback loops re: dynamic materiality; 2-holistic portfolio effects; and 3-lumping all stakeholders/society into one category. In terms of the latter, it might be more realistic to look at 'material' stakeholders by firm, industry, etc. These issues are discussed below.

[iii] The factors in DCF are: (estimated) cash flow over x periods of time; the discount rate, which is often a company's weighted cost of capital.

[iv] Similar approaches use a variety of terms, e.g. system level investing (TIIP); impact stewardship (UK); Active ownership 2.0 (Principles for Responsible Investment). We think SIF focuses meaning and attention on finance in relation to impact by naming them specifically.

[v] A universal owner has broadly diversified holdings (e.g. equities, debt instruments, private equity) such that it to a large degree represents a cross section of these asset markets. Universal owners have come to dominate almost all developed market economies and many middle- and low-income markets as well. Estimates of market dominance varies among analysts, but all agree that they own in a range of 70-80% of assets. See Amel-Zadeh et all for a low estimate based on their analysis of blockholders (vs. universal and common owners).

[vi] Private communication.

[vii] It could be argued that this would result in 'soft' data for financial accounting, but we suggest that it has always been an illusion that 'hard' financial accounting does not include large elements of 'soft' data, e.g. intangibles such as good will, valuation of human capital. It has been long noted that the growth of service and human capital-intensive economies makes financial valuation more difficult as intangibles are more difficult to value than tangible assets.

[viii] This is typically the case for large, long-term diversified often indexed or shadow indexed investors who dominate the market.

[ix] Despite widespread use there is some criticism of the legal standard of 'reasonable investor(s)' in its relation to materiality in U.S. legal commentary. See for example, Oesterle (2011) and Lin (2015).

[x] To add: brief note on EFRAG and ESRS

[xi] In the EU context, the dynamic characteristic of materiality is well incorporated in in ESRS1: "(…) In general, the starting point is assumed to be the assessment of impact materiality, as a sustainability impact may become financially material when it translates or is likely to translate into financial effects in the short-, medium-, or long-term. (…)" ([Draft] ESRS2, 2.2 par.47)

[xii] On September 4, 2023 EFRAG and GRI publish today a joint statement on the high level of interoperability achieved between the European Sustainability Reporting Standards (ESRS) and the GRI Standards. "(…) In keeping with the requirement formulated in the CSRD to adopt a double materiality approach and to take account of existing

standards, the ESRS have adopted the same definition for impact materiality as GRI and have leveraged GRI's expertise. ESRS and GRI definitions, concepts and disclosures regarding impacts are therefore fully or, when full alignment was not possible due to the content of the CSRD mandate, closely aligned" (EFRAG-GRI Joint statement of interoperability, https://efrag.org/news/public-444/EFRAG-GRI-Joint-statement-of-interoperability-?AspxAutoDetectCookieSupport=1)

[xiii] This formulation is different than the term 'investing for sustainability impact' as used in Freshfields (11) which suggests intentionally attempting investments yielding sustainability results.

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