Zheng Partners LLC

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Examples of a Simple Framework for the Initial Sustainability Screening of Funds

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Examples of a Simple Framework for the Initial Sustainability Screening of Funds

Introduction

This note demonstrates the application to initial diligence on private equity funds of the approach to sustainable investing developed in previous notes.

The approach is applied to two impact-focused private equity funds. The two funds happen to be ones I like. For the purposes of this note they have been anonymized: they are not named and the data presented here has been altered so that it cannot be matched to the original sources.

The examples show the approach being used in the context of the initial introduction of a potential investment to an investor. The only data available on the funds is that (i) in the pitch deck and (ii) obtained in a single conversation with the promotor.

The examples show that the approach can make a useful contribution to the initial screening of investment opportunities by: providing an initial positioning for each fund within the impact opportunity space; suggesting the additional information required if the analysis is to be taken further; and indicating where the fund might be repositioned within the impact opportunity space after receiving additional information.

Viewed through the lens of a holistic approach to sustainability, the two funds appear to have a similar impact profile. They both have a high impact theme as a focus and they both focus on smaller companies. Both funds rate the sustainability of their investee/pipeline companies using existing well-known methodologies and report similar ratings.

I find it encouraging that the approach demonstrated here identifies meaningful differences between the two funds which are not readily apparent from the existing sustainability methodologies used by either of the two funds.

The highlighted differences are in terms of the net quantity of additional impactful outputs each fund is likely to be able to create, reflecting the focus this approach has on identifying the additional quantity of primary impact an asset is capable of creating.

It is also encouraging that meaningful differentiation can be identified by a relatively simple approach using only four factors. Investors are faced with a myriad of investment opportunities and a relatively simple and efficient method with which to initially sort opportunities can be very useful.

The framework used for this diligence exercise is the one described in the note “Incorporating Sustainability into the Operations of a Financial Institution” in which an asset is considered through each of the four broad approaches to sustainability in turn: SRI, Thematic, ESG and Impact.

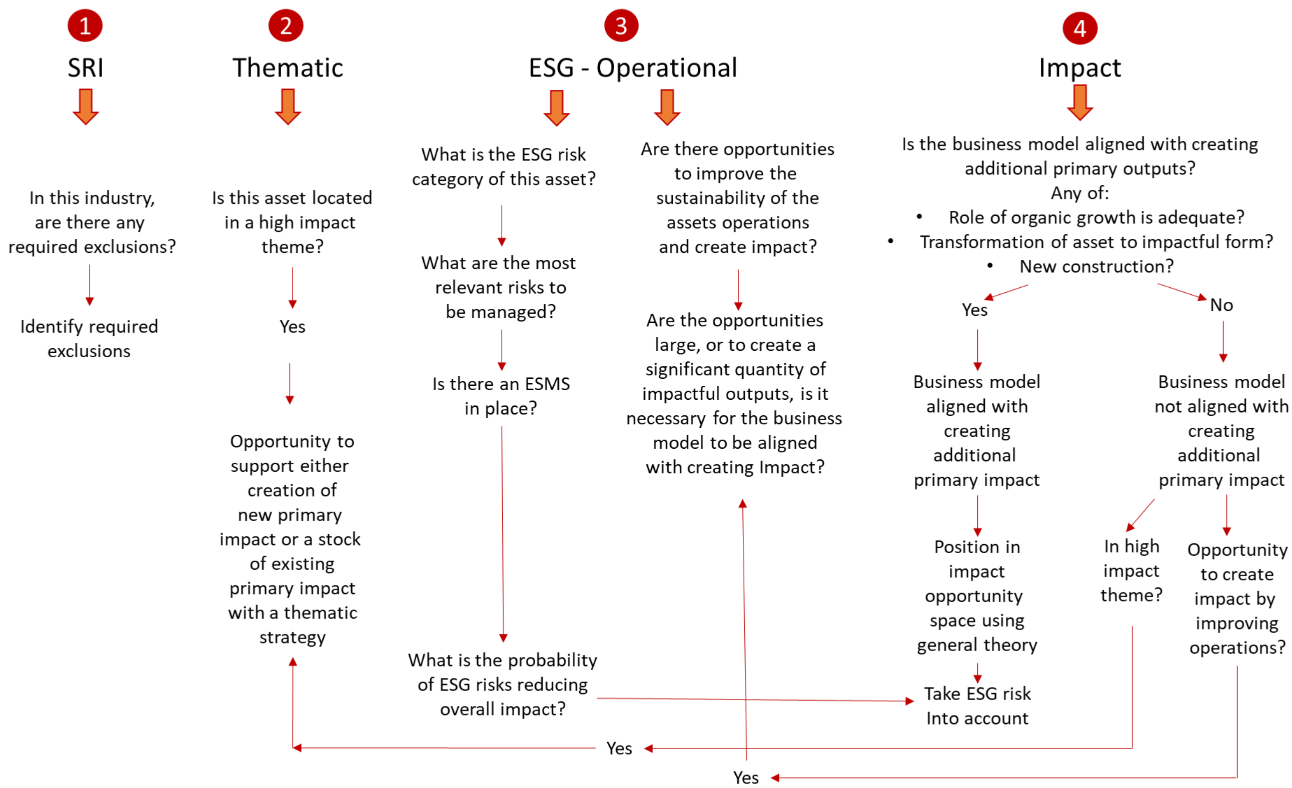
At this initial level of enquiry the examination of Impact is the most ‘technical’ and readers are referred to previous notes for an explanation of the development of the impact rating methodology[1].

[1] “The Short Version”, David Wilton March 2020 and “Pricing Impact”, David Wilton September 2019 both downloadable from https://zhengpartners.co/

Description of the Methodology

The overall framework used in the analysis is illustrated in Chart 1. The framework incorporates the idea that each of the four approaches to sustainable investment has something to add to our understanding of the sustainability profile of an asset and that we will achieve the best sustainable profile in a portfolio if we make use of each of the four strategies.

Chart 1 Framework Used



The analysis begins with SRI and asks "In this industry is there any financial or reputational risk for which we have close to zero tolerance to exposure?" If such risks exist, we will craft a policy excluding assets with these risks from the investable universe.

Having establish that the asset is not a zero-tolerance-risk asset which we wish to exclude, we then see if the asset is focused on a high impact theme such as education, the environment or health care. The answer to this informs us whether or not the asset is at least suitable for a thematic strategy. That is, a lighter version of impact which does *not* require the creation of *additional* outputs or that the majority of beneficiaries of social outputs be *disadvantaged*.

Next we look at ESG risk management in its operational form and identify the appropriate risk category for the asset based on industry exposure – refer to Chart 2. The risk category informs us of the potential severity of negative ESG events, if they were to occur. We then identify the particular ESG risks most relevant to the asset in terms of creating negative outputs and establish whether or not there is an ESMS in place to manage these risks. Using all this information, we reach an initial conclusion on the probability and possible magnitude of negative events.

Chart 2 ESG Risk Categories

Category A: Business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.

Category B: Business activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.

Category C: Business activities with minimal or no adverse environmental or social risks and/or impacts.

Category FI: Business activities involving investments in financial institutions (FIs) or through delivery mechanisms involving financial intermediation. This category is further divided into:

FI–1: when an FI's existing or proposed portfolio includes, or is expected to include, substantial financial exposure to business activities with potential significant adverse environmental or social risks or impacts that are diverse, irreversible, or unprecedented.

FI–2: when an FI's existing or proposed portfolio is comprised of, or is expected to be comprised of, business activities that have potential limited adverse environmental or social risks or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures; or includes a very limited number of business activities with potential significant adverse environmental or social risks or impacts that are diverse, irreversible, or unprecedented.

FI–3: when an FI's existing or proposed portfolio includes financial exposure to business activities that predominantly have minimal or no adverse environmental or social impacts.

After looking at ESG risks we then ask if there are likely to be ESG-driven opportunities to create impact by improving the operations of the company by, for example, switching to cleaner energy or improving working conditions. Such opportunities do not require the business model of the company to be aligned with creating impact. However, for this type of opportunity to create a significant quantity of impact, the company typically needs to be a larger one.

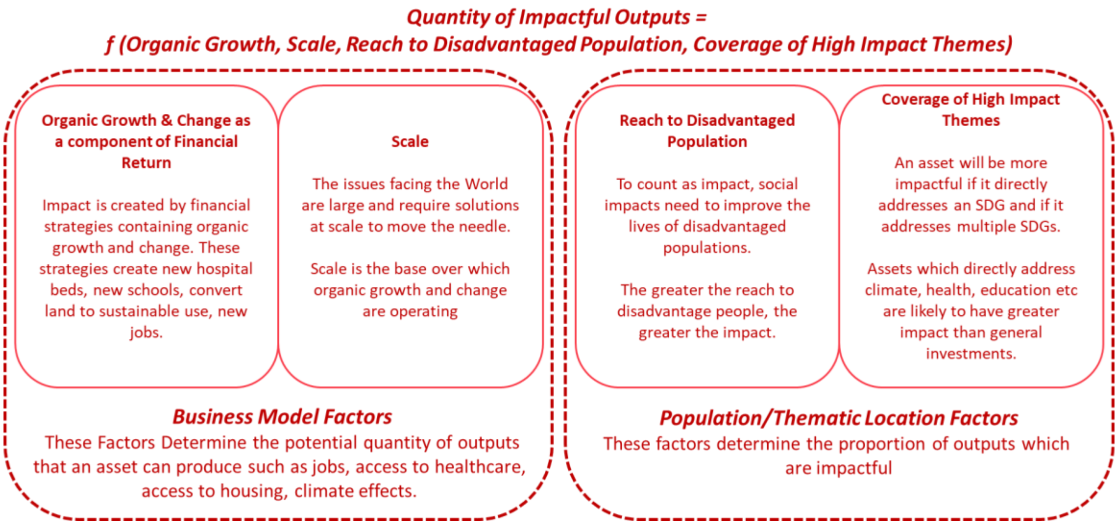
Finally, we look at the impact profile of the asset or strategy. We begin by asking if the business model used in generating financial returns is aligned with creating *additional* outputs with which to meet the UN SDGs. This is done by looking at the role played in the business model by organic growth, new construction or transformation of existing non-sustainable assets to a sustainable use.

If the business model is aligned with creating additional primary outputs, we do the initial analysis needed to position the asset within the impact opportunity space. This analysis is based on a four-factor approach to estimating the additional quantity of primary impact that an asset is capable of creating, outlined in Chart 3[2].

If the business model is not aligned with creating additional primary outputs, we investigate (i) whether the asset is exposed to a high impact theme and if this creates an opportunity for a thematic strategy to support an existing stock of impact generating assets and (ii) whether an opportunity exists to create impact by improving the sustainability of the asset's operations.

[2] Chart 3 is a representation of the general theory of impact developed in "The Short Version" and "Pricing Externalities"

Chart 3 The Determinants of an Asset's Ability to Create a Quantity of Primary Impact



To implement the four-factor approach outlined in Chart 3 we use a combination of (i) actual data on the asset, to the extent this is available and (ii) average data based on information from the IFC funds' portfolio[3].

The results of the analysis of the quantity of primary impact that an asset is capable of creating, based on the approach in Chart 3, are presented in two different formats, shown in Chart 4. Two formats are used as each format provides different insights.

Format A[4] enables a quick visual comparison of different investment prospects across four dimensions: the additional quantity of primary impact, indicated by the size of the pie chart; the contribution of each of the four factors, indicated by the size of each slice of pie; the ESG risk category into which the asset falls, indicated by the column in which the asset is located; and the expected return profile of the asset, indicated by the row in which it is located.

Format A is strongest when we have all the information we require and are comparing our 'best estimates'. This is because Format A has no way to indicate uncertainties and the possible effect of uncertainties on the additional quantity of primary impact created by an asset.

Format[5] B is a representation of the impact opportunity space: the ability of the average company with a particular level of revenue to create an additional quantity of impactful primary outputs. Format B does not enable a quick visual summary in four dimensions as Format A does. What Format B does is enable us to see the effect of variances in the four factors (organic growth, scale, exposure to a high impact theme, access provided to a disadvantaged population) on the position of an asset within the impact opportunity space.

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[3] 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/

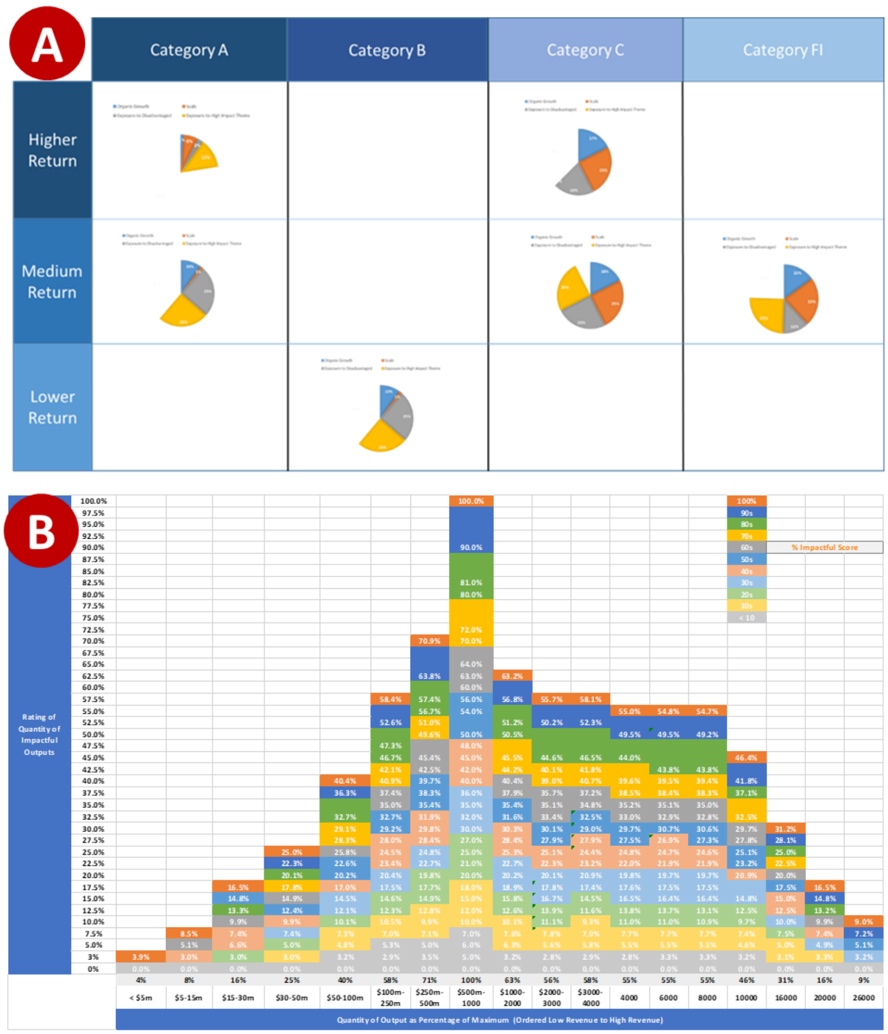
[4] Format A was developed in the note "A Simple Approach to Screening Deals for Sustainability", David Wilton June 2020 downloadable from https://zhengpartners.co/

[5] The development of Format B is explained in "The Short Version" downloadable from https://zhengpartners.co/

What if company revenue at acquisition (scale) is bigger or smaller than expected? What if the contribution of organic growth to returns is larger or smaller than expected? What if exposure to a high impact theme or the disadvantaged is more or less than expected?

The ability to think about the consequences of different outcomes is very useful in the early stages of diligence on an asset when we have only partial information. It enables us to initially position an asset in the impact opportunity space and to indicate alternative positioning that might occur based upon obtaining further information.

Chart 4   Presentational Formats



Format B is the result of manipulating the data in Chart 3 and requires some explanation.

The x-axis is ordered by (i) company revenue in ascending scale and (ii) the associated rating relative-to-the-maximum of the ability of the average company of that level of revenue to create a quantity of outputs.

The rising and then falling outline of Format B is based on data from IFC's fund's portfolio which suggests that (i) organic growth declines as companies get larger and (ii) as revenue increases, the interaction between increasing scale and declining organic growth causes the quantity of additional outputs to initially increase and then decline, resulting in a 'mountain-shaped' curve.

The shape of the curve indicates the constraint placed by the interaction of organic growth and scale on the ability of the *average* company with $x in revenue to create a quantity of additional outputs.

Within the curve, the colored bands indicate the percentage of outputs which are in fact impactful, determined by a company's exposure to a high impact theme and, for social impacts, a disadvantaged population.

The y-axis score represents an overall assessment of the ability of an asset to create a quantity of primary impact relative to other assets. It is a compound of the rating of the quantity-of-outputs-relative-to-the-maximum on the x-axis and the percentage of outputs which are impactful (indicated by the colored bands across the chart).

In Format B an asset is located in the column representing its revenue-at-entry. Its position in the column relative to the average ratings on the y-axis will depend on (i) the rating of the asset's ability to create a quantity of outputs (which may be higher or lower than the average) and (ii) an assessment of the proportion of the outputs which will be impactful.

Format B allows us to represent how changes in the attributes of an asset will cause its position to change within the impact opportunity space. The position of an asset within the impact opportunity space, as shown in Format B, will change due to (i) a change in any of the four variables in Chart 3 (organic growth, scale, exposure to high impact themes, exposure to a disadvantage population) or (ii) the occurrence of a negative ESG event. All else equal:

- An increase in the contribution of organic growth will cause an asset to move upward in the same column and a decrease will cause it to move downward.
- An increase in either exposure to high impact themes or, for social impact, a disadvantaged population, will move an asset upward in the same column and a decrease will move it downward.
- A negative ESG event will cause an asset to move downward within the same column.
- An increase in an asset's revenue at entry will cause the asset to shift rightward to another column and a decrease in revenue at entry will cause an asset to relocate leftward to another column. Within the new column the asset will move upward relative to its previous position if the revenue bracket associated with the new column has a higher rating for the quantity-of-outputs-relative-to-the-maximum than the prior revenue bracket and downward if it has a lower rating.

Example: Fund 1 – A fund focused on Life Below Water

Thematic Focus: Life below water, SDG 14

Geography: Global

Type of Financial Asset: Private Equity

Typical Revenue of companies acquired: $20-$70 million

Expected Drivers of Financial Return: Primarily organic growth, with some multiple expansion possible.

Expected Return: Average/Typical for a growth equity fund.

SRI: The fund may invest in aquaculture which, if done improperly, can cause damage to the ocean environment and endangered species. There are specific harvesting methods such as long line fishing which are known to have such negative effects on sea life that exposure to them would be a severe embarrassment to a sustainable investor. While it is very much not the intention of the fund to be exposed to any such harvesting methods, an explicit exclusion would make this clear.

Thematic: The strategy of the fund is centered on a high impact theme – the oceans and life below water. Because of this, if it turns out that the business model is not aligned with creating additional primary outputs, the fund could still make a good thematic investment as it will at the least be supporting an existing stock of assets with existing positive outputs.

ESG, Operational: It is possible that the fund may invest in companies whose activities cause adverse environmental effects which are site-specific and reversible. For example a seaweed farm in which the seaweed is grown too densely, blocking sunlight from the ocean below. It is possible the fund may invest in Category B risk investments.

The possibility of Category B risk assets heightens the need for good ESG risk management and a well implemented Environmental and Social Management System (ESMS).

Presently the fund does not have an ESMS.

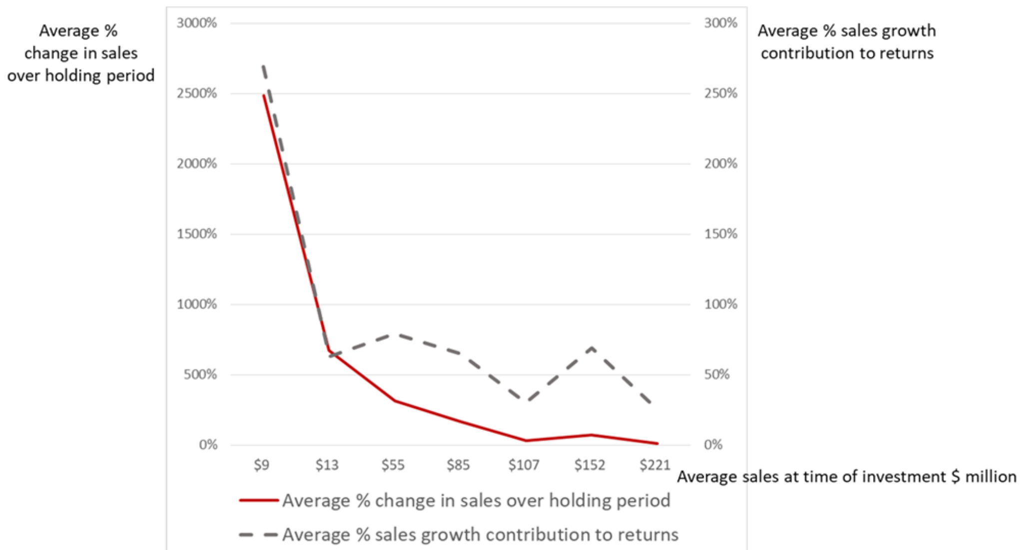
Operational ESG can also identify ways in which the operations of companies can be made more sustainable. While improvements can be made in all companies, this type of opportunity increases with the size of company. The fund plans to invest in companies with revenue in the range of $20-$70 million. At this size operational improvements are unlikely to offer an opportunity for creating a significant quantity of impact. This suggests that for this fund to be significantly impactful the business model of the fund needs to be aligned with the creation of impact.

Impact: Our first step is to determine whether or not the financial business model is aligned with creating additional primary impacts. As the fund is pursuing a growth equity strategy, the key variable here is the expected role of organic growth relative to other strategies in creating financial returns. Of the six strategies used to create financial returns, only organic growth is linked to creating additional outputs such as access to education and additional reduction of carbon[6].

At this point we face the issue that Fund 1 is a first time fund and, as such, there are no deals for us to analyze to see exactly how the strategy has been executed in practice.

Without actual examples we need to use average numbers for which we can use Chart 5 as a guide and, based on Chart 5, take 70% as an initial estimate of the likely contribution of organic revenue growth to financial returns.

Chart 5 Contribution of Sales Growth to Financial Returns[7]



Our second step is to examine the effect of the scale of the companies in which the fund will invest on the likely quantity of impactful outputs that will be created. To do this we need to identify the expected cumulative annual growth rate (CAGR) of organic revenue. That is, revenue growth excluding revenue acquired through the purchase of other companies. Again, as Fund 1 is a first time fund and there is no data on past investments, we need to use historical averages which are provided in Chart 6[8].

[6] Refer "The Short Version" ibid p6 Table 1

[7] Source: Courtesy of Morgan Stanley AIP

[8] For an explanation of the development of Chart 6 refer to "The Short Version" ibid pages 9-11

Chart 6 Positioning of Fund 1 Relative to Maximum Output Using Historical Data

					Revenue Over 5 years Compounding at Smoothed CAGR, Starting at Range Mid Point							
	$ Revenue at entry	**Average revenue CAGR**	**Average Revenue CAGR Smoothed**	**Revenue at entry mid point for calculation**	**1**	**2**	**3**	**4**	**5**	**Total Revenue Growth $m**	**Average Total Jobs Created over 5 years**	**% of Maximum**
	< $5m	36.20%	36.20%	2.5	3.4	4.6	6.3	7.6	9.1	6.6	52.8	3.66%
	$5-15m	18.80%	20.00%	10	12.0	14.4	17.3	20.6	24.5	14.5	115.8	8.03%
Fund 1 Range of Revenue at Acquisition	$15-30m	19.20%	19.00%	22.5	26.8	31.9	37.3	43.6	51.0	28.5	228.2	15.84%
	$30-50m	7.90%	17.00%	40	46.8	54.8	63.0	72.4	83.3	43.3	346.2	24.02%
	$50-100m	14.80%	15.00%	75	86.3	99.2	114.1	128.9	145.7	70.7	565.2	39.21%
	$100-250m	13.20%	13.00%	175	197.8	223.5	252.5	267.7	283.7	108.7	869.7	60.34%
	$250-500m	6.00%	6.00%	375	397.5	421.4	446.6	473.4	501.8	126.8	1014.7	70.40%
	$500-1000m	4.40%	4.40%	750	783.0	817.5	853.4	891.0	930.2	180.2	1441.4	100.00%
	$1000-2000m		2.20%	1000	1022	1044.5	1067.5	1090.9	1114.9	114.9	919.6	63.80%
	$2000-3000m		1.00%	2000	2020	2040.2	2060.6	2081.2	2102.0	102.0	816.2	56.62%
	$3000-4000m		0.70%	3000	3021	3042.1	3063.4	3084.9	3106.5	106.5	851.8	59.10%
	$4000m		0.50%	4000	4020	4040.1	4060.3	4080.6	4101.0	101.0	808.0	56.06%
	$6000m		0.33%	6000	6020	6040.1	6060.2	6080.4	6100.7	100.7	805.4	55.87%
	$8000m		0.25%	8000	8020	8040.1	8060.2	8080.3	8100.5	100.5	804.0	55.78%
	$10000m		0.17%	10000	10017	10034.0	10051.1	10068.2	10085.3	85.3	682.3	47.34%
	$16000m		0.07%	16000	16011.5	16023.0	16034.4	16045.9	16057.5	57.5	459.7	31.89%
	$20000m		0.03%	20000	20006.1	20012.1	20018.2	20024.2	20030.3	30.3	242.2	16.80%
	$26000m		0.01%	26000	26003.3	26006.6	26010.0	26013.3	26016.6	16.6	132.8	9.21%

Chart 6 uses data from the IFC funds portfolio[9] on (i) the average CAGR of revenue at different company sizes and (ii) the average dollar increase in revenue per job created, to calculate the average total number of jobs created over a five year period by companies of different levels of revenue-at-entry. The average number of jobs created is used as a general indicator of the potential of a company to create additional outputs. To get an indication of the ability of the company to create outputs relative to other companies, the estimated jobs created are compared as a percentage of the maximum number of jobs created.

Fund 1 intends to invest in companies with a range of revenue at entry between $20m and $70m. Across this range of revenue-at-entry there is a noticeable variance in the effect of scale on the potential to generate a quantity of primary output. For the purposes of Format A we will use the average of the three scores in Chart 6, 26% = average of (15.84%,24%,39.21%). For Format B the range will be used.

The third step in assessing Fund 1's potential to create a quantity of impactful outputs is to determine the extent to which the assets in which Fund 1 invests will be exposed to a high impact theme. Fund 1 will focus entirely on SDG 14, a high impact theme, so the answer is 100%.

The fourth and final step is relevant where the target is social impact and is to determine the extent to which the activities of assets in which Fund 1 invests will benefit a disadvantaged population. As Fund 1 is targeting environmental impact rather than social impact, this step is not required (environmental improvement benefits everyone) and the 'disadvantaged population' score is set equal to the high impact theme score at 100%.

Chart 7 summarizes the four components of the impact score.

[9] For the source of the data refer to "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, 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/

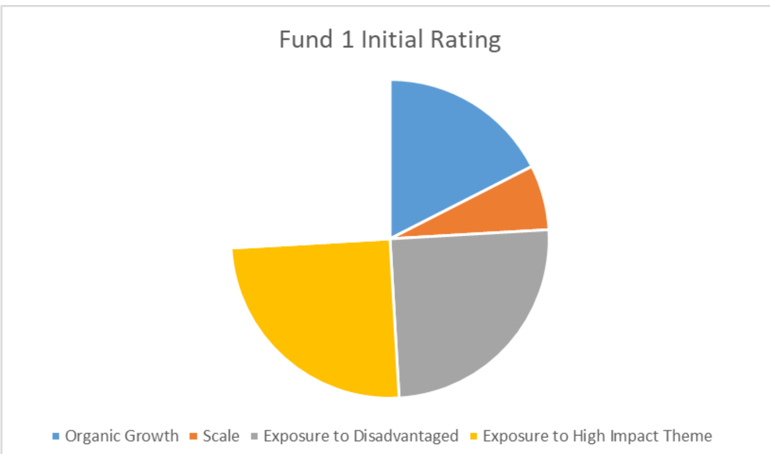
Chart 7   The four components of the impact score for Fund 1.

	Organic Growth	Scale	Exposure to Disadvantaged	Exposure to High Impact Theme
Fund 1	**70%**	**26%**	**100%**	**100%**

Translating these scores into a pie chart for the purposes of Format A simply requires multiplying each score by 25% and this is shown in Chart 8. Our starting point for Fund 1 is that it has a 74% rating (the sum of the pieces of pie).

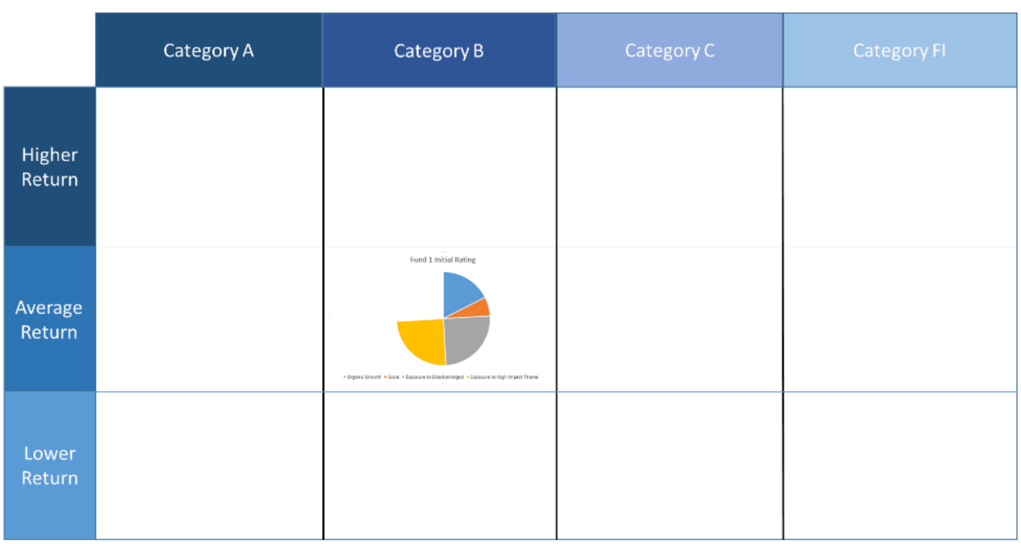
Fund 1 is strong in the thematic/population factors which contribute to the *percentage of outputs which are in fact impactful*. For the factors which contribute to the *quantity of output* likely to be created, Fund 1 is strong in the contribution of organic growth to financial returns (its business model is well-aligned to creating outputs) but weaker in scale.

Chart 8   Initial Pie Chart Rating for Fund 1



The next step is to bring the additional dimensions of ESG risk and financial returns into the picture and present our initial analysis fully in Format A, as shown in Chart 9.

Chart 9   Initial Analysis of Fund 1 Reported in Format A

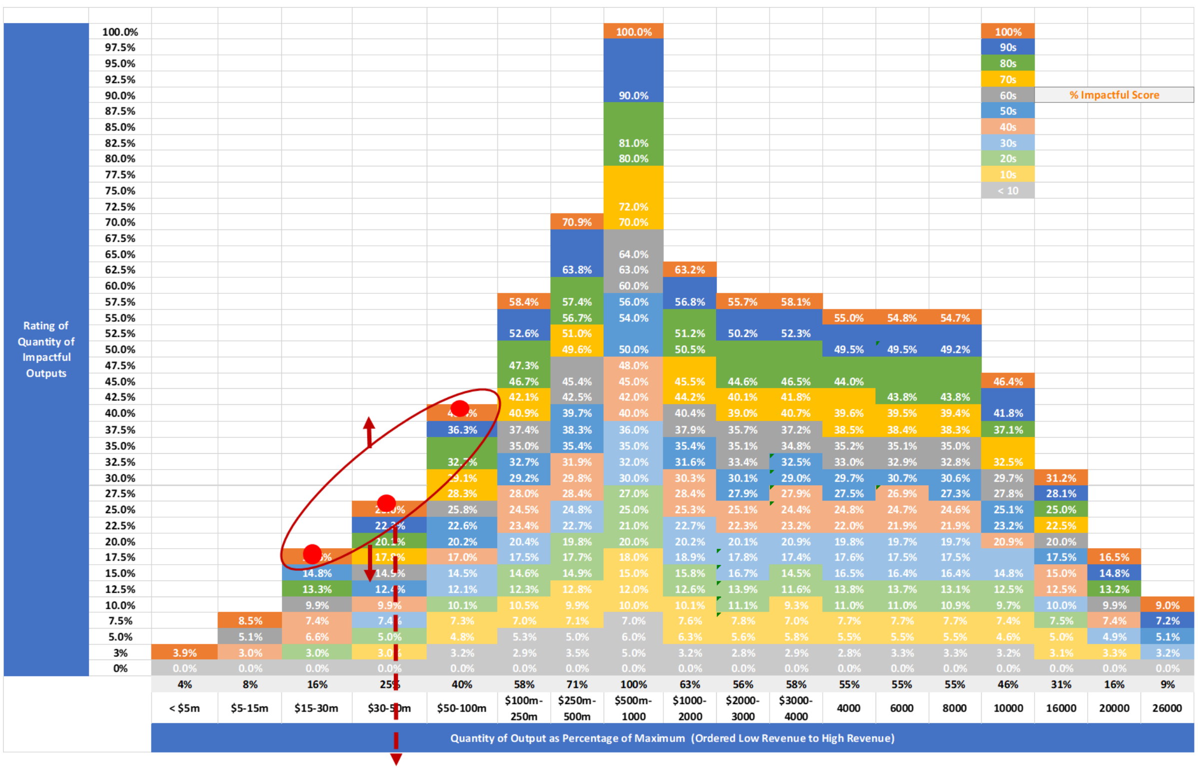


From Chart 9 we can see that Fund 1 is potentially attractive, with potential to create a good quantity of impactful outputs and average expected financial returns for the type of asset (growth equity). The issue is the Category B risk, which will need to be well managed.

As noted above, Format A provides a static picture of the attributes of an asset which is more useful when analysis is more advanced. As this is only initial analysis, we can present our findings in Format B to provide more insight into the issues that need further investigation and their possible consequences.

Chart 10 presents the initial analysis of Fund 1 in Format B. As Fund 1 is a first time fund the data for an average asset with Fund 1's characteristics is used. The red dots in Chart 10 indicate the location of the average assets with the revenue-at-entry relevant to Fund 1 and a 100% exposure to an environmental theme.

Chart 10   Initial Analysis of Fund 1 in Format B



Fund 1 has a broad range of possible points of revenue-at-entry and the implications of this wide range of scale for the quantity of impactful outputs created is indicated by the oval including three different columns.

While scale has clear implications for the quantity of impactful outputs created, the small solid arrows above and below the oval act as a reminder that, due to Fund 1 being a first time fund, this analysis is based on historical average data. It could be that Fund 1 will generate above-average or below-average growth in the companies in which it invests, which would result in upward or downward re-positioning relative to the average.

Fund 1 is likely to be exposed to Category B risk assets and does not yet have an ESMS. The dashed downward arrow indicates the potential risk this creates.

To summarize this initial analysis of Fund 1:

- Fund 1 is likely to generate an above-average percentage of outputs which are impactful, relative to the scale of its transactions. Relative to the scale at which it operates, it is likely to create an attractive quantity of impactful outputs.
- Due to likely exposure to Category B assets Fund 1 will require good management of ESG risks.
- The quantity of impactful outputs Fund 1 is likely to generate lies within a wide range. The ultimate position with this range will be determined by a combination of (i) the scale of companies in which the fund ultimately invests and (ii) the organic growth the fund manages to generate in its companies, particularly smaller companies.

As Fund 1 is a first time fund, information which will enable us to narrow the potential range of the quantity of impactful outputs is unlikely to be available.

The key variable which can be influenced at this early stage is the quality of ESG management, which should be the focus of further diligence.

Example: Fund 2 a fund focused on Education

Thematic Focus: Education, SDG 4

Geography: USA

Type of Financial Asset: Private Equity

Typical Revenue of companies acquired: $20-$25 million

Expected Drivers of Financial Return: A blend of organic growth, inorganic growth, efficiency gains and multiple expansion.

Expected Return: Above average for a growth equity fund.

SRI: In the context of US education an exposure that would be embarrassing for a sustainable investor would be exposure to a degree mill. That is, an enterprise which mires students in debt while providing an education which does not noticeably improve the students employability or income. The fund has not invested in such an institution and has no intention of investing in such institutions. However, the explicit exclusion of such institutions would provide comfort to investors.

Thematic: The fund is focused on education, a high impact theme. Because of this, if the business model turns out to not be aligned with creating additional primary outputs (insufficient organic growth), the fund might still make a good thematic investment as it will at the least be supporting an existing stock of assets with existing positive outputs.

ESG, Operational: The fund is most likely to invest in companies with minimal or no social or environmental risks. It is most likely to invest in companies rated Category C for ESG risk. Although Fund 2 has a low ESG risk rating it would still benefit from implementing ESG risk management using an ESMS which could be tailored to the risks most relevant to the fund such as the quality of the education delivered by the investee companies. Presently the fund does not have an ESMS.

The focus of Fund 2 on smaller companies with $20-25 million in revenue makes it unlikely that there will be opportunities to create a large quantity of impact through improving operations. For Fund 2 to create a significant quantity of impactful outputs its business model will need to be aligned with creating impact.

Impact: The degree of alignment of the business model with creating additional outputs is a key issue in evaluating Fund 2. While Fund 2 is focused on smaller companies with $20-25 million in revenue for which one would expect organic growth to be a significant contributor to financial return, the strategy of Fund 2 is one of platform building in which a number of smaller companies are merged. In this strategy efficiency gains and an increase in the valuation multiple as the combined entity achieves scale are expected to make meaningful contributions to financial returns, which may lessen the emphasis placed on organic growth.

Fund 2 is a repeat fund from an established manager and the pitch deck includes a short-form value bridge analysis for a sample of the existing investments which enables us to conduct an initial exploration of the role played by organic growth in the fund strategy. The result of this exploration is Chart 11, which indicates a very different role for organic growth between different investees.

Chart 11 Revenue at Entry and Revenue CAGR for Two Sample Companies

	Entry Revenue	Revenue CAGR
Company 1	**19**	**7%**
Company 2	**25**	**19%**

Without a full value bridge analysis it is not possible to determine the correct contribution of organic growth to financial return. However, we can make a very initial ballpark guesstimate by comparing the revenue CAGR for each company in Chart 11 with the average CAGR for companies with $15-30 million in revenue-at-entry in Chart 12 and then use this to scale the historical contribution given in Chart 5.

The CAGR of Company 2 is the same as the average CAGR (Chart 12) and from this it is presumed that for Company 2 the contribution of organic revenue growth is the same as the historical average of 70% (Chart 5). The CAGR of Company 1 is only 37% of the historical CAGR and so the contribution of organic growth to financial return is estimated to be 26% (37% of 70%).

Based on these two data points the initial estimate of the contribution of organic growth to returns for Fund 2 is 48% (average of 70% and 26%). This average will be used in reporting for Format A while the range will be used in Format B.

In estimating the effect of scale on the ability of Fund 2 to create a quantity of outputs having actual data, even if only for two companies at this stage, allows us to make an initial positioning of Fund 2 relative to average data for companies of the same scale and relative to the maximum. These calculations are made in Chart 12.

Chart 12   Positioning of Fund 2 Relative to Companies of the Same Scale and Maximum Output

				Revenue Over 5 years Compounding at Smoothed							
$ Revenue at entry	**Average revenue CAGR**	**Average Revenue CAGR Smoothed**	**Revenue at entry for calculation**	1	2	3	4	5	**Total Revenue Growth $m**	**Average Total Jobs Created over 5 years**	**% of Maximum**
< $5m	36.20%	36.20%	2.5	3.4	4.6	6.3	7.6	9.1	6.6	52.8	3.66%
$5-15m	18.80%	20.00%	10	12.0	14.4	17.3	20.6	24.5	14.5	115.8	8.03%
$15-30m	19.20%	19.00%	22.5	26.8	31.9	37.3	43.6	51.0	28.5	228.2	15.84%
Company 1 $19	7.00%	7.00%	19	20.3	21.8	25.0	28.8	33.1	14.1	112.7	8%
Company 2 $25	19.00%	19.00%	25	29.8	35.4	42.1	50.1	59.7	34.7	277.3	19%
$30-50m	7.90%	17.00%	40	46.8	54.8	63.0	72.4	83.3	43.3	346.2	24.02%
$50-100m	14.80%	15.00%	75	86.3	99.2	114.1	128.9	145.7	70.7	565.2	39.21%
$100-250m	13.20%	13.00%	175	197.8	223.5	252.5	267.7	283.7	108.7	869.7	60.34%
$250-500m	6.00%	6.00%	375	397.5	421.4	446.6	473.4	501.8	126.8	1014.7	70.40%
$500-1000m	4.40%	4.40%	750	783.0	817.5	853.4	891.0	930.2	180.2	1441.4	100.00%
$1000-2000m		2.20%	1000	1022	1044.5	1067.5	1090.9	1114.9	114.9	919.6	63.80%
$2000-3000m		1.00%	2000	2020	2040.2	2060.6	2081.2	2102.0	102.0	816.2	56.62%
$3000-4000m		0.70%	3000	3021	3042.1	3063.4	3084.9	3106.5	106.5	851.8	59.10%
$4000m		0.50%	4000	4020	4040.1	4060.3	4080.6	4101.0	101.0	808.0	56.06%
$6000m		0.33%	6000	6020	6040.1	6060.2	6080.4	6100.7	100.7	805.4	55.87%
$8000m		0.25%	8000	8020	8040.1	8060.2	8080.3	8100.5	100.5	804.0	55.78%
$10000m		0.17%	10000	10017	10034.0	10051.1	10068.2	10085.3	85.3	682.3	47.34%
$16000m		0.07%	16000	16011.5	16023.0	16034.4	16045.9	16057.5	57.5	459.7	31.89%
$20000m		0.03%	20000	20006.1	20012.1	20018.2	20024.2	20030.3	30.3	242.2	16.80%
$26000m		0.01%	26000	26003.3	26006.6	26010.0	26013.3	26016.6	16.6	132.8	9.21%

For Company 1 the CAGR of revenue is much less than the average for a company with between $15-30 million of revenue. This suggests that the diversified strategy of Fund 2 may lead to less emphasis on achieving organic growth. However, for Company 2 the CAGR of revenue aligns with the average and, due to the slightly larger revenue at entry, outputs created relative to the maximum are slightly higher than average (19% vs 15.84%).

These two data points suggest that it is possible that Fund 2 might be aligned with the average for funds investing in companies with a similar level of revenue, despite its stated strategy downplaying the role of organic growth in creating financial returns. However, these are only two out of many companies in which the manager has invested. A key diligence point will be to get this data on as many of the fund's companies as possible to position Fund 2 more accurately.

For the purposes of reporting results in Format A we will use the average of the two scores-relative-to-maximum in Chart 12, 13.5% = average of (8%, 19%). For the Format B we will use the range of possible outcomes indicated in Chart 12, 8%-19%.

The third step in assessing Fund 2's potential to create a quantity of impactful outputs is to determine the extent to which the assets in which Fund 2 invests will be exposed to a high impact theme. Fund 2 will focus entirely on Education, a high impact theme, so the answer is 100%.

The fourth and final step, which is relevant in the case of Fund 2 where the target is social impact, is to determine the extent to which the activities of assets in which Fund 2 invests will benefit a disadvantaged population. This information is not available in the pitch deck. Discussion with the fund manager suggests that the number will vary across investments and in some investments will be high. The manager thinks it will be able to provide some data on this point.

In the absence of data an examination of the descriptions of the businesses of existing investee companies suggests that, consistent with the manager's thoughts, some will service relatively few disadvantaged people (for example, companies providing training of a highly advanced technical nature or training to the staff of large companies) while others may service many disadvantaged people (for example companies providing up-skilling and re-training for a general population). Based on the available information a gut-call is to make an initial estimate of 50% exposure to a disadvantaged population.

Fund 2 presents an additional point to consider in regard to providing access to the disadvantaged. The manager has made a point of backing companies with minority or woman ownership/leadership where an opportunity arises. The methodology used here focuses on quantities and, quantitatively, these owners and leaders are small in number. Depending on their mandate, individual investors may want to increase the 'disadvantaged population' score to reflect the presence of minority and women ownership. I am making the personal choice to increase the initial estimated disadvantaged score from 50% to 60%.

The four components of the impact score for Fund 2 are summarized in Chart 13.

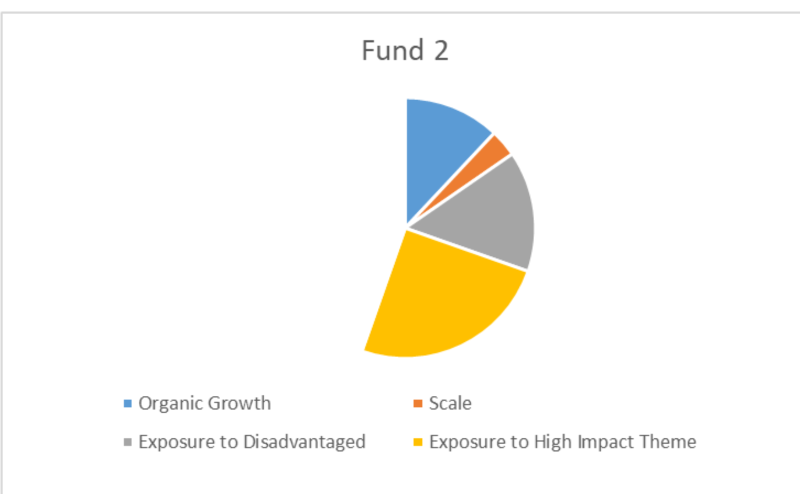
Chart 13 The four components of the impact score for Fund 2

	Organic Growth	Scale	Exposure to Disadvantaged	Exposure to High Impact Theme
Fund 2	48.0%	13.5%	60.0%	100.0%

These scores are translated into a pie chart for the purposes of Format A in Chart 14. Our starting point for Fund 2 is that it has a 55% rating (the sum of the pieces of pie).

Fund 2 is relatively strong in the thematic/population factors which contribute to the *percentage of outputs which are in fact impactful*. The fact that it is not as strong as Fund 1 in these dimensions, despite focusing on a high impact theme, indicates the additional burden in social themes of needing to address a disadvantaged population.

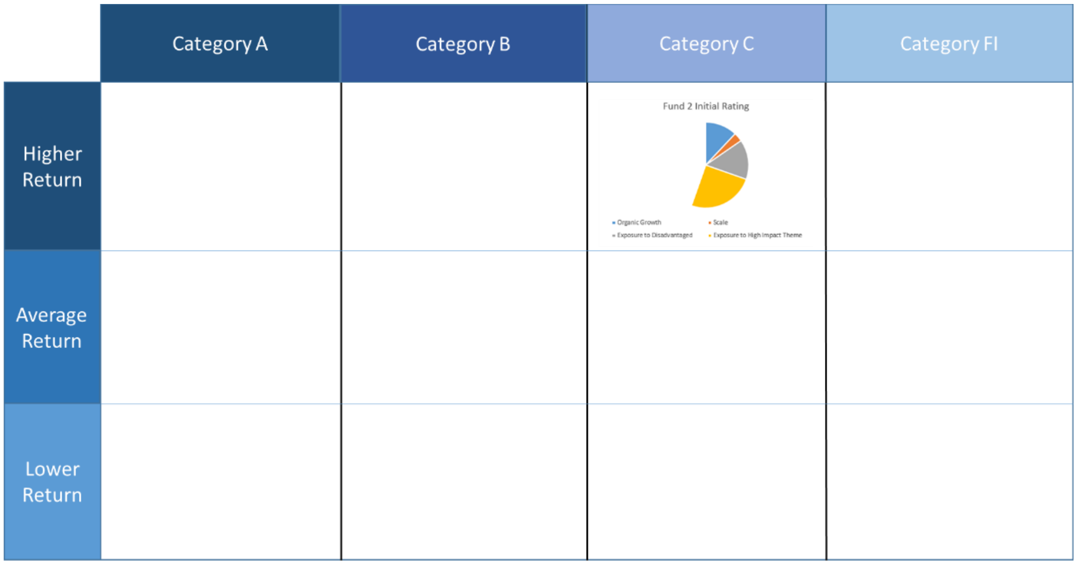
Chart 14   Initial Pie Chart Rating for Fund 2



For the factors which contribute to the *quantity of output* likely to be created, Fund 2 is weak in scale (weaker than Fund 1) and the alignment of its business model to creating outputs (contribution of organic growth) appears to be adequate, but this is a point which requires further diligence.

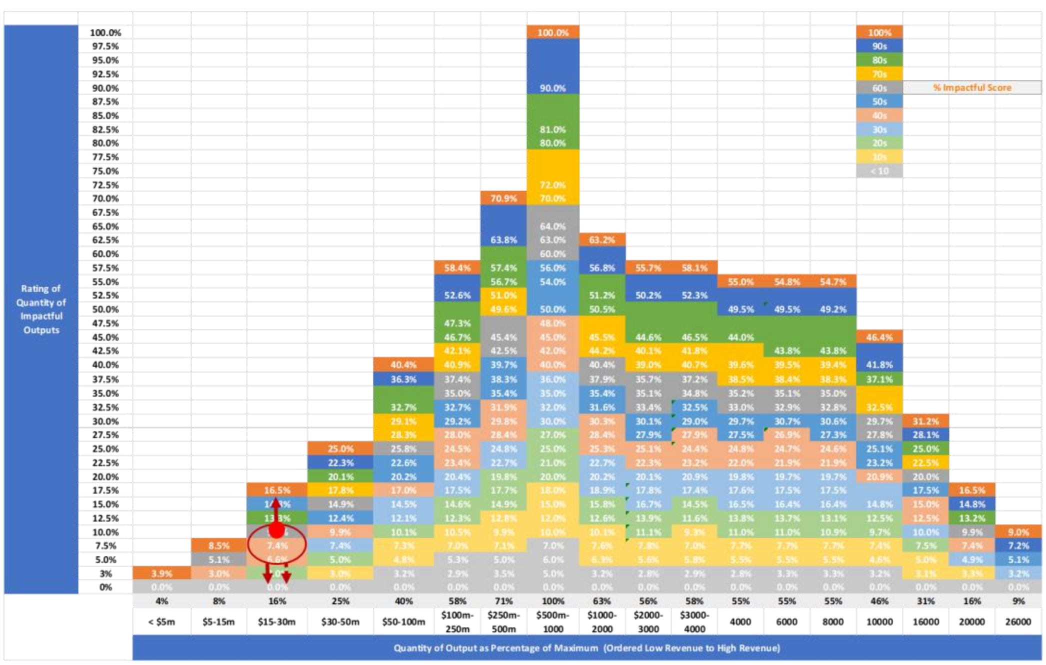
The additional dimensions of ESG risk and expected return are now added to the picture in Chart 15 which presents the analysis in Format A.

Chart 15 Initial Analysis of Fund 2 Reported in Format A



Fund 2 is potentially attractive with the potential to generate a good quantity of impact relative to its scale and above average financial returns (Fund 2 has a strong financial track record in prior funds) with low levels of ESG risk.

Chart 16 Initial Analysis of Fund 2 in Format B



To provide insight into the issues which should be the focus of further diligence, Chart 16 presents the initial analysis of Fund 2 in Format B.

The red dot in Chart 16 represents the location of the average asset with the revenue level of Fund 2, 100% exposure to a high impact social theme and 60% exposure to a disadvantaged population [9.6% = 16%*(100%*60%)].

However, the limited data we currently have indicates a potentially wide range of outputs relative to the maximum (Chart 12). On the basis of our initial estimate of 100% exposure to education and 60% exposure to a disadvantaged population, the upper and lower ends of the red circle in Chart 16 represent the two extremes in Chart 12 [11.4% = 19%*(100%*60%) and 4.8% = 8%*(100%*60%)].

The blended business model of Fund 2 relies heavily on strategies which create return on equity other than organic growth and creates the possibility of a lower impact outcome relative to the average, indicated by the location of the red 'average' dot near the top of the range.

The possible effect on the position of Fund 2 of variation in (i) the contribution of organic growth in the business model and (ii) thematic/population factors, is indicated by the upward and downward solid red arrows. If the companies backed by Fund 2 have greater reach into disadvantaged populations than our initial estimate of 60%, Fund 2 may reposition upwards. Likewise, further information on the contribution of organic growth could reposition Fund 2 either upwards or downwards.

The possible effect of the occurrence of negative ESG events is suggested by the downward dashed red arrow. Given the Category C ESG risk rating of Fund 2 the potential effect of negative ESG events is not as significant as it is for Fund 1.

Format B illustrates the constraints created by the scale of its target companies on the ability of Fund 2 to create a quantity of impactful outputs. The companies in which Fund 2 invests will all be within the band of $15-30 million in revenue at the time of entry and, with this scale of revenue at entry, the only route by which Fund 2 can create a quantity of impactful outputs beyond the bounds of the column in which it is located is to generate greater-than-average organic growth in its investee companies.

Chart 16 suggests that the key diligence points to follow up are data which provide (i) greater insight into the role of organic growth in the business model of Fund 2 and (ii) greater insight into the access provided to disadvantaged populations by companies backed by Fund 2.

To summarize this initial analysis of Fund 2:

- It is possible that Fund 2 may generate an above-average percentage of outputs which are impactful, relative to the scale of its transactions. For this to happen further diligence needs to establish that either (or both): (i) Organic growth plays a greater role in the business model than the average of the two existing data points suggests; (ii) Reach to the disadvantaged is greater than current data suggests.
- Fund 2 will benefit from establishing a good quality ESMS to actively manage ESG risk. The main risk to manage is the quality of education provided. ESG risk is not the priority issue that it is in the case of Fund 1.
- Due to the scale constraint created by the target size of companies, the quantity of impactful outputs Fund 2 is likely to generate lies in a relatively narrow range; a much narrower range

than Fund 1. The impactful outputs of Fund 2 will be boosted if either (or both): (i) the role of organic growth is higher than initially estimated, (ii) reach to the disadvantaged is greater than initially estimated.

Fund 2 is a follow-on fund by a well-established manager. More of the data required to improve our insight into the role of organic growth and reach to the disadvantaged should be available and should be the key focus of further diligence.

Comparing the Two Examples – Which Fund to Choose?

By placing both Funds 1 and 2 into Formats A and B we can see how the two funds relate to each other as investment options.

Purely in terms of the potential to create a quantity of additional outputs with which to meet the SDGs, Fund 1 is the more attractive, as long as ESG is well managed.

However, when making investment decisions investors have different mandates which determine the weightings they give to various factors such as return, risk, thematic exposure, quantity of additional impactful outputs and additionality. Because of this there is no one answer as to which of Fund 1 or 2 is the more attractive – attractiveness is relative to the investor's mandate.

Format A in Chart 17 suggests that both funds will be attractive to commercial investors. Fund 2's higher expected return, lower ESG risk and established track record will possibly give it an edge over Fund 1 even though the expected quantity of additional impactful outputs created is lower.

Format B in Chart 17 makes clear Fund 1's potential to achieve a larger quantity of additional impactful outputs relative to Fund 2, but also makes clear the greater risk unless ESG risk is well managed.

Chart 17 Comparing Funds 1 and 2 in Format A

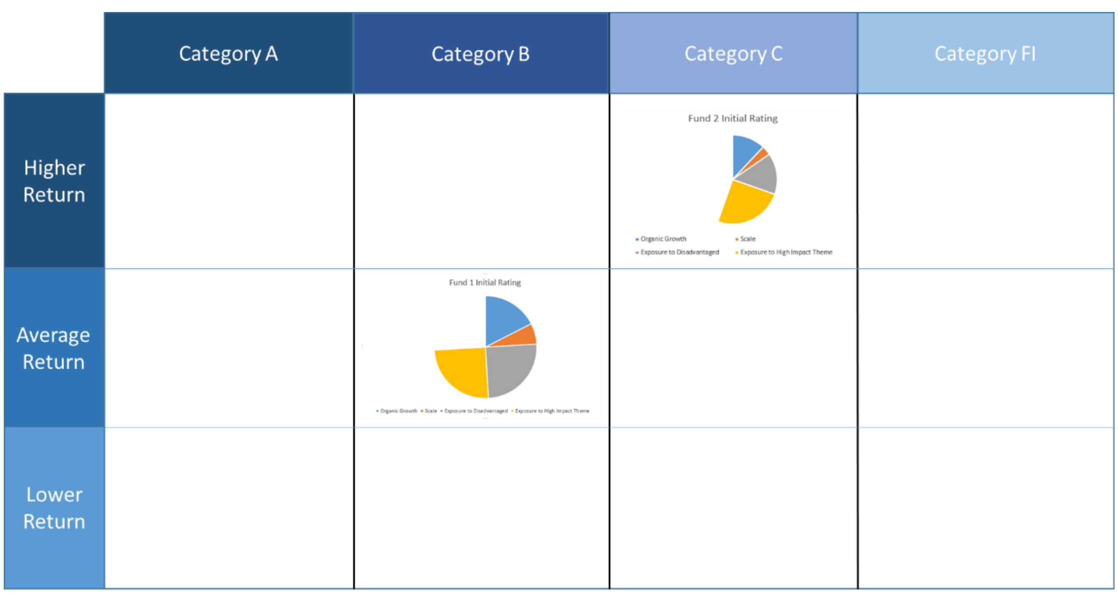
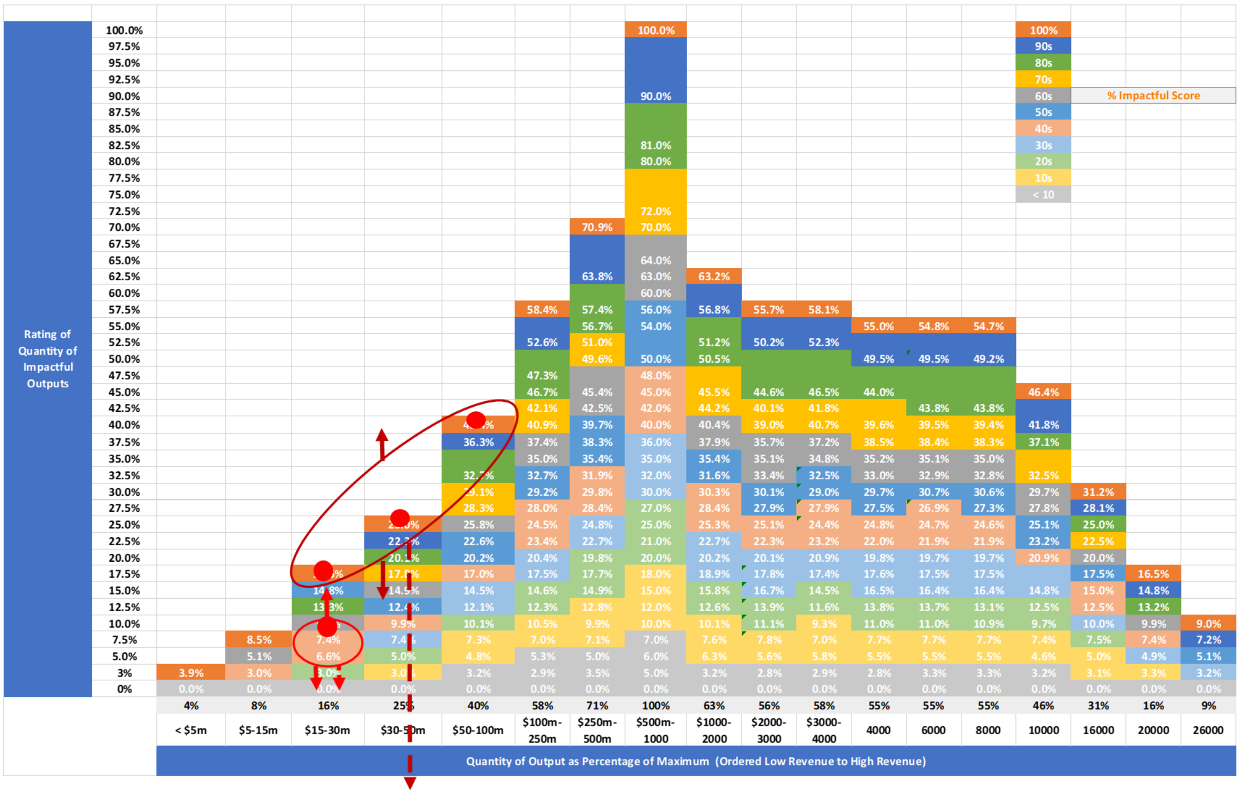


Chart 18   Comparing Funds 1 and 2 in Format B



From a portfolio perspective, the relevance of the impact rating of an asset to an investor's portfolio is the effect the asset has on the average impact profile of the portfolio. Any asset whose rating is higher than the average of the portfolio can make a positive contribution to improving the impact profile of the portfolio.

Chart 19 considers Funds 1 and 2 in the context of whether or not they improve the average impact rating of an investor's portfolio.

Chart 19 presents the same data as Format B in a different configuration. The numbers in the body of Chart 19 are the multiple of the x- and y- axis and correspond to the ratings on the y-axis of Format B. The y-axis of Chart 19 is the percentage of outputs which are impactful. The x-axis of Chart 19 is the same quantity-of-output-as-a-percentage-of-the-maximum as on the x-axis of Format B, but ordered low-score to high-score rather than low-revenue-at-entry to high-revenue-at-entry.

The assets located above a downward sloping diagonal line drawn through Chart 19, suggested by the green colored squares, are those which will create a greater-than-average quantity of additional impactful outputs. Assets capable of creating the largest quantity of additional primary outputs will be located towards the upper right of the chart.

The dark orange and dark blue squares represent the average impact ratings of the portfolios of a large institutional investor and a family office respectively[10].

[10] Refer to "The Short Version" ibid pp31-34 for an explanation of how these examples were developed.

Assets located in the white squares benefit the portfolio of neither investor. Assets located in the pale orange squares benefit the portfolio of the institutional investor only. Assets located in the pale blue squares benefit the portfolios of both the institutional investor and the family office, while not being assets which are likely to create an above-average quantity of additional impactful outputs. Assets in the green squares benefit both portfolios and additionally are likely to create above-average quantities of additional impactful outputs.

Chart 19 Considering How Funds 1 and 2 Might Meet Portfolio Needs

Scores in the Body of the Table are the Overall Assessment of the Ability of an Asset to Create a Quantity of Impactful Outputs, Created by Multiplying the Y-Axis and X-Axis

% Of Outputs Which Are Impactful																	
	100%	3.9%	8.5%	9.0%	16.5%	[illegible]	[illegible]	31.2%	[illegible]	46.4%	54.7%	54.8%	55.0%	55.7%	58.1%	58.4%	63.2%	70.9%	100.0%
	90%	3.5%	7.6%	8.1%	14.8%	14.8%	22.3%	28.1%	36.3%	41.8%	49.2%	49.3%	49.5%	50.2%	52.3%	52.6%	56.8%	63.8%	90.0%
	81%	3.1%	6.9%	7.3%	13.3%	13.3%	20.1%	25.3%	32.7%	37.6%	44.3%	44.4%	44.6%	45.1%	47.0%	47.3%	51.2%	57.4%	81.0%
	80%	3.1%	6.8%	7.2%	13.2%	13.2%	19.8%	25.0%	32.3%	37.1%	43.8%	43.8%	44.0%	44.6%	46.5%	46.7%	50.5%	56.7%	80.0%
	72%	2.8%	6.1%	6.5%	11.9%	11.9%	17.8%	22.5%	29.1%	33.4%	39.4%	39.5%	39.6%	40.1%	41.8%	42.1%	45.5%	51.0%	72.0%
	70%	2.7%	5.9%	6.3%	11.5%	11.5%	17.3%	21.9%	28.3%	32.5%	38.3%	38.4%	38.5%	39.0%	40.7%	40.9%	44.2%	49.6%	70.0%
	64%	2.5%	5.4%	5.8%	10.5%	10.5%	15.9%	20.0%	25.8%	29.7%	35.0%	35.1%	35.2%	35.7%	37.2%	37.4%	40.4%	45.4%	64.0%
	63%	2.4%	5.3%	5.7%	10.4%	10.4%	15.6%	19.7%	25.4%	29.2%	34.5%	34.5%	34.7%	35.1%	36.6%	36.8%	39.8%	44.7%	63.0%
	60%	2.3%	5.1%	5.4%	9.9%	[illegible]	14.9%	18.7%	24.2%	27.8%	32.8%	32.9%	33.0%	33.4%	34.8%	35.0%	37.9%	42.5%	60.0%
	56%	2.2%	4.7%	5.1%	9.2%	9.2%	13.9%	17.5%	22.6%	26.0%	30.6%	30.7%	30.8%	31.2%	32.5%	32.7%	35.4%	39.7%	56.0%
	54%	2.1%	4.6%	4.9%	8.9%	8.9%	13.4%	16.9%	21.8%	25.1%	29.5%	29.6%	29.7%	30.1%	31.4%	31.5%	34.1%	38.3%	54.0%
	50%	1.9%	4.2%	4.5%	8.2%	8.2%	12.4%	15.6%	20.2%	23.2%	27.3%	27.4%	27.5%	27.9%	29.0%	29.2%	31.6%	35.4%	50.0%
	49%	1.9%	4.2%	4.4%	8.1%	8.1%	12.1%	15.3%	19.8%	22.7%	26.8%	26.9%	27.0%	27.3%	28.5%	28.6%	30.9%	34.7%	49.0%
	48%	1.9%	4.1%	4.3%	7.9%	7.9%	11.9%	15.0%	19.4%	22.3%	26.3%	26.3%	26.4%	26.8%	27.9%	28.0%	30.3%	34.0%	48.0%
	45%	1.7%	3.8%	4.1%	7.4%	7.4%	11.2%	14.1%	18.2%	20.9%	24.6%	24.7%	24.8%	25.1%	26.1%	26.3%	28.4%	31.9%	45.0%
	42%	1.6%	3.6%	3.8%	6.9%	6.9%	10.4%	13.1%	17.0%	19.5%	23.0%	23.0%	23.1%	23.4%	24.4%	24.5%	26.5%	29.8%	42.0%
	40%	1.5%	3.4%	3.6%	6.6%	6.6%	9.9%	12.5%	16.1%	18.6%	21.9%	21.9%	22.0%	22.3%	23.2%	23.4%	25.3%	28.4%	40.0%
	36%	1.4%	3.1%	3.2%	5.9%	5.9%	8.9%	11.2%	14.5%	16.7%	19.7%	19.7%	19.8%	20.1%	20.9%	21.0%	22.7%	25.5%	36.0%
	35%	1.4%	3.0%	3.2%	5.8%	5.8%	8.7%	10.9%	14.1%	16.2%	19.1%	19.2%	19.3%	19.5%	20.3%	20.4%	22.1%	24.8%	35.0%
	32%	1.2%	2.7%	2.9%	5.3%	5.3%	7.9%	10.0%	12.9%	14.8%	17.5%	17.5%	17.6%	17.8%	18.6%	18.7%	20.2%	22.7%	32.0%
	30%	1.2%	2.5%	2.7%	4.9%	4.9%	7.4%	9.4%	12.1%	13.9%	16.4%	16.4%	16.5%	16.7%	17.4%	17.5%	18.9%	21.3%	30.0%
	28%	1.1%	2.4%	2.5%	4.6%	4.6%	6.9%	8.7%	11.3%	13.0%	15.3%	15.3%	15.4%	15.6%	16.3%	16.4%	17.7%	19.8%	28.0%
	27%	1.0%	2.3%	2.4%	4.4%	4.4%	6.7%	8.4%	10.9%	12.5%	14.8%	14.8%	14.9%	15.0%	15.7%	15.8%	17.1%	19.1%	27.0%
	25%	1.0%	2.1%	2.3%	4.1%	4.1%	6.2%	7.8%	10.1%	11.6%	13.7%	13.7%	13.8%	13.9%	14.5%	14.6%	15.8%	17.7%	25.0%
	24%	0.9%	2.0%	2.2%	4.0%	4.0%	5.9%	7.5%	9.7%	11.1%	13.1%	13.2%	13.2%	13.4%	13.9%	14.0%	15.2%	17.0%	24.0%
	21%	0.8%	1.8%	1.9%	3.5%	3.5%	5.2%	6.6%	8.5%	9.7%	11.5%	11.5%	11.6%	11.7%	12.2%	12.3%	13.3%	14.9%	21.0%
	20%	0.8%	1.7%	1.8%	3.3%	3.3%	5.0%	6.2%	8.1%	9.3%	10.9%	11.0%	11.0%	11.1%	11.6%	11.7%	12.6%	14.2%	20.0%
	18%	0.7%	1.5%	1.6%	3.0%	3.0%	4.5%	5.6%	7.3%	8.4%	9.8%	9.9%	9.9%	10.0%	10.5%	10.5%	11.4%	12.8%	18.0%
	16%	0.6%	1.4%	1.4%	2.6%	2.6%	4.0%	5.0%	6.5%	7.4%	8.8%	8.8%	8.8%	8.9%	9.3%	9.3%	10.1%	11.3%	16.0%
	15%	0.6%	1.3%	1.4%	2.5%	2.5%	3.7%	4.7%	6.1%	7.0%	8.2%	8.2%	8.3%	8.4%	8.7%	8.8%	9.5%	10.6%	15.0%
	14%	0.5%	1.2%	1.3%	2.3%	2.3%	3.5%	4.4%	5.7%	6.5%	7.7%	7.7%	7.7%	7.8%	8.1%	8.2%	8.8%	9.9%	14.0%
	12%	0.5%	1.0%	1.1%	2.0%	2.0%	3.0%	3.7%	4.8%	5.6%	6.6%	6.6%	6.6%	6.7%	7.0%	7.0%	7.6%	8.5%	12.0%
	10%	0.4%	0.8%	0.9%	1.6%	1.6%	2.5%	3.1%	4.0%	4.6%	5.5%	5.5%	5.5%	5.6%	5.8%	5.8%	6.3%	7.1%	10.0%
	9%	0.3%	0.8%	0.8%	1.5%	1.5%	2.2%	2.8%	3.6%	4.2%	4.9%	4.9%	5.0%	5.0%	5.2%	5.3%	5.7%	6.4%	9.0%
	8%	0.3%	0.7%	0.7%	1.3%	1.3%	2.0%	2.5%	3.2%	3.7%	4.4%	4.4%	4.4%	4.5%	4.6%	4.7%	5.1%	5.7%	8.0%
	7%	0.3%	0.6%	0.6%	1.2%	1.2%	1.7%	2.2%	2.8%	3.2%	3.8%	3.8%	3.9%	3.9%	4.1%	4.1%	4.4%	5.0%	7.0%
	6%	0.2%	0.5%	0.5%	1.0%	1.0%	1.5%	1.9%	2.4%	2.8%	3.3%	3.3%	3.3%	3.3%	3.5%	3.5%	3.8%	4.3%	6.0%
	5%	0.2%	0.4%	0.5%	0.8%	0.8%	1.2%	1.6%	2.0%	2.3%	2.7%	2.7%	2.8%	2.8%	2.9%	2.9%	3.2%	3.5%	5.0%
	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Output relative to Maximum		4%	8%	9%	16%	16%	25%	31%	40%	46%	55%	55%	55%	56%	58%	58%	63%	71%	100%
Revenue at Entry		< $5m	$5-15m	$26,000	$20,000	$15-30m	$30-50m	$16,000	$50-100m	$10,000	$8,000	$6,000	$4,000	$2000-3000m	$3000-4000m	$100-250m	$1000m	$250-500m	$500-1000m

Quantity of Output an Asset is Able to Create Relative to the Maximum

Fund 2 will benefit the impact profile of the portfolio of the institutional investor and may also benefit the portfolio of the family office if further diligence shows either a higher exposure to the disadvantaged or a greater contribution of organic growth to the business model.

Fund 1 will benefit the impact profiles of both portfolios and, if ESG risk is well managed, has the potential to create an above-average quantity of additional primary outputs.