Zheng Partners LLC

郑和

Research Proposal: Improving the Alignment of Sustainability Ratings With the SDGs

Introduction

The problem this note addresses is the failure of current approaches to rating the sustainability[1] of an asset to take adequate account of the additional quantity of impactful outputs that an asset is capable of creating over a given period.

No current rating methodology can rank-order assets by the quantity of additional outputs they will contribute toward the SDGs over a given period.

Achieving the UN SDGs requires large additional quantities of access to socially beneficial things such as education and health care and large additional reductions-in or offsets-to the production of carbon and other harmful chemicals.

Unless the sustainability rating of an asset aligns with the net quantity of socially or environmentally beneficial outputs it creates, ratings will fail to prioritize those assets capable of making the greatest contribution to achieving the SDGs.

As a result, investors' capital allocations will not prioritize the assets with the greatest contribution to make. Aligning sustainability rankings with the additional quantity of impactful outputs created will better align capital mobilization with achieving the SDGs.

The benefits of being able to rank-order assets by the additional quantity of impactful outputs they can create extends beyond a better alignment of capital mobilization with achieving the SDGs.

Bringing the quantity of outputs to the forefront has the benefit of focusing on a metric which can be forecast ex ante and measured ex post.

Focusing on the quantity of impactful outputs will enable impact to be incorporated into established approaches to portfolio management such as the Capital Asset Pricing Model (CAPM). Portfolio optimization in three dimensions – Risk, Return and Sustainability – becomes possible.

The integration of sustainability into established portfolio management methodologies will remove a significant barrier currently faced by investors, particularly large institutional investors, to respond to the requests of the owners of capital and incorporate sustainability into the management of total assets under management (AUM) rather than a lesser 'special' carve-out.

The integration of sustainability into the management of total AUM, rather than a minority carve-out, will lead over time to the pricing of sustainability on an increasingly efficient basis.

The logical conclusion of this evolution is market-based economies which price both positive and negative externalities and so markets and a form of market capitalism which is both much more efficient and much more sustainable than market capitalism in its present form.

Additionally, better ex-ante estimation of the quantity of impactful outputs that are likely to be created over a given period is required before the analysis of sustainability can be extended further and an ex-ante financial value placed upon the potential impactful outputs of an asset.

---

[1] Sustainability is used here in its broad sense as an umbrella which includes each of the four strategic approach to sustainable investing: SRI, Thematic, ESG and Impact.

Aligning the rating of sustainability with the quantity of additional impactful outputs created is an important piece of much larger developments.

Discussion

Achieving the UN SDGs can only be achieved through a combination of a substantial increase in the quantity of positively impactful outputs and a substantial decrease in the quantity of negatively impactful outputs.

A substantial change in *quantities* is required.

Current approaches to assessing the impact of an investment largely focus on either those characteristics of an asset which increase or decrease its *potential* to be impactful, or how the impacts are *interpreted* by stakeholders, rather than the *quantity* of impactful outputs the asset is likely to create.

While most approaches to rating or measuring impact do include a scale variable, the scale variable is typically only one of a number of additive inputs to the rating. For example in the IMP impact of an enterprise template, How Much is one of five dimensions represented by three of fifteen data points.

Aggregating quantity with a wide range of other variables which describe the *potential* of an asset to be impactful very much under-rates the role of scale in achieving the additional quantity of impacts required to meet the SDGs.

Scale leverages the positive or negative potential for impact of an asset. Scale has a multiplicative relationship to the quantity of impact created, not an additive one.

Aggregating quantity with variables which describe the potential of an asset to be impactful also fails to recognize that the factors which determine the quantity of outputs and the factors which determine how much of the quantity is impactful are quite different.

The under-consideration of the quantity of impact is reflected in an absence of enquiry into what it is that creates additional quantities of positive and negative outputs. In existing methodologies the scale variable typically is obtained from an enterprise's estimates of its own activity. There is no theory to explain ex ante the potential quantity of impactful outputs that an asset can create either individually or in relation to other assets.

The evidence for this is the fact that none of the existing ratings have a consistent correspondence with the quantity of impactful outputs created: a high-to-low ranking by rating will not correspond to a ranking from the largest to the smallest quantity of impactful outputs created.

Given the need to create substantial additional quantities of positive impact to achieve the SDGs, the lack of enquiry into how an additional quantity of impactful outputs is created is a significant lacuna in current approaches to impact.

Filling this gap in current approaches to assessing impact will provide better alignment between impact ratings and mobilizing capital to achieve the SDGs.

Additionally, an approach which is able to make an ex ante rating of the quantity of impactful outputs an asset can create makes it possible to compare the potential impact of different assets based on a single transparent variable.

Focusing on the quantity of impactful outputs an asset can create makes it possible to include sustainability as a third variable in investor's portfolio asset allocation decisions, optimizing the portfolio in three dimensions of risk, return and impact.

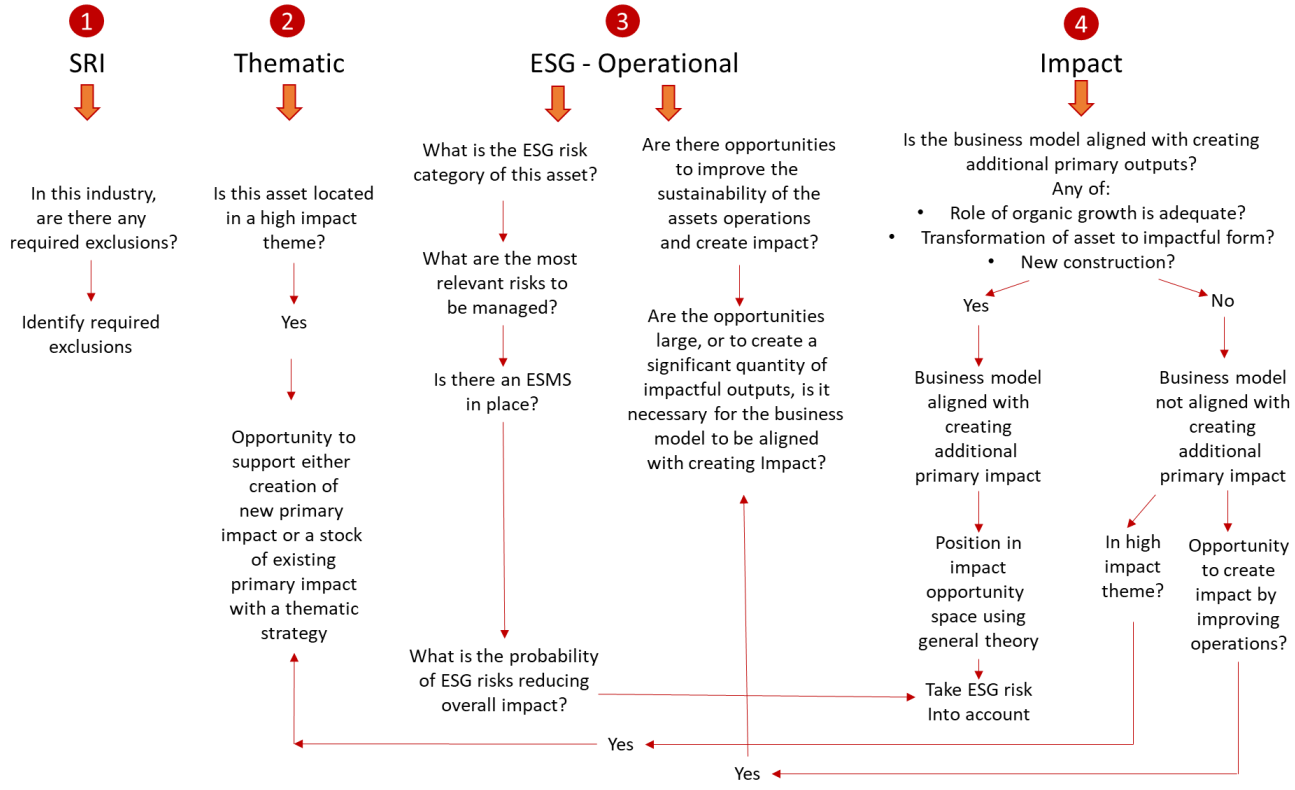
The ability to integrate sustainability into established portfolio management methodologies makes it much easier for investors to integrate sustainability into the management of total AUM.

The focus of this proposal is an approach to incorporating an assessment of an asset's ability to create a quantity of impactful outputs into the overall sustainability assessment, grounded in financial logic and data.

Before describing this approach it is useful to step back and look at both (i) the place of impact within the broader umbrella of sustainability and (ii) the total data landscape for impact and where this approach to assessing the quantity of impact fits into it.

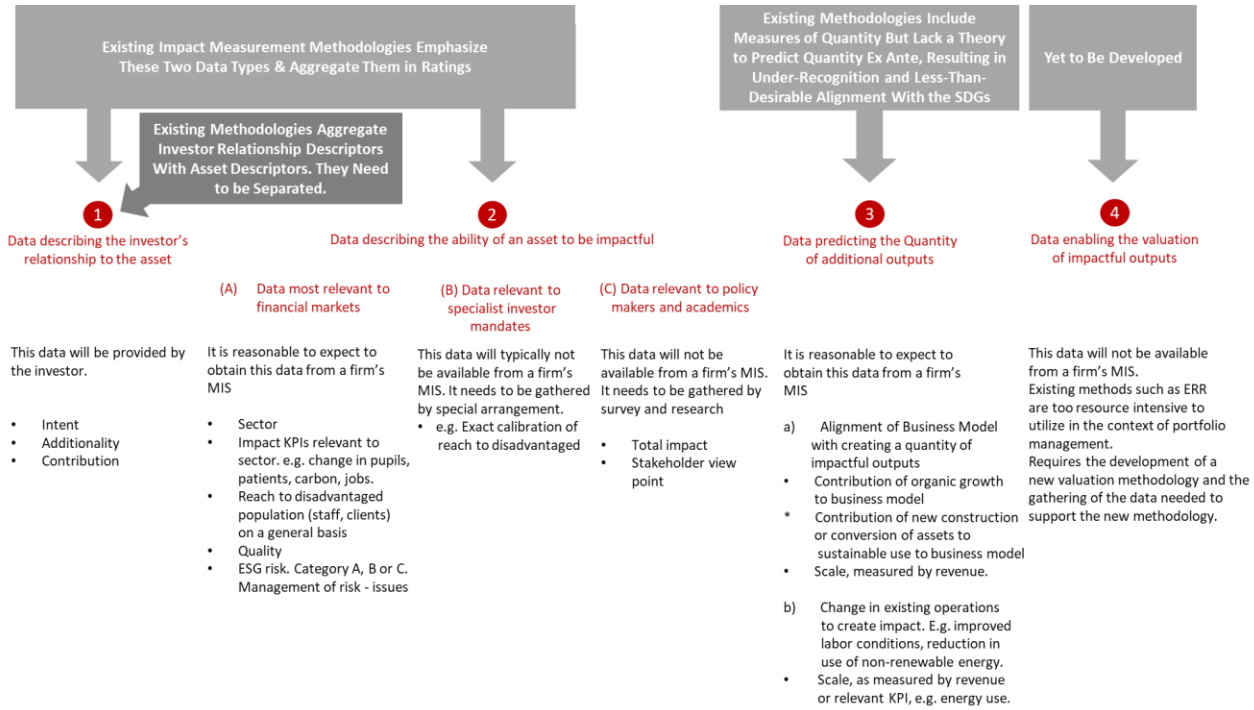
Chart 1 describes the relationship to each other of the four strategies which contribute to a sustainable approach to investing. Each of these four strategies brings something different to the management of a portfolio and achieving the desired sustainable profile of a portfolio will benefit from the use of all four strategies.

Chart 1 The Four Strategies Contributing to a Sustainable Approach to Investing



The focus of this note is the impact piece of the broader sustainable landscape. Chart 2 illustrates the types of data used for assessing impact.

Chart 2 The Data Landscape for Impact



Comprehensive data across all four data types would allow us to rate the potential impact of an asset relative to other assets ex-ante in the most meaningful manner as we would understand both the quantity of impact and its economic value, e.g. the value of x additional people with access to health care versus the value of x carbon offset. This level of data would enable us to include impact in portfolio optimization along with risk and return and allocate capital based upon the ability of assets to meet SDG priorities.

Comprehensive data across the first three data types (excluding valuation) would allow us to identify those assets capable of creating the greatest quantities of additional impactful outputs with which to meet the SDGs, without enabling the comparison of economic value between the different types of output. This level of data is sufficient to enable the inclusion of impact in portfolio optimization along with risk and return and to allocate capital in broadly the right direction to achieve the SDGs.

As comprehensive data across either (i) all four data types or (ii) the first three data types, enable the inclusion of impact in portfolio optimization and the consequent re-allocation of capital toward more impactful assets, these two standards of data open the possibility of achieving better pricing of impact and externalities which, in turn, can lead to a form of market-based capitalism which through pricing externalities is both more efficient and more sustainable than current market capitalism.

Current approaches to rating the potential impact of assets use only a blend of the data in data types 1 and 2.

While the KPI and reach data in type 2 provide an indication of scale (number of clients, number of people reached) these numbers are based on observation or the business' own forecasts. There is no underlying or unifying theory that might be used to form ex-ante expectations of the potential of a wide range of disparate assets to create an additional quantity of impactful outputs.

Type 2 data is sufficient to tell us whether many or few of the outputs an asset creates will be impactful, but we cannot tell how many outputs there are likely to be. This level of information is insufficient to rank-order assets by the quantity of additional impactful outputs they will contribute to the SDGs and so is insufficient as a basis for including impact in portfolio optimization. If we cannot go beyond type 2 data, there is little chance that markets will one day price impact.

There is in fact a risk that if markets attempt to allocate capital based on only type 1 and type 2 data the lack of a common metric capable of observable measurement and quantification may result in arbitrageable pricing inconsistencies to the benefit of hedge funds and the disadvantage of both long term investors and the reputation of impact investing.

Type 3 data, which is not considered by any of the existing approaches to rating impact, provides a basis for forming ex-ante expectations of the quantity of outputs that an asset is capable of producing.

The logic underpinning this approach to forming expectations of the quantity of outputs that an asset can produce is as follows:

- It is necessary to differentiate between an existing stock of outputs and creating additional outputs.
  For example, one hospital serves one thousand low income patients a month and is not increasing this number while a second hospital serves five hundred low income patients a month and is increasing this number by 30% annually. The one thousand patients and five hundred patients are the existing stock of impact. While supporting this stock of existing impacts is important, meeting the SDGs requires an increase in this number, which is being achieved by the second hospital but not by the first.
  To achieve the SDGs we need to understand how *additional* outputs are created and include this in our rating of assets.
- The *quantity of additional outputs* that an asset is capable of creating depends upon the business model being used.
  Additional outputs are created in one of two ways:
  - The business model is aligned with creating additional outputs.
    i. Organic growth is present in the business model. There are six strategies through which the return on equity is created. Only one of these strategies, organic growth, is directly connected to creating additional outputs. Refer to Chart 2 for a description of the six strategies and their relationship to creating additional outputs.
    ii. The business model involves new construction. For example low income housing, green buildings, solar energy plant.
    iii. The business model involves converting non-sustainable assets to sustainable use. For example, non-energy efficient buildings to green buildings, non-sustainably farmed land to sustainably farmed.

- The business model is not necessarily aligned with creating additional outputs. However, changes in existing operating processes may lead to the creation of positive impact through, for example, reduced use of fossil fuel, less energy consumption or improved labor conditions.

Focusing on the alignment of the business model with creating additional outputs, it would be helpful if we could find data which verified the logical link described in Chart 3 between organic growth and the creation of outputs such as additional jobs or additional access to education.

Chart 3 The Six Strategies for Creating a Return on Equity and Their Link to Creating Additional Outputs

Strategy	Description	Role in Impact
Organic Growth	Revenue growth driven by increased sales in existing business and internal introduction of new business. Financial return comes from increased sales.	Directly linked to provision of additional goods/services as this is what drives organic growth. Linked to job creation as company grows.
Inorganic Growth	Revenue growth created by mergers and acquisitions. Growth comes from purchasing existing revenue of another company. Financial return comes from cost-cutting and scale benefits.	No additional goods/services provided or jobs created by acquisition. May reduce jobs short term due to rationalization.
Efficiency Gains	Cutting costs to improve margins. Financial return comes from improved EBITDA.	No additional provision of goods/services in the short term. Short term possibly a negative effect on jobs. Medium to long term, if lower costs are passed on to consumers in lower prices, it could increase the access of underserved groups. If this happens, it will be captured in organic growth.
Leverage	The amount of debt the company is carrying. Larger debt relative to equity increases the return on equity but also increases risk.	No link to additional provision of goods/services or additional jobs.
Multiple Expansion	An increase in the valuation of the company, typically expressed as a higher P/E ratio. Valuation changes can be caused by the company reaching a size that makes it a more attractive acquisition target, by performance exceeding expectations and by market momentum.	No link to additional provision of goods/services or additional jobs.
Cash Extraction	Payment of cash by the company, for example as dividends, fees, royalty payments, stock buyback.	No link to additional provision of goods/services or additional jobs.

Data confirming this link from the IFC funds' portfolio is presented in Chart 4[2] and shows a surprisingly consistent relationship between revenue growth (driven mostly by organic growth in this data set) and job creation across companies of different sizes[3].

Evidence of a link between revenue growth and job creation is strong evidence of a link to other outputs such as additional access to education or healthcare as each additional pupil or patient contributes directly to additional revenue while the relationship to job creation is less direct. Using job creation data as a proxy for the general ability of assets to create outputs is reasonable.

[2] The data in Charts 4 and 5 come from a sample of 519 growth equity companies across sixty two emerging market countries in the period 2000-2011. This data is available from "Implications for Job Creation and Achieving Good Financial Returns in Emerging Markets: An Analysis of Private Equity Funds Backed by IFC (Vintage 2000–2011)", David Wilton and Wilmot Allen, Emerging Market Private Equity Association December 2012 and "The Benefits of Private Equity Investment", David Wilton, Commonwealth Trade and Investment Report 2013. Both documents can be downloaded from https://zhengpartners.co/

[3] Revenue growth per new job will differ across time periods and countries and between less automated and highly automated activities. This data is an average from 519 growth equity companies across sixty two emerging market countries in the period 2000-2011.

Chart 4 Data From IFC's Funds' Portfolio Showing a Relationship Between Revenue Growth and Job Creation

	SME	Larger Company	Total/Average
Number of companies	235	284	519
Total jobs created	26,679	276,656	303,335
Average jobs created per company	114	974	584
Average revenue growth per company	$14,112,910	$140,863,906	$81,644,178
Average revenue growth per job created	$120,694	$132,294	$131,208
Investment by funds	$946,000,000	$3,320,000,000	$4,266,000,000
Fund investment per job created	$35,439	$12,000	$14,064
Job growth rate (annual)	18.3%	12.9%	15.3%
Revenue growth rate (annual)	29.8%	14.9%	21.5%
Average number of jobs at investment	79	1,628	927
Average revenue at investment	$4,130,336	$231,354,368	$125,616,452

Given the evidence of a relationship between organic revenue growth and the creation of outputs, if we could identify a pattern in the degree to which organic growth is present across assets of different types it would be a useful guide to the relative ability of different types of assets to create the additional outputs needed to meet the SDGs.

Data from the IFC funds' portfolio and Morgan Stanley suggest that the presence of organic growth follows a pattern connected to company size. As company size (represented by revenue) increases, both the rate of organic growth and the contribution of organic growth to the return on equity decline.

Chart 5 shows the decline in the rate of revenue growth from the IFC data and Chart 6 shows the declining contribution of organic growth to the return on equity from the Morgan Stanley data.

Chart 5 Growth Rate in Revenue at Different Company Sizes

	Revenue Growth Rate
All companies	21.5%
Revenue at investment < $5 million	36.2%
$5 to $15 million	18.8%
$15 to $30 million	19.2%
$30 to $50 million	7.9%
$50 to $100 million	14.8%
$100 to $250 million	13.2%
$250 to $500 million	6.0%
> $500 million	4.4%

With evidence that (i) there is a relationship between revenue growth and the creation of outputs and (ii) the role played by organic growth declines with company size, we now need to see how the two factors, organic growth and company size, interact to create a quantity of outputs.

The increase in revenue which drives job creation is the result of the *combination* of organic growth and scale. Scale is the base over which organic growth operates. A high contribution of organic growth over a small base may result in fewer outputs than a lower contribution of organic growth over a larger base. We need to get a feel for how this relationship works.

Chart 6 Contribution of Sales Growth to Return on Equity at Different Initial Revenue Levels[4]

Is there an impact sweet spot in terms of scale?

For example, to better understand the ability of assets to contribute to the SDGs it would be interesting to be able to answer questions such as: "Is there some range of company sizes over which increasing scale off-sets the decline in organic growth, leading to an increase in outputs?" and "Is there a point at which the decline in organic growth off-sets the increase in scale, so that beyond that point outputs decline?"

To understand the relationship between company size, the contribution of organic growth to returns and additional outputs such as jobs and access to healthcare, Chart 7 uses the data from the IFC funds' portfolio in Charts 4 and 5 to create a mapping of the estimated average number of jobs created by companies in different revenue brackets.

In Chart 7 the growth rates from Chart 5 are smoothed and used to compound revenue over five years, beginning with the mid-point of the range in which the company is located. The final revenue is then divided by $125k, as a representation of average-revenue-growth-per-new-employee from Chart 4, resulting in an estimate of the number of jobs created.

The estimated average number of jobs created over five years by companies of different sizes (the last column of Chart 7) is plotted in Chart 8.

[4] Courtesy of Morgan Stanley AIP. Data from 126 mainly US-based companies.

Chart 7 Estimate of Jobs Created Over a Five Year Period[5]

			Revenue Over 5 years Compounding at Smoothed CAGR, Starting at Range Mid Point						
$ Revenue at entry	**Average revenue CAGR**	**Average Revenue CAGR Smoothed**	1	2	3	4	5	**Total Revenue Growth $m**	**Average Total Jobs Created over 5 years**
< $5m	36.20%	36.20%	3.4	4.6	6.3	7.6	9.1	5.7	45.5
$5-15m	18.80%	20.00%	12.0	14.4	17.3	20.6	24.5	12.5	99.8
$15-30m	19.20%	19.00%	26.8	31.9	37.3	43.6	51.0	24.3	194.0
$30-50m	7.90%	17.00%	46.8	54.8	63.0	72.4	83.3	36.5	291.8
$50-100m	14.80%	15.00%	86.3	99.2	114.1	128.9	145.7	59.4	475.2
$100-250m	13.20%	13.00%	197.8	223.5	252.5	267.7	283.7	86.0	687.7
$250-500m	6.00%	6.00%	397.5	421.4	446.6	473.4	501.8	104.3	834.7
$500-1000m	4.40%	4.40%	783.0	817.5	853.4	891.0	930.2	147.2	1177.4
$1000-2000m		2.20%	1022	1044.5	1067.5	1090.9	1114.9	92.9	743.6
$2000-3000m		1.00%	2020	2040.2	2060.6	2081.2	2102.0	82.0	656.2
$3000-4000m		0.70%	3021	3042.1	3063.4	3084.9	3106.5	85.5	683.8
$4000m		0.50%	4020	4040.1	4060.3	4080.6	4101.0	81.0	648.0
$6000m		0.33%	6020	6040.1	6060.2	6080.4	6100.7	80.7	645.4
$8000m		0.25%	8020	8040.1	8060.2	8080.3	8100.5	80.5	644.0
$10000m		0.17%	10017	10034.0	10051.1	10068.2	10085.3	68.3	546.3
$16000m		0.07%	16011.5	16023.0	16034.4	16045.9	16057.5	46.0	367.9
$20000m		0.03%	20006.1	20012.1	20018.2	20024.2	20030.3	24.2	193.8
$26000m		0.01%	26003.3	26006.6	26010.0	26013.3	26016.6	13.3	106.2

Chart 8 Estimate of Jobs Created Over a Five Year Period – Outline of the Impact Opportunity Space[6]

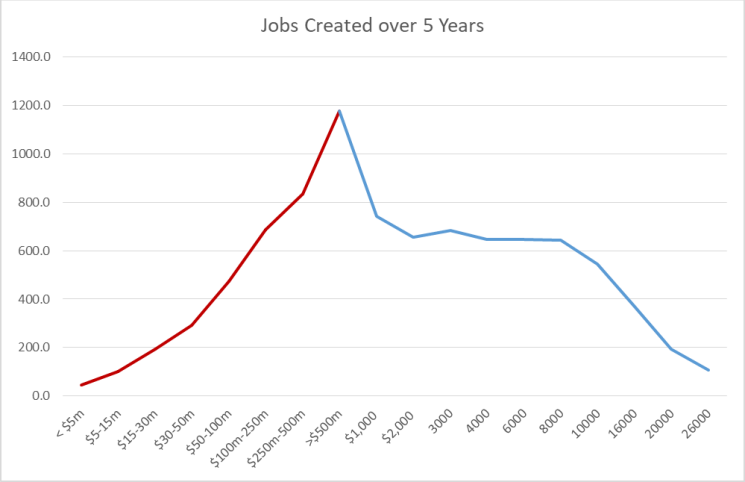


Chart 8 suggests that the structural relationship between company size and the role played by organic growth in generating returns leads to a wide range of opportunities to create jobs and, by inference, other outputs such as access to health care and education.

At very small company sizes, while the contribution of organic growth to returns is very high the small scale results in a small number of jobs being created.

At very large company sizes the large scale is not enough to off-set the very small contribution of organic growth to returns, resulting in a small number of jobs being created.

---

[5] Green shading in the '$ Revenue at entry' column indicates data from IFC's portfolio. Data for revenue $1000-2000m and beyond is based on extrapolation in the absence of data from larger-sized companies.

[6] The red part of the curve indicates data based on IFC's portfolio. The blue part of the curve is based on extrapolation in the absence of data from larger sized companies.

Between the very small and the very large, the role played by organic growth is significant enough and the scale of companies is large enough that the numbers of outputs created (additional jobs, additional access to socially beneficial things) is significant.

Chart 8 also suggests that the tipping point at which the declining contribution of organic growth to financial returns is no longer off-set by increasing scale, so that the number of jobs created ceases to rise with scale and instead begins to decline with scale, is somewhere between $500m-$1000m in revenue.

Chart 8 maps the contours of the potential quantity of outputs created by assets of all types – the contours of the Impact Opportunity Space. This is valuable information which is absent from any existing approach to rating the impact of assets.

However, Chart 8 only tells us about the location of the potential *quantity* of all outputs. It does not does not contain enough information to tell us which of these outputs are in fact impactful. It lacks the information to identify where the *impactful outputs* are located within this broad map of all outputs.

For example, in terms of social impact many of the people who benefit from the jobs created or additional access to healthcare will not come from disadvantaged backgrounds and so the jobs and access which accrue to them will not count as impactful.

To really be useful in directing investment capital the information in Chart 8 needs to be combined with information on the impact characteristics of assets, the information in the second data group in the impact data landscape illustrated in Chart 2.

The second data group in Chart 2 contains a multitude of possible variables due to (i) the breadth of different types of impact that are of interest to different people and (ii) the different depths of detail and the degree to which investors require a holistic or a simpler assessment of impact. The multitude of options allows flexibility to tailor the assessment of the impact of an asset to different mandates.

One option to see what insights can be gained when the quantity information in Chart 8 is combined with information on the impact characteristics of assets, is to take the simplest approach possible and select only two variables from among the multitude in Group 2 in Chart 2: (i) the extent to which an asset is exposed to a high impact theme such as the environment or healthcare and (ii) for social impact (but not environmental) the extent to which the people affected as employees or as clients are from a disadvantaged group.

This combination of quantity variables and impactfulness variables is described in Chart 9.

Taking the simple approach outlined in Chart 9, and after some data manipulation, we can create the map of the impact opportunity space illustrated in Chart 10.

Chart 10 is a complete map of the Impact Opportunity Space (as it relates to the business model) showing the location of all possible assets as determined by (i) the quantity of outputs an asset has the potential to produce and (ii) the percentage of the outputs which are likely to be impactful.

The shape of the Impact Opportunity Space is determined by the quantity data: the relationship between scale and the contribution of organic growth to financial returns.

Chart 9 A Simple Model to Explain the Quantity of Impactful Outputs an Asset Can Create

Quantity of Impactful Outputs =
f (Organic Growth, Scale, Reach to Disadvantaged Population, Coverage of High Impact Themes)

Organic Growth & Change as a component of Financial Return

Impact is created by financial strategies containing organic growth and change. These strategies create new hospital beds, new schools, convert land to sustainable use, new jobs.

Scale

The issues facing the World are large and require solutions at scale to move the needle.

Scale is the base over which organic growth and change are operating

Reach to Disadvantaged Population

To count as impact, social impacts need to improve the lives of disadvantaged populations.

The greater the reach to disadvantage people, the greater the impact.

Coverage of High Impact Themes

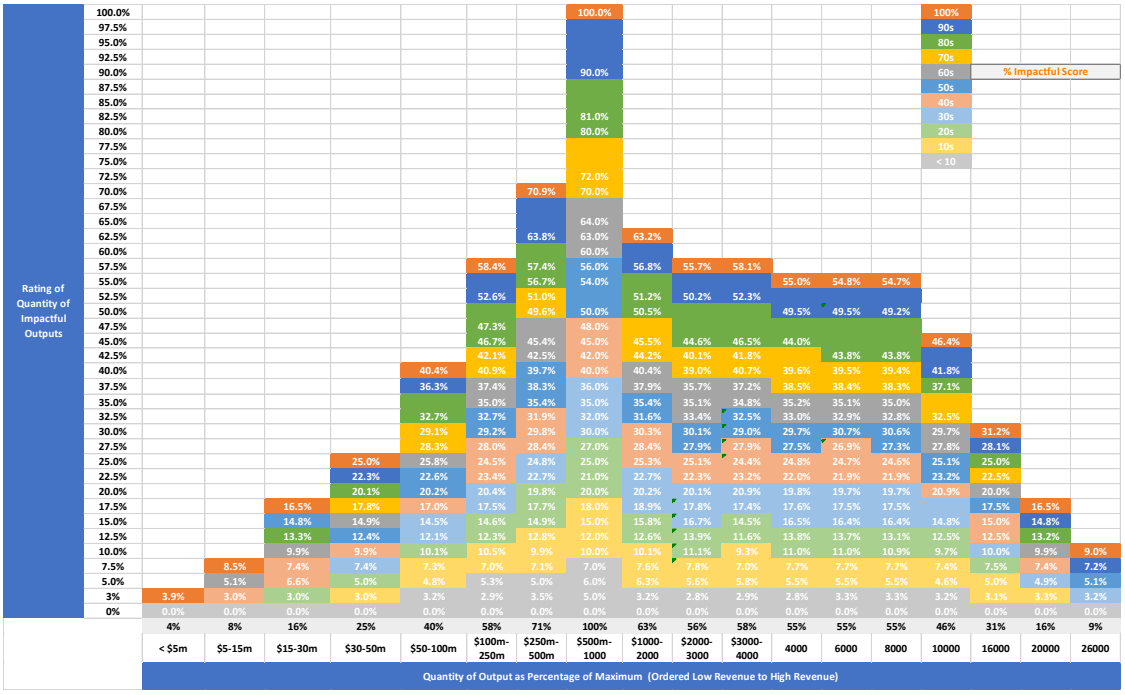
An asset will be more impactful if it directly addresses an SDG and if it addresses multiple SDGs.

Assets which directly address climate, health, education etc are likely to have greater impact than general investments.

Business Model Factors
These Factors Determine the potential quantity of outputs that an asset can produce such as jobs, access to healthcare, access to housing, climate effects.

Population/Thematic Location Factors
These factors determine the proportion of outputs which are impactful

Chart 10 Map of the Impact Opportunity Space



The area underneath the curve, the body of the Impact Opportunity Space, represents the totality of opportunities to create primary impact (related to the business model).

The position of an asset within the Impact Opportunity Space mapped by Chart 1 is determined by:

(i) The revenue band in which the asset is located (x-axis), which indicates the raw quantity of outputs the asset has the potential to create, and

(ii) The percentage of the output of the asset which is exposed to High Impact Themes and Disadvantaged Populations, indicated in Chart 10 by the colored bands running across the chart which suggest how much of the output is likely to be impactful.

These bands can be thought of as indicating the extent to which an asset is taking advantage of the potential quantity of output offered by the revenue band in which it is located to create outputs which are impactful.

Following the path of the colored bands across the Impact Opportunity Space provides insight into the process creating the quantity of impact.

For example, the dark orange band at the top of each bar indicates the location of assets 100% of whose outputs are impactful. These assets are either (i) focused 100% on both disadvantaged populations and high impact themes or (ii) focused 100% on the environment. The perfect assets, it would appear.

Actually no, as the quantity of output, driven by the organic growth and scale characteristics of the asset, must also be taken into account.

At both ends of Chart 10 there are assets 100% focused on both disadvantaged populations and high impact themes which create only a small quantity of impactful outputs because the asset lacks either scale (left tail) or organic growth (right tail).

From the colored bands running across Chart 10 we can draw inferences about the location of opportunities to create primary impact.

- The key determinant of the quantity of primary impact an asset is likely to create depends on both factors measured by the Impact Opportunity Space: the Quantity of Outputs and the Percentage of Outputs which are Impactful. Neither dimension, by itself, is an accurate guide.
- The opportunity to create the largest quantity of impactful outputs *per asset* appears to be centered in the vicinity of assets with revenue in the $500-1000m range[7].
- While the largest opportunity per asset appears to be centered in the vicinity of assets with revenue in the $500-1000m range, the location of assets capable of creating a meaningful quantity of primary impact is very widely disbursed across the revenue spectrum on the x-axis. No one part of the Impact Opportunity Space has a monopoly on generating primary impacts with which to achieve the SDGs.
- Maximizing the total primary impact created globally depends upon capturing all the opportunities to create impact within the Impact Opportunity Space. Achieving the SDGs will benefit greatly from capturing opportunities to create impact across the entire spectrum.
- The significant influence of the potential Quantity of Outputs on the quantity of primary impact created means that it is a mistake to focus only on those assets with a high exposure to High Impact Themes. For example, assets with 'percentage impactful' scores in the 30s (light blue) in the $500-1000m revenue range have higher Quantity of Impactful Output scores (y axis) than

[7] A lot more data is required to create an accurate map of the Impact Opportunity Space.

assets with ‘percentage impactful’ scores in the 40s, 50s and even up to 100 in other revenue brackets.

These insights into the distribution among assets of the ability to create a quantity of impact are, by themselves, a useful addition to existing approaches to rating the impactfulness of assets.

The simplicity of the four-factor approach described in Chart 9 has additional advantages for institutional investors as it enables these investors to do two operationally valuable things which make it possible for them to integrate impact into established portfolio management methodologies:

- The four-factor approach can be applied to both individual assets and asset classes. It is not possible to apply any current impact rating methodology to asset classes. Applying an impact rating at the asset class level enables impact to be incorporated into the initial portfolio optimization exercise in which the major capital allocation decisions are made. It enables portfolios to be optimized in three dimensions of risk, return and impact.
- The four-factor approach can be used as an efficient gating tool to initially screen assets for potential impact. Given the hundreds if not thousands of assets large institutional investors need to screen, an efficient screening tool is necessary and the availability of such a tool will encourage the application of impact across a larger part of total AUM.

By enabling investors to integrate impact into established portfolio management methodologies, this approach makes it possible to integrate sustainability criteria across total AUM and greatly expand the proportion of global capital managed to sustainable criteria.

The larger the proportion of global capital managed to sustainable criteria, the more likely it is that sustainability and externalities are priced, improving both the efficiency and sustainability of market-based economies.

Research Required

To further develop the ideas discussed above the key need is a much larger and more diverse data set. The IFC and Morgan Stanley data from which the ideas discussed above are developed cover six hundred and forty five companies and sixty two emerging markets plus the USA. This is sufficient data upon which to begin to shape ideas, but insufficient to develop these ideas fully.

In particular this data set is focused on companies in the growth equity and VC spaces selected by GPs for their growth potential.

The fact that the data set is one of companies pre-screened by GPs is helpful as it is the characteristics of the asset class as presented to investors that is relevant, rather than the characteristics of the entire universe of all companies of a similar size and location.

However, the focus of the data set on growth equity and VC needs to be broadened to encompass larger companies for which organic growth is a lesser part of the business strategy. The data also needs to be broadened to include strategies based on new construction and conversion-to-sustainable-use strategies rather than organic growth.

With a broader data set, a number of ideas can be more fully explored:

(a) A more accurate mapping can be made of the impact opportunity space, providing a better guide to the likely location of assets capable of creating additional outputs. This can be achieved through a better understanding of (i) the role played by organic growth in companies across the entire size spectrum and (ii) the interaction between organic growth and scale in creating a quantity of outputs across the entire size spectrum.

(b) Identifying the relationship between the scale of (i) new construction and (ii) the conversion of non-sustainable assets to sustainable use and the quantity of outputs created. This would allow assets with these business strategies to be incorporated into the impact opportunity space.

(c) Better understanding the risks associated with achieving a quantity of impactful outputs. For example (i) negative environmental and social risks will be larger for certain industries and will increase with scale and (ii) the risk associated with creating an additional quantity of impactful outputs may be closely associated with execution/implementation risk for which financial risk may be an acceptable proxy.

(d) Understanding the relationship between primary impact (which is specific to assets) and total impact (which is specific to goals). In particular, to what extent is primary impact an adequate indicator of an assets potential contribution to total impact and how does this vary across different types of asset? For example, the primary impact of a growth equity asset in the education space may be a good indicator of its potential to contribute to total impact relative to other assets. However, the primary impact of new construction infrastructure may be a poor indicator of its potential to contribute to total impact.

(e) How efficiently do different types of asset create impact through measures such as additional outputs per additional dollar of revenue?