Climate Change Investing in SEA

INSEAD MBA Project in cooperation with Burda Principal Investments

Final report

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(INSEAD MBA Class of 2020 July)

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About BPI

Burda Principal Investments is the growth equity arm of Hubert Burda Media, one of Europe's largest media and technology conglomerates with a strong investment track record in digital businesses since 1998. In the past, Hubert Burda Media have invested in successful platforms such as Etsy, Zooplus, HolidayCheck and Xing.

We leverage Burda's capital, brands and sector expertise to help our portfolio companies with business expansion and localization. As a long-term financial partner, we provide growth capital free of rigid limitations of a fund structure and holding periods. Today, our portfolio comprises 18 digital businesses across Southeast Asia, Europe and the US, including the likes of regional category leaders such as Vinted and Zilingo.

Our dedicated team of professionals are spread across Singapore, Munich, Berlin and London.

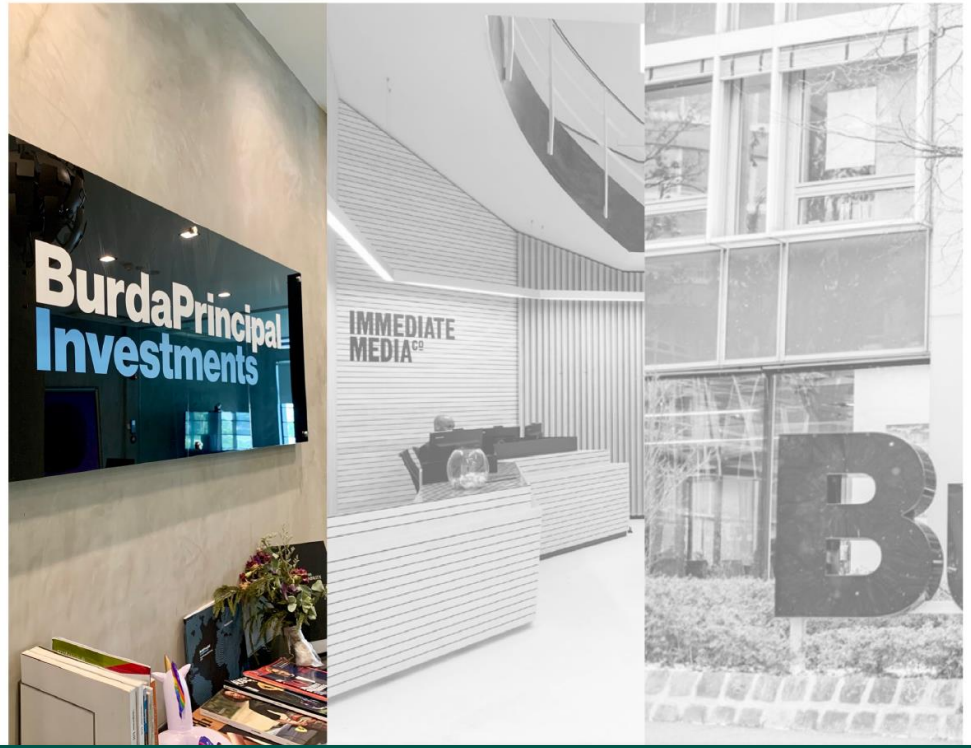

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Table of contents

Executive summary (1/2)

Section I

The case for climate change investing in SEA

1 *Market opportunity for climate change investing in SEA*

- **Strong demand side**: Climate change is a global megatrend dominating public space (4x more climate-change articles in last 2 years, emerging 'climate idols'), with investor preference shifting towards ESG-friendly (Environmental, Social and Corporate Governance) activity (& climate being #1 theme in impact investing)
- **Growing supply side**: green bonds, green-project finance, ESG-agnostic investments in public assets & impact investment; entry of large PE/VC funds
- **SEA destined to be the next big market:** strong states' appetite for innovation, interventionism, strong economic growth & consumer openness/trends
- SEA investment has been focused on 'direct-impact' areas; **status-quo shifting & maturing with 'indirect-investment' in ESG-positive companies**

2 *Economic value add and profitability upside*

- Economic value driven by upsides on portfolio firm and investment industry level: the former includes **revenue upside** (enabled by macro trends), **cost savings** (through reduced resource use and more efficient processes) and **improved risk mitigation** (esp. regulatory, reputational, operational)
- **Increasing (yet still inconclusive) evidence** ESG-focus can strengthen **financial returns in capital markets** – with **increasing investor mindset shift** from 'ESG as compromise on returns' to seeking stronger returns through ESG investment
- PE/VC evidence limited, yet the **ability to raise individual first- and second-round ESG funds of up to $2.5bn** is strong indication of emerging trend

3 *Emerging successful investment theses in the industry*

- Overall **evolving landscape with different investment models** pursued, but some shared characteristic and signs of growth
- **Three key theses prevail in the industry – from analysing 50+ funds:**
  - **Targeted framework:** based on global needs and gaps in the market)
  - **Rating framework:** based on a logic model that links a company's products/services to ESG related outcomes)
  - **Monetization framework:** investment objectives at fund & sector-level, accompanied by a specific impact thesis for each investment
- In-depth analysis of active funds showed **three good practice principles** – well-run funds are **designed for impact, have a specified product, stage and geography and are committed to financial returns**

Note: ESG stands for Environmental, Social and Corporate Governance

Executive summary (2/2)

Section II

Building a climate change pitchbook

4 *Clear focus: Determining an investment thesis*

- As a first step as a GP, position yourself along the spectrum of pure traditional vs. impacting investing. Exemplary position could be to be an **'ESG opportunity seeker'** and **embed ESG across the value chain, while putting financial returns first**
- Use a funnel approach to determine your investment thesis: Identify **attractive segments** (i.e., verticals/horizontals with attractive size, high growth and low competition), define how to **leverage your firms unique strengths and capabilities** and find the **right business models/targets to invest** in
- In the investment space you have defined, **screen for attractive opportunities and business models** both along vertical (i.e., industry) and horizontal (i.e., climate change relation) lines

5 *Attractive partnerships: Understanding the LP landscape*

- **LP universe for impact related funds is relatively concentrated**, with large majority of GPs studied being **funded by Foundations, HNWIs / Family Offices or Syndicates** of impact focused investors; large funds attract a **more diverse LP base**
- **Impact GPs tend to attract pockets of capital dedicated specifically to impact driven initiatives**, with many traditional LPs establishing special sidecars for this purpose
- Recently, there appears to be **some influx of more traditional investors** and other corporates in the space

6 *Consistent commitment: Operationalizing climate change investment*

- **Its important to embed ESG throughout the fund's value chain** to ensure consistent focus, scalability and development of advanced internal capabilities and thus ultimately achieve investment success:
  - In fundraising, **target climate-focused investors,** communicate the GP's ESG levers and tailor investment allocations (to investors)
  - During DD, incorporate **climate-criteria within existing framework**, evaluate historical & future impact; potential to appoint 3rd party rating agency
  - **Actively guide implementation of climate goals for each portfolio company**, facilitate learning across portfolio
  - Monitor effectively by **incorporating 2-3 main climate-impact-related KPIs** & communicate ESG performance progress to LPs regularly
  - Prepare for strong exit: **Tap into growing market for climate-investing** and realize superior exit returns through targeted sales processes

Section I

The case for climate change investing in SEA

Section I

Chapter 1

Market opportunity for climate change investing in SEA

1

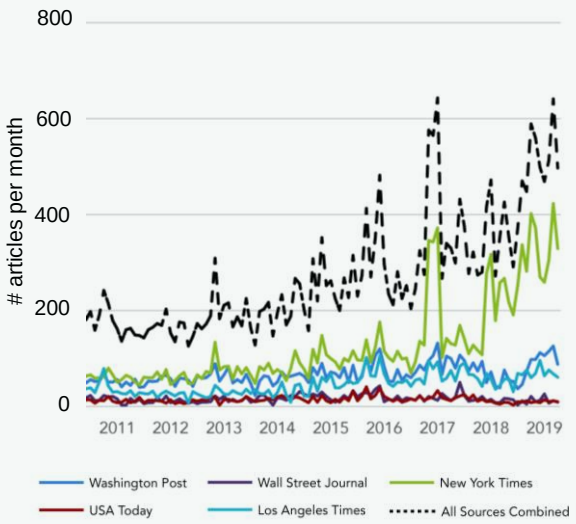
Climate-change investment has experienced substantial growth & popularity globally, with SEA destined to be the next big market

	Key arguments	Details
a	**Climate change is a global megatrend dominating public space**	• **Booming media coverage** (4x more climate-change media articles in the last 24 months), supported by strong **scientific evidence** has engrained sustainability in today's culture • Government & MNC commitments **following Paris Agreement 2015 prompt increasing focus on ESG space** • Further, **emergence of many climate-focused start-ups** (e.g. >2000 in Europe alone)
b	**Investor preferences are shifting toward ESG-friendly activity**	• Majority of millennial investors set **impact as a first investment criterion**, with 77% already impact investing • Climate change has become the **number one theme in impact investing since 2019** • **$30tn of inheritable wealth poised to be received by millennials in next 20 years**, with 70-80% of them likely to revisit investment criteria and shift focus
c	**Globally, there has been growth across different "green investments"**	• Emergence of **Green bonds and green-project finance** – driven by state funds and developmental banks • **Growing proportion of impact investing,** i.e., investors equally interested in impact and financial returns • **Entry of established VC and PE funds** in the space with **impact-focused 'mega-funds'** emerging in past 5 years
d	**SEA is destined to be the next big market for such investments**	• Strong **economic growth and consumer openness to technology** likely to further promote innovative businesses • Local developmental states' **appetite to leapfrog to the forefront of innovation**, history of interventionism & unique mechanisms to encourage investment in sustainability are likely to **accelerate focus and funding in the space**
e	**SEA investment focused on 'direct-impact' areas, yet status-quo shifting**	• **SEA impact investment gathering pace**, yet still focused on blend of public-driven investment and more 'traditional' direct-impact purpose-driven companies (e.g., clean energy) • Regional VC and PE funds start to adapt: **engraving ESG within their value-chain**, focusing on impact through investing in 'sustainability-positive' mainstream companies and launching tangent initiatives

Climate change megatrend dominates public space

Strong scientific evidence	• Last 5 years hottest on record (1 degree + hotter vs 100 years ago) • 200 million people will be affected by climate migration by 2050
Booming media coverage	• 4x more climate-change media articles in the last 24 months
Stronger culture around sustainability	• Swedish activist Greta Thunberg • FT named 'flygskam' or 'flight shame' their word of the year for 2019, etc.
Strong government & MNC commitments	• Paris Agreement 2015: e.g. London, NY, Paris, Sydney committed to be carbon neutral by 2050 • Siemens, F1, Temasek, Bosch, Danone, IKEA - by 2030
Increase in climate-focused start-ups	• EIT Climate-KIC supports more than 2000 climate-change focused start-ups in Europe • 50+ start-ups focused on 'greener travelling' alone last year in the US

2011-2019 US Newspaper Articles on Climate Change or Global Warming



Sources: www.ft.com/content/5c635430-1dbc-11ea-97df-cc63de1d73f4, https://sciencepolicy.colorado.edu/, ClimateCentral, National Geographic, WWF; https://travelandmobility.tech/mapping-the-50-sustainability-startups-in-travel-mobility-tech/; https://www.climate-kic.org/who-we-are/what-is-climate-kic/; https://www.cjr.org/covering_climate_now/climate-change-crisis-story-quantity.php

Changing investor profile & preferences likely to prompt significant shift in investments in the next decade

90%

*of millennial investors set impact it as **a first investment criteria** (vs less than 50% for 'Baby boomers')*

77%

*of affluent millennial **have put** money into **impact investment***

95%

*of affluent millennial investors prefer to make **investments which have positive effect on environment***

#1

***Climate change** has become the number one theme in impact investing in 2019 (previously #5 in 2018)*

$30tn

of inheritable wealth poised to be received by millennials in next two decades

70-80%

of investment goals usually reconsidered / assets shifted when wealth changes generation

78%

*of today's investors **already** consider **ESG management to be one of the key issues** when choosing asset manager*

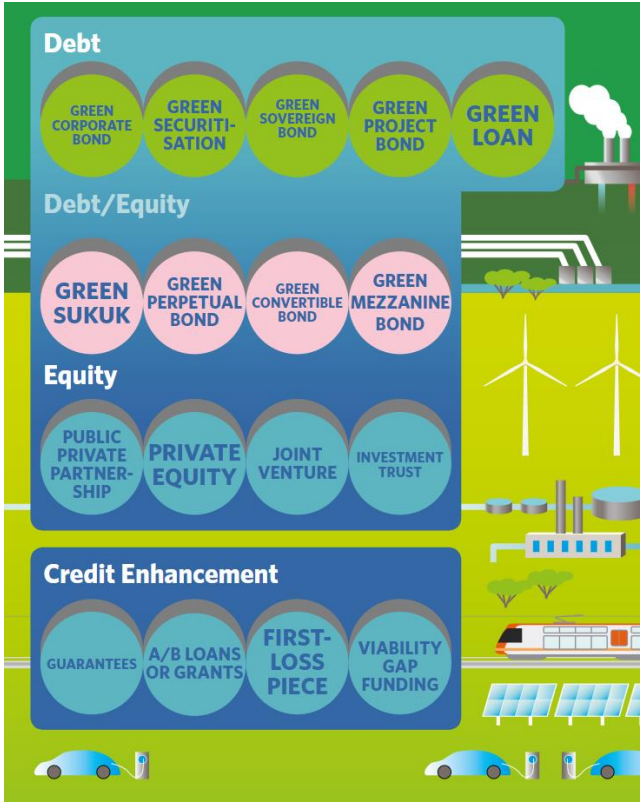
Focus on climate & other sustainability topics will enable faster and more diverse fundraising – from a growing pool of impact-focused/-interested LPs

Sources: Bank of America Securities, CNBC, 2019; HBR, 2019; EY https://www.ey.com/Publication/vwLUAssets/ey-sustainable-investing-the-millennial-investor-gl/$FILE/ey-sustainable-investing-the-millennial-investor.pdf; Business Insider (2019) https://www.forbes.com/sites/unicefusa/2020/03/06/womens-advice-for-girls-stay-in-school-believe-in-yourself/

Globally, there has been growth across different types of "green investments"

Focus of this document

	Description	Type	Players
Green bonds	• Fixed-income instrument specifically earmarked to raise money for climate and environmental projects • Asset-linked, backed balance sheet	Debt capital markets, pension funds	National governments & treasuries, IB, development banks
ESG investing	• Investments in publicly-traded assets, ranging from 'negative screening' and responsible investing to active ESG strategies	Public equity markets, ETFs, mutual funds, unit trusts, pension funds	Xtrackers, Vanguard, Blackrock, Amundi
Impact investing	• Investment strategy linked to detailed social & environmental KPIs, alongside financial return objectives	Private equity, venture capital, credit, project finance, blended	IIX, ResponsAbility, Blue Orchard
Private equity	• Capital raised accelerating • More 'megafunds' emerging (e.g. TPG $2bn Rise Funds, $1bn KKR Global Impact, $1bn Partners LIFE)	Private equity, mid-stage venture capital, pension funds	TPG, KKR, Partners Group, etc.
Green project finance	• Green-linked and sustainability-linked loans and financing structures, typically provided in accordance with a set of non-financial criteria	Infrastructure projects, real estate	Development banks, investment banks, SWFs



Sources: Climate bonds initiative, Bain (2020)

SEA as a region is destined to be the next big market for impact and climate-related investment – 5 reasons why

	Strong need for action in the region	Strong economic growth forecasts	Consumer openness to technology	Potential to leapfrog to the forefront of innovation	Likelihood of regulatory action
Reason	*Pollution, waste and population growing extensively*	*Ample opportunity for new business models across countries*	*Markets thirsting for innovation without complacency and blocking structures*	*Using insights from more developed countries to move ahead*	*Fluidity of political systems makes intervention more likely*
Proofpoint	▪ Philippines, Timor L'Este, Cambodia & Laos fastest growing populations in APAC ▪ Escalating concern over environmental quality. Pollution in major cities and haze crises of 2013, 2015 & 2019	▪ Asian Development Bank projections on ASEAN GDP between 4.8-5.0% [prior to COVID-19] ▪ Region is forecast to overtake Europe and Japan to become world's 4th largest economic bloc	▪ Comparatively high levels of smart-phone use; ability to unlock e-commerce innovation ▪ Mobile commerce penetration ranges from 30-70% (excluding Singapore)	▪ Payments: Southeast Asian countries currently undergoing a 'leap' in payments, moving directly from cash to digital payments, skipping credit cards ▪ Similar story with mobile networks & infrastructure	▪ Top-down political systems in most regimes. Early signs in Singapore & Malaysia ▪ Track record of following the lead of European and North American legislation, and learning from their mistakes

Source: Asian Development Bank, Team analysis

SEA unique characteristics necessitate prompt action to stay ahead of the curve

SEA developmental states offer commitment and unique mechanism of support for target industries

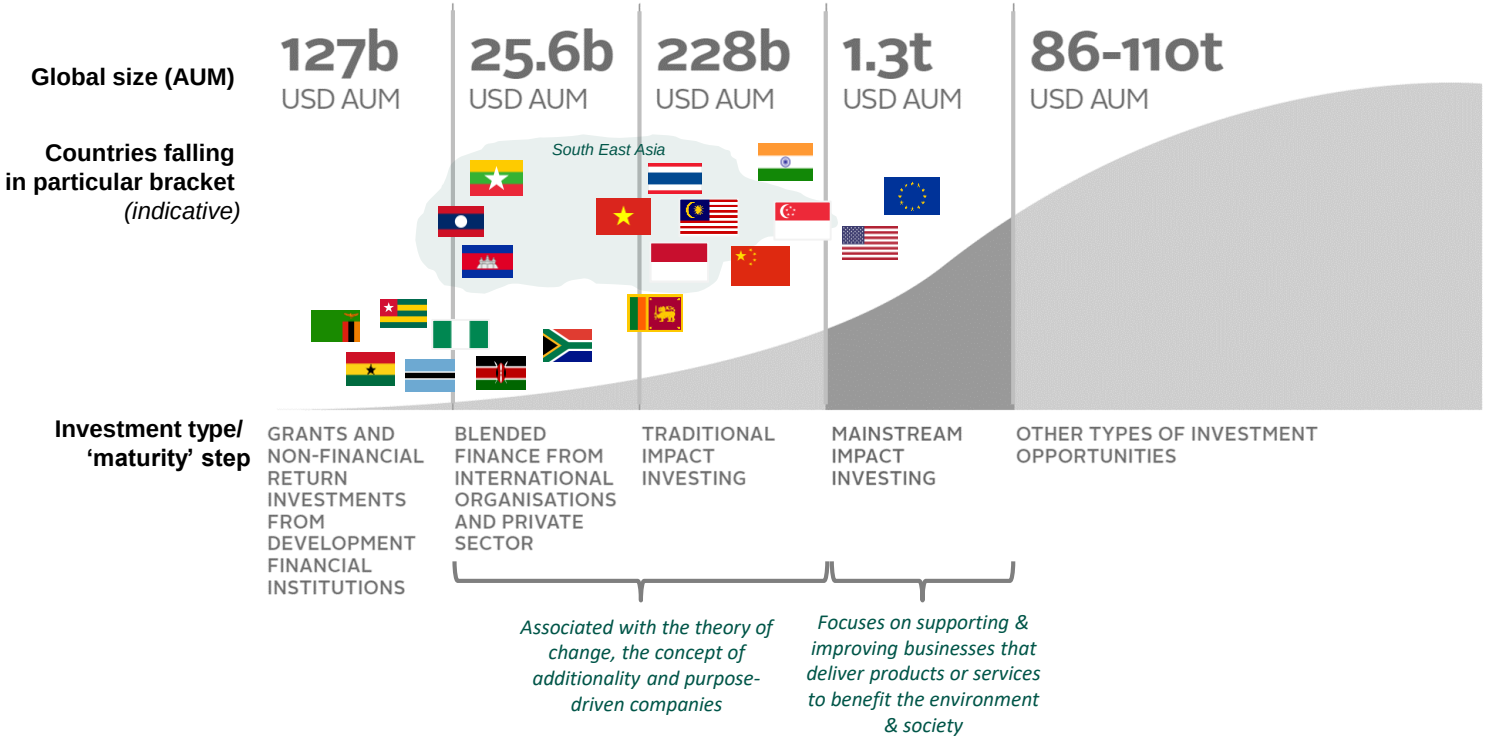
- Most East Asian governments committed to Renewable Energy, Carbon Footprint reduction, and Transport goals post Paris Agreement 2015
- Strong National Sovereign Wealth Funds enable faster investment in new industries
- 6 out of the world's top largest sovereign funds from Asia – incl. two in Singapore: GIC Private Limited & Temasek

Rapidly changing target industries in SEA necessitate action to avoid complacency

- During the 2000s, most investors targeted primary industries such as oil & gas, mining and agriculture
- In the late 2010s, there was increased focus on investing in companies meeting funds sustainability criteria: e.g. 56% in 2019 (vs 30% in 2017) (Bain 2019)
- Today, investors increasing looking for renewable energy, sustainable financing, healthcare networks projects, etc. (TheJakartaPost, 2019)

Sources: SWFI, 2019; IFC (2019) https://www.ifc.org/wps/wcm/connect/59260145-ec2e-40de-97e6-3aa78b82b3c9/3503-IFC-Climate_Investment_Opportunity-Report-Dec-FINAL.pdf?MOD=AJPERES&CVID=lBLd6Xg; Bain (2019); TheJakartaPost 2019

SEA impact investment gathering pace, yet still focused mainly on traditional (‘direct-impact’) climate-related areas



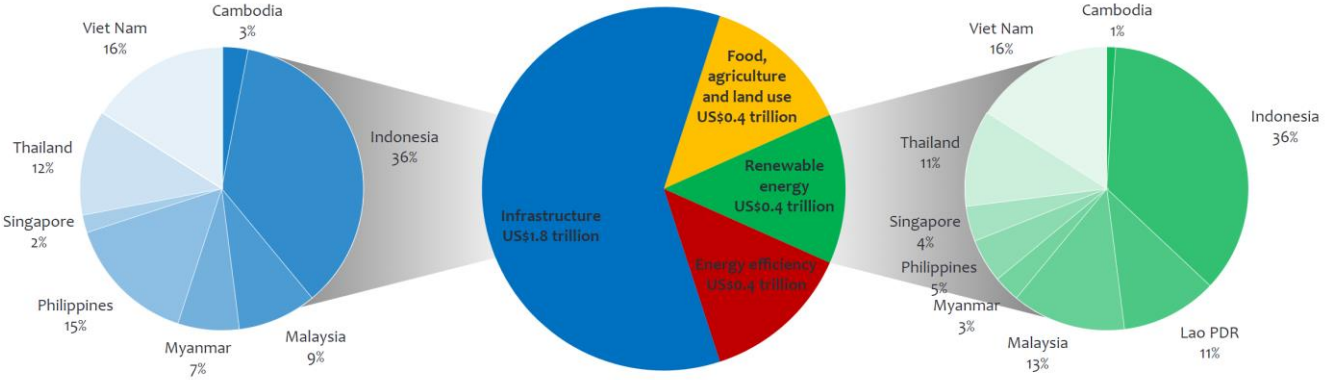
Source: https://www.unpri.org/thematic-and-impact-investing/initial-considerations/3538.article; GIIN Report 2018

SEA's 'direct-impact' climate-related investment potential well-diversified between largest ASEAN countries

$2.6-3.0tn

Green investment opportunities in ASEAN between 2016 and 2030 (DBS, 2016)

Investment opportunities breakdown



Asset Owners

Infrastructure
- Most often state-owned currently
- Emerging trend of private ownership, esp in Telecommunication and Green buildings

Food, agriculture & land
- Broad base of owners and investors
- Mainly in: Indonesia, Thailand, Vietnam & Philippines

Energy Efficiency
- Building & industrial production owners, auto manufacturers, EE service providers
- Mainly in: Indonesia, Thailand (based on national targets)

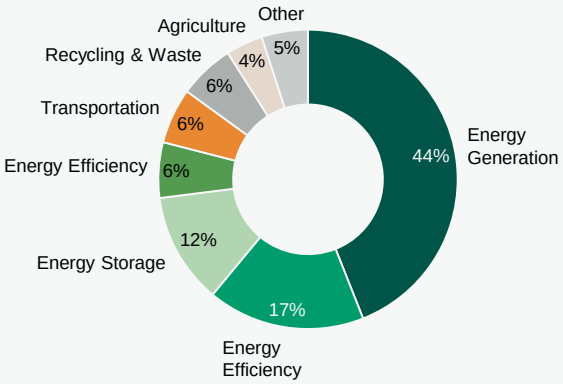
Renewable energy
- Medium-to-large independent power producers, on-grid projects

Source: https://www.dbs.com/iwov-resources/images/sustainability/img/Green_Finance_Opportunities_in_ASEAN.pdf

Clean energy has been the lead target of PE/VC investors, demonstrating a growth trend over the past 15 years

Historically, main climate-focused investment on clean energy

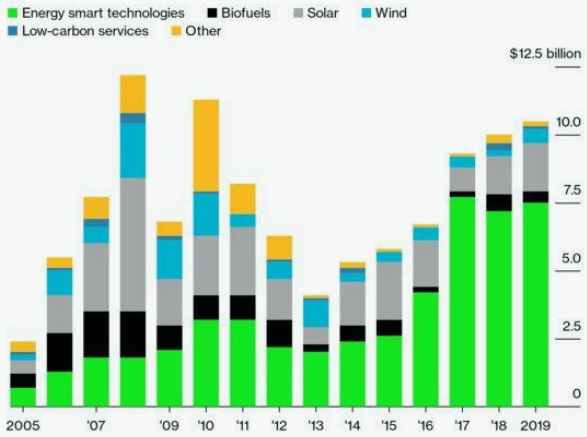
% of climate-focused investment by market



VC & PE investment remain small proportion; high % VC funding

- VC early stage accounted for c.40%
- Late VC and PE investment - 30% each
- VC and PE investment in 'climate-tech', however, still accounts for only 3-4% of total investment in this space
- 20% of global investors plan in next 5 years to focus on the environment & energy sector (NVCA and Deloitte, 2019)

Since 2013, a 're-bounce' of climate-related VC/PE investment



Source: Bloomberg, 2018 & 2020; National Venture Capital Association and Deloitte survey (2019); ICF Climate Friendly Investments Assessing the Opportunities for Private Equity & Venture Capital Investors

Investors start to diversify approach to climate-investing engraving ESG in value-chain & launching tangent initiatives

Examples

KKR

In 2018 made first impact investment in SEA (in Barghest - software algorithms and equipment controls to cut electricity consumption)
Aim: focus where ***financial performance & societal impact are aligned*** *(no trade-off)*

TEMASEK HyperX

Temasek launched HyperX - a global sustainability-themed programme (hackathon, pre-accelerator and accelerator) *Aim:* ***ideate, build and scale solutions addressing directly & in-directly ESGs***

Aloe Fund (AUM EUR 420 million) invests in Asian companies whose technologies can be used in the PRC and SEA with a particular ***emphasis on transferring technology and know-how***

aloe private equity

ADB is ***integrating climate change components into its planning for investments*** in developing Asia - including via private equity funds (e.g. Keytone Fund, VenturEast Fund)

ADB Asian Development Bank

"The most striking sustainability trend in Southeast Asia, however, is the ***growing number of ordinary deals*** *across the region that involve companies with a positive environmental or social progress (as defined for developing countries)."*

- Edge Markets (2020)

56% of PE deals *in 2019 involved companies that* ***met fund's sustainability criteria*** *for developing countries (up from 30% in 2017)*

- Bain (2019)

Source: https://www.adb.org/news/adb-invests-three-climate-change-technology-venture-capital-funds; Bain (2019), https://www.theedgemarkets.com/article/sustainability-investing-takes-southeast-asia

Section I

Chapter 2

Economic value add and profitability upside

Business case for climate-change investing confirmed in capital markets – evidence in PE&VC inconclusive, but shift noticeable

	Key arguments	Details
a	**Main factors behind economic value of climate change focused investing**	• **Portfolio firm level value-add factors include:** revenue upside (enabled by macro trends), cost savings (through reduced resource use and more efficient processes) and improved risk mitigation (esp. regulatory, operational) • At **investment industry level**, growth/focus in the space drives likely higher future multiples • ESG-friendly strategies likely to be **seen positively in investment community** (reputation-building for parent entity)
b	**Increasing evidence ESG-focus can strengthen financial returns**	• **Stoxx Global ESG Leaders outperform Stoxx Global Index** with returns of 3.8x (vs 2.7x) since 2003 • Investor **mindset shift from 'ESG as compromise on returns'** to seeking stronger returns through ESG investment • Investors increasingly believe that **ESG considerations boost returns**, increase alpha and mitigate risk
c	**Data in PE space not conclusive, but positive trends**	• PE-specific research renders **inconclusive results: from impact funds lag to 16% greater returns** • Despite that, climate megatrend leads to LPs' **growing conviction that ESG investing can increase returns** • Strong indication of success is the **ability of individual ESG funds to progress to round 2 fund raising –** examples: TPG's Rise Funds I and II, Bain Capital Double Impact, LeapFrog raising between $600mil and 2.5bn

Five factors lie beneath economic value of climate change focused investing

	Factor	Description	Proofpoint/Example
Portfolio firm level	Revenue upside enabled by macro trends	▪ **Consumer appreciation of eco-friendly behaviour** driving market success ▪ **Strong growth prospects** for climate change focused industries	▪ Nielsen: Sales of chocolate, coffee and bath products making environmental claims were **growing ~4x faster than rivals** ▪ MS: Millennials are **2x more likely to buy sustainable products** relative to the total pop.
Portfolio firm level	Cost savings through reduced resource use	▪ More appreciative use of resources **drives down consumption and cost** ▪ Potentially, production **processes become more efficient**	▪ Unilever: Saved $**1B since 2008 by actively cutting water, energy and materials** usage ▪ KKR: Implementation of water- and energy-saving measures at 11 portfolio companies is **expected to save $11M/year from 2019**
Portfolio firm level	Improved risk mitigation	▪ **Operational** risk: Damages to production ecosystem ▪ **Strategic** risk: Long-term viability of business model ▪ **Regulatory** risk: Potential backlash from authorities ▪ **Reputational** risk: Fallout from negative events	▪ Reputational risk: **BPs Deepwater Horizon** as prime example of risk related to fossil fuels ▪ Same goes for **investor flight from coal industry across geographies**
Investment industry level	Growth in investment market enabling attractive exits	▪ Strong **trend towards climate change aware** investing across asset classes ▪ Growth in demand for such assets expected to **drive future transaction multiples**	▪ Since 2015, impact fund assets raised or currently being raised **have grown 154%, to $28 billion**
Investment industry level	Ease to attract GPs and reputational upside	▪ ESG-friendly strategies **likely to be seen positively in investment community** ▪ Thus, supply side upside in such markets	▪ With millennials caring about climate change, **GPs will become more interested in this investment space** ▪ There is a **strong reputational upside** for the PE firm itself and its GPs

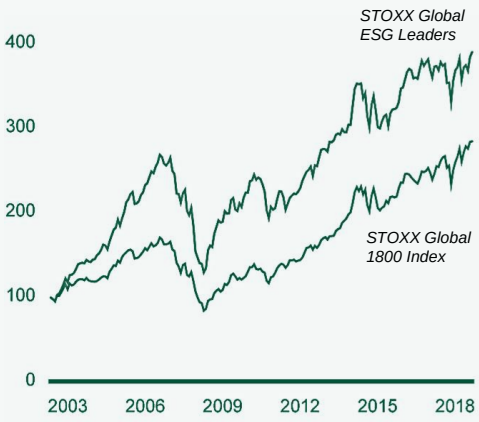
Source: Bain Global Private Equity Report 2020; Nielsen; Morgan Stanley

Increasing evidence showing that ESG-focus can strengthen financial returns

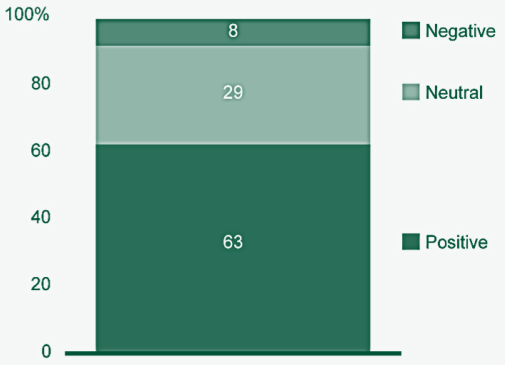
Increasing evidence ESG investing can strengthen financial returns

- ***65% of sustainable funds rank in the top half*** of their respective category (Bain, 2020)
- ESG-focused funds have ***at least comparable performance*** to their non-ESG focused peers between 2014 and 2018 (Morgan Stanley, 2019)
- **Investors are increasingly convinced that ESG investing can pay off** by
  - boosting returns
  - increasing alpha
  - mitigating risk (RBC, 2018)

STOXX index performance
(indexed to 31st Jan 2003)



Results of meta-studies on link between ESG and financial performance
(by type of relationship)



Sources: SNCB (2019), Bain (2020), DWS and University of Hamburg 'ESG and Financial performance evidence from More than 2,000 empirical studies', 2015; STOXX, 2019

Early insights in PE space – data not conclusive, but early signs of positive-financial-impact trend are noticeable

PE data still inconclusive ...

- Given the nascent stage of ESG investing in PE/VC evidence is still inconclusive, although there are positive signals
- RBC study showed LPs are increasingly convinced that ESG investing can increase returns
- 2019 Global Impact Investing Network (GIIN) indicated that impact funds seeking market rate performance realised returns of greater than 16% since inception
- Cambridge Associates (CA) study of indicated returns of ~80 impact investment funds lagged their emerging market PE/VC index by 2-6% across any given time period

... but fund raising continues

A strong indication of success is the ability of individual ESG funds to progress to round 2 fund raising

LeapFrog closed its third fund at $700M, $100M oversubscribed

Bain Capital Double Impact is on target to raise $600M more for a second portfolio

TPG's Rise Fund II is targeting $2.5B, with $1.7B secured as of late 2019

Source: Bain Global Private Equity Report 2020; STOXX; Global Impact Investing Network; Cambridge Associates

Section I

Chapter 3

Emerging successful investment theses

Analysis of ESG-funds shows emerging successful investment theses; such funds incorporate common good practices

	Key arguments	Details
a	**Overview of climate change investing landscape**	▪ **Over 50 funds analysed in detail** with information taken from various databases (Pitchbook, Impact Assets, Crunchbase, Websites, etc.) – core insights: – **Average AUM at around USD 200m**, with the average fund manager tenor of just over 13 years – Most funds invest at **Seed to Series C stages** and most are **headquartered in US/ Canada, though investees are mostly in emerging countries** – The ESG tackled by the largest number of funds in the sample is "**Decent Work & Economic Growth**", ”**Climate Action**” comes third – Distinct structure, **with smaller, often foundation-supported funds on the one and larger funds with diversified LP base** on the other side (also see chapter 5)
b	**Archetypical investment theses**	▪ **Investors pursue different investment models to weigh importance of and achieve impact goals**, with the spectrum as broad as the investing universe ▪ **Three key theses prevail in the industry: Targeted, Rating and Monetization Frameworks** – achieving "impact" however remains more of an art than a science, with no industry-wide accepted measurement framework
c	**Detailed fund analyses**	▪ An in-depth analysis of the investment thesis of several funds showed **three important good practices** – well-run funds are: – **Designed for impact:** Clear reference to the impact goal (and ESG) in the investment thesis – **Specified product, stage and geography:** Focus for investments, beyond mere impact commitment (e.g., "Climate Change") – **Committed to financial returns:** Strong acknowledgement of the importance of financial success ▪ We have conducted an in-depth analysis of five funds **showcasing well-working set-ups** across the diverse spectrum of active firms

3a

Methodology: To better understand the ESG investing space, we completed a detailed listing of >50 funds

Our approach

- **Over 50 funds analyses in detail,** with information taken from **various databases** (Pitchbook, Impact Assets, Crunchbase, Websites, etc.)
- Database **focused on Venture Space** rather than Private Equity to make it most relevant to BDI
- **Key information included:** Style, Years of Operations, AUM, Active Investments, LTM Investments (as of Q1 2020), Median Round, Main LP Category, Example LPs, Investment Thesis, Primary UN ESG and Climate Change Focus
- Easy reference and search depending required outcome and focus (investment, geography, etc.)

Impression of output

Proprietary excel database of 50+ impact funds as basis for analysis

#	Fund Name	HQ	Style	Years of operation	AUM	Active Investments	LTM Investments	Median Round	Main LP Category	Other LPs	Examples
1	361 Infrastructure Partners	US	Seed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.
2	Accion	US	Seed / Series A-C	1961	66	113	14	3.9	Foundations	FoF, Gov, IFI	Ford Foundation, Heifer, ImpactAssets, IFC, Sagamore Investors, US Gov
3	Adjuvant Capital	US	Seed / Series A-D	2012	202	5	5	20.0	Foundations		Gates Foundation
4	Advance Global Capital	UK	Seed	2012	n.a.	n.a.	n.a.	n.a.	Foundations		Access Ventures
5	Aiim Partners	US	Seed / Series A	2018	100	3	2	4.6	n.a.		n.a.
6	Alante Capital	US	Seed / Series A	2016	30	2	1	8.0	n.a.		n.a.
7	Aqua - Spark	Netherlands	Seed / Series A	2013	135	22	3	4.1	Foundations	HNWIs	ImpactAssets, Stichting DOEN, Rancilio Cube
8	Arborview Capital	US	Series A-B	2008	30	7	1	6.1	Foundations		ImpactAssets, ARB
9	Bamboo Capital Partners	Switzerland	Series A-D	2007	320	41	3	5.0	Diversified	SWFs, Gov, IFI,	Aabar, EU, IFAD, TIAA, AXA
10	Better Ventures	US	Series A-B	2010	57	31	8	1.8	Foundations	HNWIs, AMs	KL Felicitas Foundation, Abacus Wealth, Treehouse Investments, Prudenti
11	Calvert Impact Capital	US	LP / Co-Investments	1988	125	n.a.	n.a.	n.a.	LP themselves		non for profit foundation
12	Capital Impact Partners	US	Venture Debt	1982	30	n.a.	n.a.	n.a.	Foundations		California Endowment, Kresge Foundation
13	Capria Ventures LLC	US	Series A-B	2015	100	4	1	8.6	Foundations	HNWIs, Ams, IFI	Vulcan Capital, Ford Foundation, Omidyar Network, IFC, Bill Gates, Sorens
14	Circulate Capital	Singapore	Venture Debt	2018	106	n.a.	n.a.	n.a.	CVCs		Pepsi, P&G, Dow, Danone
16	Community Investment Management LLC	US	Venture Debt	2012	n.a.	n.a.	n.a.	n.a.	HNWIs		Anna-Marie Wasche
17	DBL Partners	US	Series A-E	2003	554	29	4	22.0	Pension Funds / Insurance Companie		Calpers, 3M, Edison, Califronia Endowment

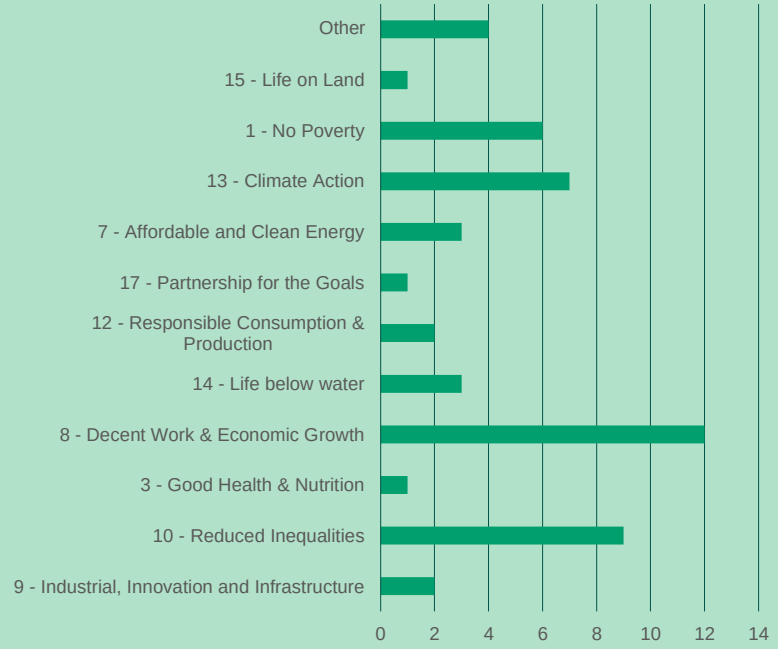
Avg. AUM in ESG investing at ~$200m with two 'clusters': smaller, foundation-backed and larger with diverse LPs

Highlights from fund analysis

- **Average AUM is at around USD 200m**, with actual values ranging **from 3 million to USD 1.44bn**
- Median fund **manager incorporation year is 2010,** with average fund manager **experience of around 13 years**
- Funds tackle investments from **Seed to Private Equity stage**, though the vast **majority invest at Series A and after**, looking for a (somewhat) viable business model
- **"13 - Climate Action" is the third most-common SDG** funds are focusing their investment on (see chart for details)
- Most funds have **over 25 investors**, with foundations being the main type of investor
- The **larger fund managers** (LeapFrog, North Sky, SEAF, etc.) have a **varied investor base**, consisting also of **IFIs, Pension Funds, Insurance companies and other Asset managers**

Details in chapter 5

Number of funds with particular SDG as main focus



SDG goals = UN-set 17 Sustainable Development Goals across all ESG topics
Source: Based on database built by project team (see previous page)

Investment models and commitment to impact vs. financial return differ

	Traditional investor	ESG risk mitigator	ESG opportunity seeker	Impact investor	
Sources of value	Financial only	Financial first; social and environmental considered		Both financial, social and environmental impact	Social and environmental first
Sourcing approach to ESG assets	Passive	Focus on screening out noncompliant assets or sectors	Look for assets in sectors with positive ESG impact (alongside others)	Look for assets only in sectors with positive ESG impact	
Investment approach	No specific investment fund		Thematic fund	Dedicated impact fund	
Involvement on ESG during ownership	None	Focus on risks and divest from certain sectors	Push for impact	Actively involved, such as capability building	
ESG impact measurement	None	Limited, usually includes some KPIs focused on risks	Track some ESG KPIs	Have tailored performance indicators to measure ESG impact in addition to financial returns	

Financial considerations ← → Social/ environmental considerations

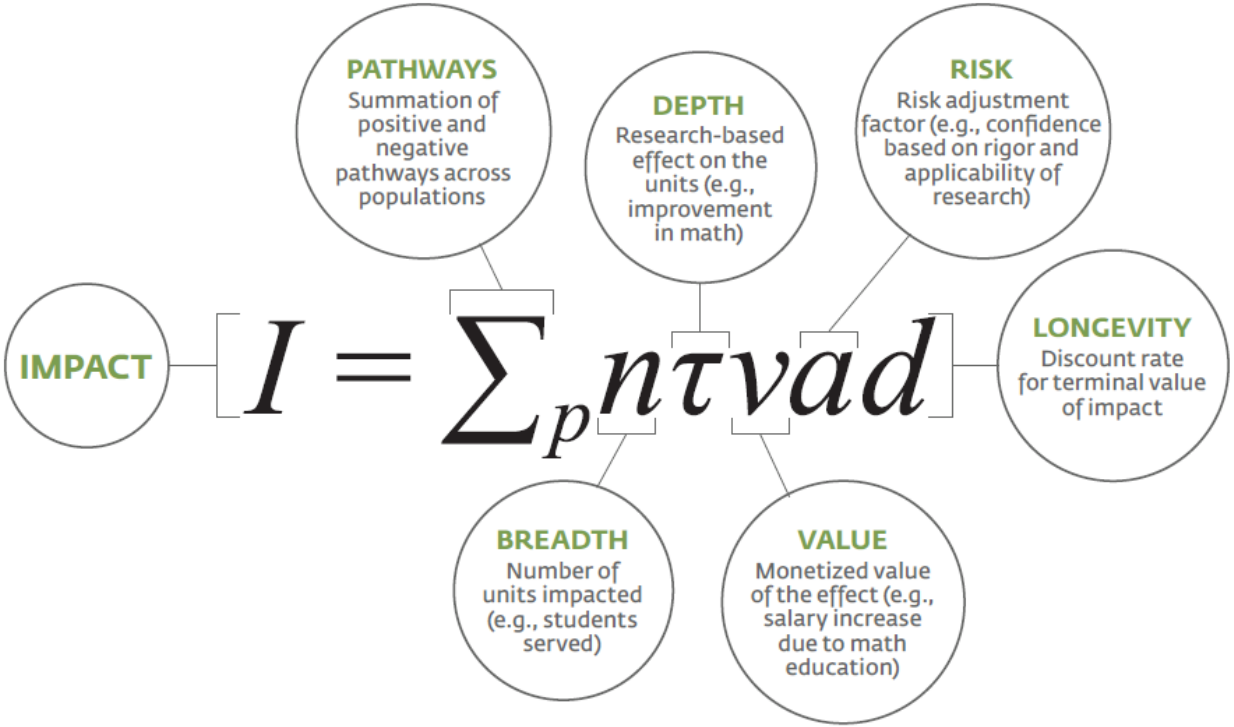
Sources: Bain & Company

Accordingly, there is a variety of impact investing theses and frameworks varying across investors

	Targeted Framework	Rating Framework	Monetization framework
Impact Thesis	• Theses and theories of change are based on global needs and gaps in the market	• Thesis based on a logic model that links a company's products/services to ESG related outcomes	• Investment objectives at the fund and sector level, accompanied by a specific impact thesis for each investment
Impact Evidence	• Funds leverage external evidence and research to connect their theories of change to the ultimate impact they seek	• A core feature of each thesis is understanding the evidence that links outputs to outcomes	• Approach heavily grounded in academic research. Each impact pathway articulated in the investment thesis is backed up by a rigorous study that translate outputs to (monetary) outcomes
Impact Assessment & Monitoring	• KPIs are collected from businesses on a quarterly basis. These are a combination of standard KPIs, supplemented with company-specific KPIs that are deemed critical to portfolio management • Consumer insights data are collected based on the needs of the company	• Impact based on a rating of expected outcomes related to the ESGs and the five dimensions of impact (as defined by the IMP) • The fund monitors impact throughout the ownership period by using three to five metrics agreed upon with the company - reported annually	• Impact assessment based on business indicators related to the social/environmental outcomes being targeted, combined with an economic valuation of those outcomes • KPIs that are Chapter of the calculation are reported and monitored quarterly. Calculations are updated on an annual basis
Case studies	LEAPFROG INVESTMENTS	BCP BAMBOO CAPITAL PARTNERS	PG Impact INVESTMENTS KKR Global Impact THE RISE FUND

Sources: IFC, Company Research

However, to remember: Quantifying impact is more an art than a science



Sources: Bain & Company

Learnings and practical implications from identified funds addressing climate change in SE Asia*

Detailed fund analysis

aiim
SARONA
responsAbility
BCP BAMBOO CAPITAL PARTNERS
North Sky CAPITAL
encourage capital
ALANTE CAPITAL
BETTER VENTURES
FullCycle
CIRCULATE CAPITAL
SEAF
Prime Impact Fund

Observed good practices

Designed for impact

- The investment thesis make **reference to the impact to be instilled**
  - If a **certain ESG** or theme is pursued (e.g climate change), this is clearly stated (but not too narrow, e.g. climate mitigation or climate adaptation)
  - If several ESGs or themes are tackled, **a more general statement is made**

Specified product, stage and geography

- The **investment thesis will**, in most cases, make **reference to the overall category of products** the fund will invest in – seed, growth or more "senior" equity and/ or debt, and at **what stage** in the companies' evolution (start-up, early, growth)
- **Oftentimes the geographies are fairly broad** so as to allow a more flexible investment mandate
- Were certain **narrower geographies are targeted**, this is also mentioned in the investment thesis – Africa, SE Asia, South America

Committed to financial returns

- Strong **financial performance is expected** and usually **linked to "quantitative" effects in the impact dimension**
- Commonly **referred-to goals are**: "Outsized returns", "attractive financial returns", "big profits", "massive potential for financial returns", "financial outperformance", "superior returns", "strong financial returns", "targeted financial returns"

* Main or secondary impact theme/ geography

Focused investment thesis: AIIM Partners

"Our investments address climate change through the lens of oceans and their interdependencies with land, air, and energy systems."

Investment thesis: aiim invests in technology-enabled solutions addressing climate change and providing quality jobs in a carbon constrained economy, with a focus on oceans. We make significant investments in differentiated, market leading technologies with strong teams that we believe have the potential for generating outsized impact and returns.

AUM: USD 25-50m

Financial returns: The portfolio is up 1.8x based on investment rounds to date, 44x in follow-on capital.

Environmental returns: 500MT of GHG reduction potential, 175,000 tons per year of seafood protection potential, 2,400 tons of plastic replacement per year.

During DD, AiiM uses a Balanced Scorecard approach to evaluate companies on both financial and impact metrics. Impact is tracked and reported to investors, with third party validation of measured metrics: GIIRS-rated fund, GRI reporting, signatories to UNPRI.

How We're Different

A Better Investment Model

We provide milestones-based, long duration capital and hands-on technical assistance to build high impact companies that help create a healthy ecosystem.

We Focus On The "Missing Middle'

We invest in the 'missing middle', where capital is scarce for innovative companies disrupting big markets, to bridge companies from prototype to scale.

A Proven Track Record

Our team has combined 160 years of experience in funding, ocean health, and building innovative, profitable businesses that have improved over 3 million lives and attracted over 25 times initial investment in follow-on capital. The team's portfolio strategy has yielded top quartile performance while benefiting 3 million people worldwide. Women founders and CEOs form 64% of the AiiM Partners Fund assets; ethnic minority founders and CEOs, 59%.

Sources: https://www.impactassets.org/ia50_new/fund.php?id=a012R00000tVbidQAC ; https://www.aiimpartners.com/

Top **impact "value-creation" & tracking**: Bamboo Capital

"We find game-changing businesses. We apply geographical and sector expertise. We deliver financial and social returns."

BCP

Investment thesis: Bamboo Capital Partners' mission is to deliver attractive financial and social returns to their investors by investing in companies improving livelihood and providing access to goods and services for low and middle-income communities in emerging markets.

AUM: > USD 100m

Financial returns: Since inception BCP has delivered an IRR of 21.9% in local currency.

Social Impact: helped create 40,000 jobs and improved 152 million lives.

To capture impact, BCP uses a logical framework approach, **establishing an Impact Map**, for each investee, to monitor the scale and reach of the products. This helps them assess the investee's current and potential social impact before investing and monitor its performance vs Impact Map on a quarterly basis. Impact is reported to investors and public, with third party validation of measured metrics: GIIRS- rated fund, GRI reporting, signatories to UNPRI.

Our impact management process throughout the investment lifecycle:

Pre-Investment:
During the pre-investment phase, we check prospective investments against the Bamboo social impact screening criteria and conduct in-house and on-site analyses to provide an assessment of the company's expected impact.

Investment: Impact Framework
During the negotiation of investment terms the Bamboo Team and the investee define and agree upon an Impact Framework. The Impact Framework maps the impact of the company from its mission and social goals to the selected output indicators on which the investee will report regularly. It also defines the assumptions made. This process may lead to include elements in the shareholder agreement related to mission continuity, the observance of certain activities and thresholds for certain indicators.

Post-Investment: Ongoing impact monitoring
Investees report on the selected indicators. We monitor data collected and review assumptions based on new evidence. Through this monitoring process we seek to capture and assess information that we believe will support performance improvements. Also, as an equity investor, Bamboo sits on the board of its investees overseeing and contributing to social performance and impact issues alongside financial matters.

Divestment: Responsible exist
We seek to divest to trustworthy investors who will allow and enable the organizations to pursue their missions and visions. We also aim for organized, simple, fair and transparent divestment processes.

Sources: https://www.impactassets.org/ia50_new/fund.php?id=a012R00000tVaokQAC; http://www.bamboocp.com/

Great **impact assessment framework**: Vital Capital (1/2)

"Improved economic, personal and social well-being for low and middle-income communities in Sub-Saharan Africa."

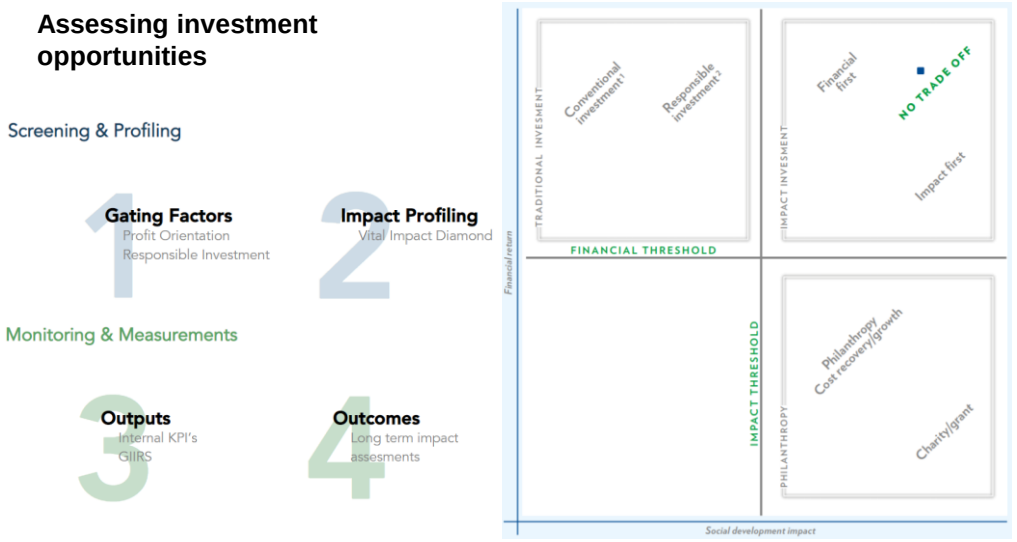
Investment thesis: Vital Capital investments are guided by the conviction that creating positive, sustainable impact can go hand-in-hand with delivering market-rate, risk-adjusted returns for their investors. Impact is integral to what they do, from deciding where to invest to helping them refine our approach to future investments.

AUM: USD 350m

Financial returns: N/A

Social Impact: 5m annually receive essential products or services via investees; USD 740 in local purchases made by investees

Assessing investment opportunities

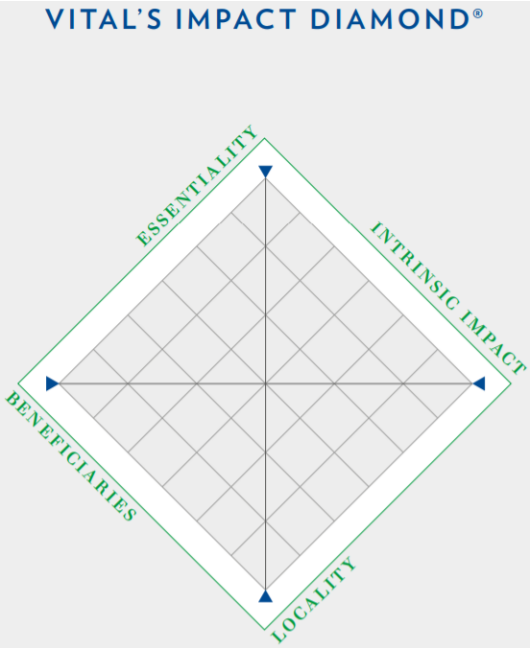


Investment process

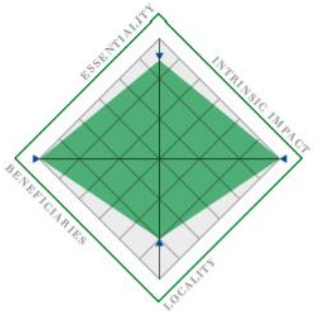
Sources: https://www.vital-capital.com/

Great **impact assessment framework**: Vital Capital (2/2)

Vital's Impact Diamond: Focal Energy



Focal Energy



GIIRS OVERALL RATING	
MARKET & SECTOR	96
MARKET ONLY	101
FOCAL ENERGY	121

GOLD GIIRS IMPACT MEDAL

THE NEED

Energy shortage is an endemic problem across emerging markets. Current electricity sources in developing nations include a very high proportion of diesel-run generators which are costly to operate, inefficient and highly polluting. There is a great need to shift the balance, improving access to energy via sustainable technologies.

THE SOLUTION

Focal Energy develops, operates and manages renewable energy based power-plants, including solar (PV), biomass (farming waste) and small-scale hydro (run-of-the-river).

COMPANY OUTLINE

Focal's initial concentration is on the Indian market, with 127 MW under management, comprising 27 MW operating assets and 60 MW under development. In its operations in India, Focal has developed strong expertise in low-cost renewable energy generation, a skill set we view as highly valuable for application across other emerging markets.

SECTOR	CLEAN ENERGY
GEOGRAPHY (COUNTRY)	INDIA
COMMITMENT AMOUNT	US $14.2M
DATE OF IC APPROVAL	10 SEPTEMBER 2012
OWNERSHIP	MINORITY
OWNERSHIP TYPE	EQUITY
CONTROL	YES
STAGE/PROGRESS	BEGAN Q1 2015
TARGET IRR AT UNDERWRITING	~20%

112,206 tonnes of greenhouse gas offset/mitigated

77.5m KWh produced in 2014

$1.35m annual biowaste purchases from smallholder farmers in 2014

83,000 individuals estimated to gain access to energy from a renewable source

Up to 3,000 farmers sell agro-waste to Focal Energy

Sources: https://www.vital-capital.com/

Great **all-round performance**: LeapFrog Investments

"LeapFrog Breaks Impact Investing Record, with $700M Emerging Markets Fund" BusinessWire, May 2019

LEAPFROG INVESTMENTS

Investment thesis: LeapFrog invests growth equity in high-growth, purpose-driven and emerging consumer-focused financial services and healthcare businesses in fast-growing markets in Asia and Africa, leveraging its unique hands-on value-add approach to support businesses in achieving rapid revenue growth, top-tier financial returns and large-scale social impact.

AUM: >USD 1.5bn

Financial returns: N/A

Social Impact: LeapFrog's companies provide basic services (healthcare/ financial services) to more than 168m people in 35 countries, of which 136m in emerging countries. LeapFrog has publicly announced its aim to **deliver essential services to 1 billion people by 2030.**

"Prudential's lead investment in LeapFrog's latest fund underscores our conviction in the power of capital-based solutions to solve the financial, social, environmental, and economic challenges of our changing world," said **Charles Lowrey, Chairman and Chief Executive Officer of Prudential Financial, Inc**. "We are pleased to partner with LeapFrog to realize the enormous potential for inclusive growth and shared prosperity in emerging Asia and Africa."

LeapFrog's third fund recently surged past its $600 million target to reach a final close of $743 million. Investors in the new fund included leading insurers such as Prudential Financial, AXA XL, QBE, and Zurich; pensions and asset managers such as TIAA-Nuveen and Partners Group Impact; development finance institutions such as DEG, EIB, IFC, Proparco and OPIC; and family offices and foundations including the Ford Foundation and Rockefeller Foundation.

Industry leader verified as best-in-class across all 9 Operating Principles for Impact Management

September 19, 2019: LeapFrog Investments today became **the first impact investor** globally to announce the results of an independent audit of its impact against the **Operating Principles for Impact Management**, new industry standards developed by the IFC in consultation with leading impact investors and other stakeholders. Launched in April, the Principles provide common disciplines for management of investments for impact, helping to ensure authenticity and high standards of measurement. In the independent audit by Tideline, a leading US impact advisory consultancy, LeapFrog was assessed as an "Exemplification of industry best practice," with its Impact Measurement and Management (IMM) system achieving "an advanced level of alignment across the board for all nine of the Principles." Tideline concluded that "LeapFrog's IMM comprehensively addresses and exceeds the implementation guidance provided by the IFC and has been refined and strengthened over the course of several funds."

"LeapFrog's team is widely recognised as having opened up a new frontier … for alternative investing"

Former President Bill Clinton

"Andy and Leapfrog have been trailblazers in helping to create the industry known as impact investing."

CEO, Emerging Markets Private Equity Association

Sources: https://www.businesswire.com/news/home/20190509006034/en/LeapFrog-Breaks-Impact-Investing-Record-700M-Emerging ; https://www.leapfroginvest.com/

Great **impact investing platform**: TPG The Rise Fund (1/3)

Rise is the first global, scale private equity platform directing institutional capital to businesses that measurably address pressing societal challenges

Rise Core Pillars

Complete Returns

IRR & IMPACT

*Competitive financial returns **and** measurable social or environmental outcomes*

Leverage Platform Experience

TPG GROWTH

ELEVAR EQUITY

Rise Founders' Board
Societal Leadership

Rise Senior Advisors
Sector-Specific Expertise

THE RISE FUND

Evidence-Based Assessment

Develop and utilize rigorous impact multiple of money (IMM) methodology

The Bridgespan Group

KPMG

Sector-Based Approach

Identify business models that quantifiably address the societal challenges identified by the UN SDGs

SUSTAINABLE DEVELOPMENT GOALS

TPG Growth: $13.7 billion AUM differentiated global growth investment platform

Apply Sector Investing Experience Toward Societal Challenges

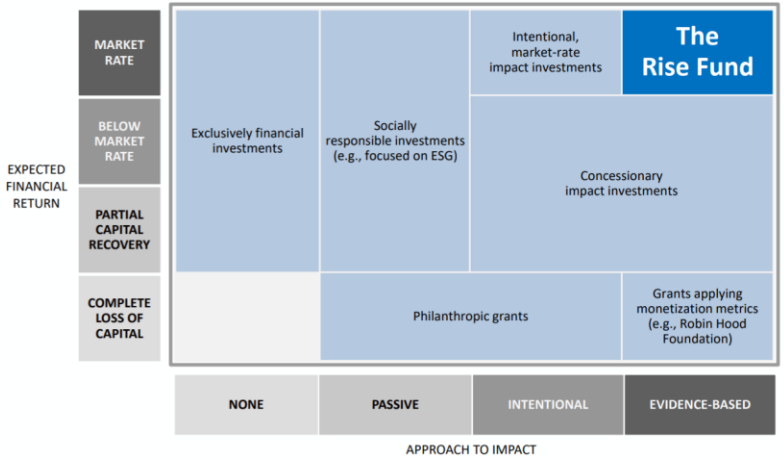
	Targeted Outputs	Addressable SDGs
Education	• Increased attendance • Increased academic performance • Increased academic completion	1, 4, 5, 8, 10
Energy	• Increased households with reliable access • Increased % of clean energy • Increased earnings for households / individuals	7, 11, 12, 13
Financial Services	• Access to financial services • Improved financial resiliency • Increased firm / household income	1, 5, 8, 10
Food & Agriculture	• Higher crop yields; lower crop loss • Increased farmer margin and income stability • Improved access to nutritious food	1, 2, 3, 9, 12, 13
Growth Infrastructure	• Increased affordable housing • More efficient inputs and outputs • Increased earnings for households / individuals	1, 3, 6, 8, 9, 11, 12
Healthcare	• Increased rate of care • Improved health status • Lower death rates	1, 3, 5, 8, 10
Technology	• Increased digital connectivity • Increased usage of technology • Improved business productivity	1, 3, 4, 8, 9, 12, 15

Sector vision aligned with the UN's Sustainable Development Goals

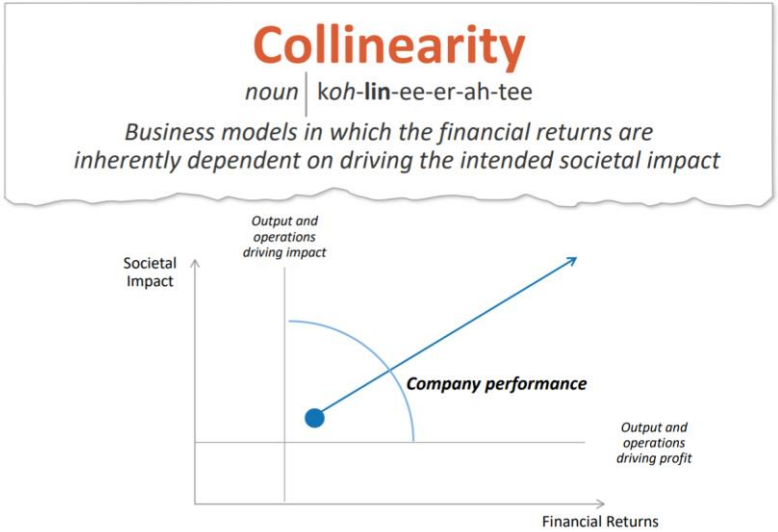
Great **impact investing platform**: TPG The Rise Fund (2/3)

Rise is the first global, scale private equity platform directing institutional capital to businesses that measurably address pressing societal challenges

Investing for Societal and Financial Returns in Tandem

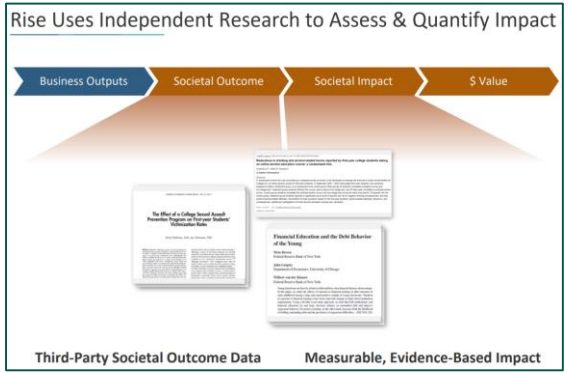


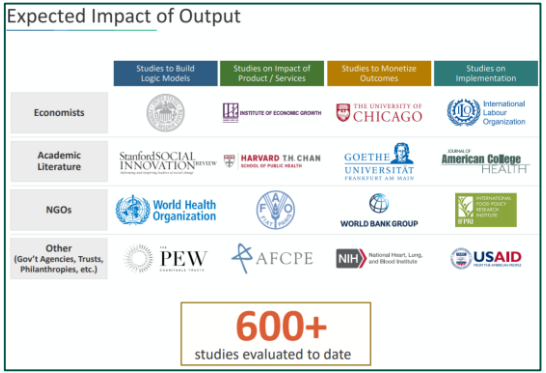
Collinearity

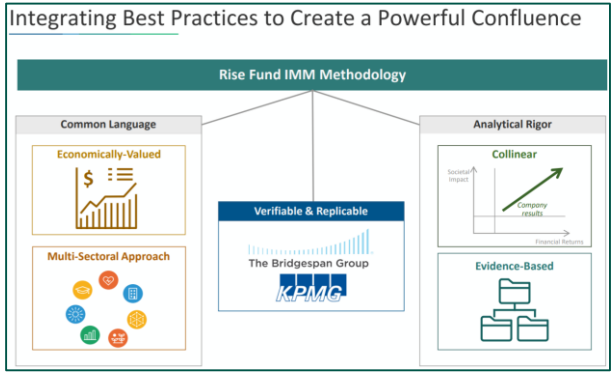


Great **impact investing platform**: TPG The Rise Fund (3/3)

Rise is the first global, scale private equity platform directing institutional capital to businesses that measurably address pressing societal challenges







Opportunities Ahead for Impact Investing – TPG Rise Methodology

1. **Attract capital** to address our greatest societal challenges
2. **Direct capital** to more effectively deliver social and environmental impact
3. **Drive accountability** for the impact we wish to generate in the world

KKR

PE moves towards impact: KKR Global Impact Fund (1/3)

KKR partners with businesses that create value by providing commercial solutions or key challenges facing the world

Overview of KKR Global Impact

We are partnering with businesses that create value by providing commercial solutions to key challenges facing the world

Lower Middle Market Private Equity Strategy

Focused on Americas, Europe and Asia

Targeting Private Equity-Like Returns

Targeting high teens net returns after fees and carried interest[1]

Investment Size

Focused on opportunities requiring less than $100 million of equity investment

Leverage Competitive Advantages of KKR

Global team with local country expertise

Differentiated sourcing from across the Firm

Align with Thought Leaders

Industry executives and NGOs across key industry verticals

Pursue Traditional PE Approaches

Change of control acquisitions

Minority partnerships with influence

Industry build-ups

4 Imperatives We Believe We Can Help Drive

4 Imperatives

1. **Mitigating & Adapting to Climate Change**
2. **Harnessing the 4th Industrial Revolution**
3. **Serving Empowered Consumers**
4. **Building for the Future**

KKR

PE moves towards impact: KKR Global Impact Fund (2/3)

KKR partners with businesses that create value by providing commercial solutions or key challenges facing the world

Impact and ESG Measurement and Management

- **Align Commercial Outcomes & Positive Impact**
- **Leverage Tested Frameworks and Lessons Learned**
- **Incentivize Management for Maximum Impact**
- **Third Party Inputs**
- **Optimize Locally Relevant Impacts**
- **Manage the Possible Downsides**
- **Focus on Metrics that Matter**
- **Specific & Credible Reporting**

Portfolio Construction

We intend to manage portfolio construction in partnership with the KKR Global Macro and Asset Allocation team in order to create thoughtful risk exposure

Targeting:

- Private equity-like returns and risks
- +/-20 investments
- Representation across each key sub-sector of focus
- Balanced exposure to developed & developing markets (Americas, Europe, Asia)

15%
targeted concentration limit for any single investment

+ or - 5
key positions of larger size ($75-100 mm); average position size of +/- $50 mm

Up to 20%
to co-invest in larger impact investments within other flagship and/or growth equity strategies

KKR

PE moves towards impact: KKR Global Impact Fund (3/3)

KKR partners with businesses that create value by providing commercial solutions or key challenges facing the world

Example: Creating Value by Rebuilding Aging Infrastructure

Case Study: Bayonne and Middletown

- KKR worked with United Water and the City of Bayonne and Middletown to create the concession model that allocated risks efficiently, creating a solution that met the needs of all constituents
- Enhanced the operating condition of a system that was severely under invested
- Kept control in the hands of the Cities

Sustainable Development Goals[1]

KKR's Differentiated Approach

1. **Exclusive partnership with water utility operator to bring industry leading solutions to the cities of Bayonne, NJ and Middletown, PA**
2. **Sourced management team to deliver differentiated deal flow and execution**
3. **Deployed best in class operating capabilities through strong partnership with United Water to mitigate years of underinvestment**
4. **Align governance and operations with the interests of ratepayers and workers, while incorporating environmental and safety best practices**

Bayonne: Before

Bayonne: After

Example: Creating Value by Engaging Employees

Case Study: Employee Engagement

Since 2011, KKR's Industrials PE team in the Americas has focused on employee engagement as a key driver in building stronger companies by:

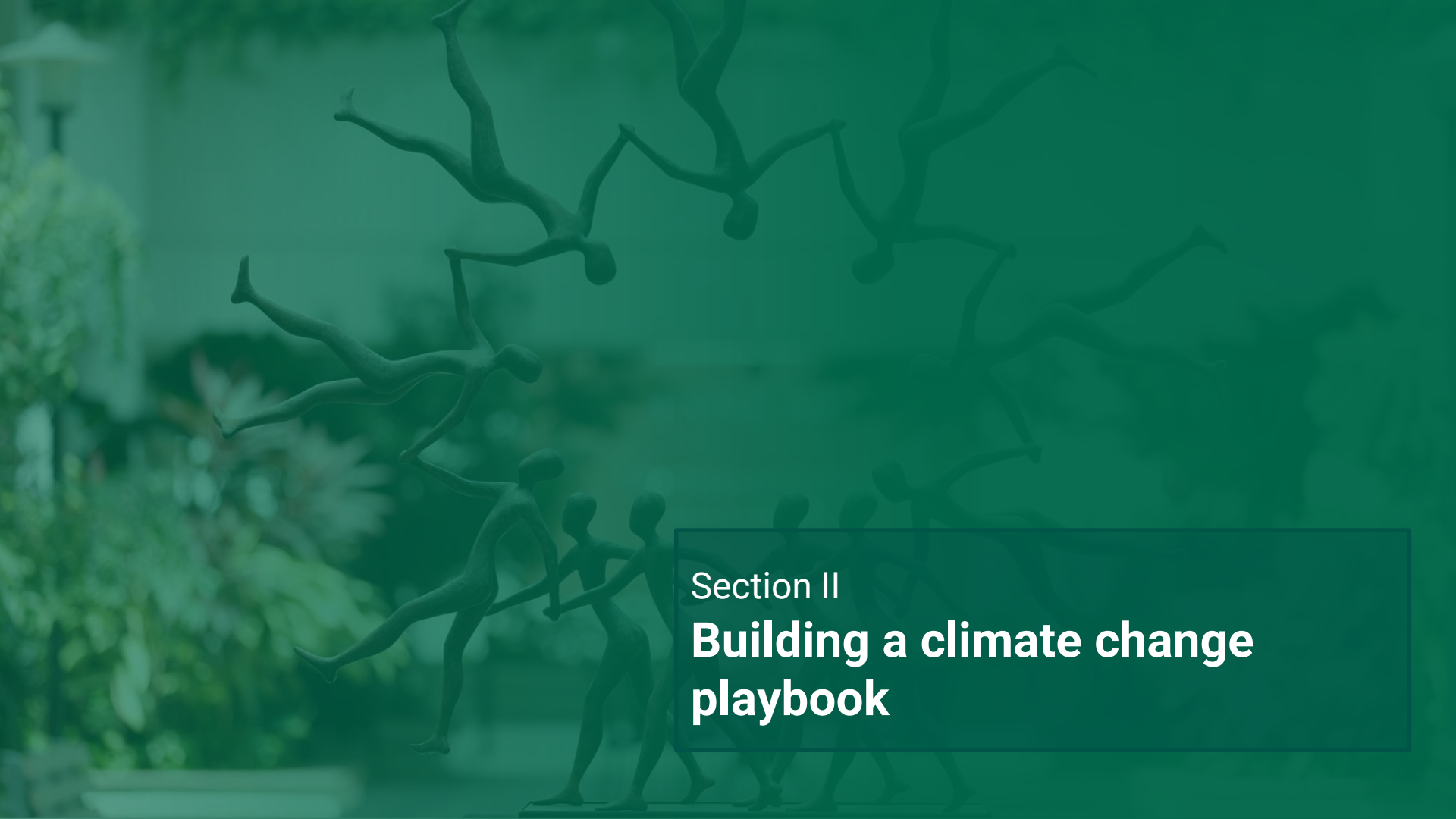
- Seeking to make everyone in the company an owner by granting the opportunity to participate in the equity return potential directly alongside KKR
- Investing in people through safety and functional training programs to support a stronger workforce
- Engaging with the community by forming partnerships with non-profit organizations that may benefit from our companies' products, skills or services and help improve the quality of life of others

KKR's Differentiated Approach

1. **Build stronger companies through employee engagement and ownership**
2. **Implement inclusive management equity program**
3. **Seek to make everyone an owner and aligning incentives to build strong companies**
4. **Demonstrate how everyone in the company can enhance behaviors and drive improved results**

"Through our engagement model, we have seen how the alignment and excitement of broad-based employee ownership can contribute to creating exceptional outcomes."

PETE STAVROS
Member and Head of Industrials, KKR



Section II

Building a climate change playbook

Section II

Chapter 4

Clear focus: Determining an investment thesis

As a first step, GPs should position themselves along the spectrum of pure traditional vs. impact investing

Reading example

	Traditional investor	ESG risk mitigator	ESG opportunity seeker	Impact investor
Sources of value	Financial only	Financial first, social and environmental considered		Both financial, social and environmental impact / Social and environmental first
Sourcing approach to ESG assets	Passive	Focus on screening out noncompliant assets or sectors	Look for assets in sectors with positive ESG impact (alongside others)	Look for assets only in sectors with positive ESG impact
Investment approach	No specific investment fund		Thematic fund	Dedicated impact fund
Involvement on ESG during ownership	None	Focus on risks and divest from certain sectors	Push for impact	Actively involved, such as capability building
ESG impact measurement	None	Limited, usually includes some KPIs focused on risks	Track some ESG KPIs	Have tailored performance indicators to measure ESG impact in addition to financial returns

Financial considerations ← → Social/ environmental considerations

Reading example – 'ESG opportunity seeker' positioning as a strategy to:

- Stay 'ahead of the curve' in SEA, positioning for prevalent global trends towards ESG & impact focus
- Deliver unique positioning in the region to boost fundraising from Millennial investor
- Develop internal capabilities in ESG which will be increasingly sought-after by early-stage companies & investors

While…

- Maintaining strong focus on financial returns aligned to still-prevalent SEA investor priorities

Source: Bain (2020)

As an 'Opportunity seeker', developing a clear investment thesis is key – funnel approach for climate change space

Approach to determine investment focus	Application to investor
a **Identifying attractive segments (verticals, horizontals)** Determine attractive 'spaces to play' applying consistent framework	Exemplary determinants could be ▪ Current industry size ▪ Expected industry growth ▪ Intensity of competition ▪ Opportunity for impact
b **Leveraging unique strengths** Employ assets and capabilities of the buyer in target identification and portfolio management	▪ <Consider investor strengths, derived from previous investments, portfolio management expertise and strategic orientation> ▪ <Think about relevance of investment horizon>
c **Finding the right targets** Specify to-be-targeted business models	▪ <Think about the types of business models you would like to support>

Investment thesis: reading example

<Summarize insights into a concise investment thesis>

Pursue asset-light businesses in:
- **Retail**
- **Software**

... that deliver positive climate impact through:
- **Awareness,**
- and **Mitigation.**

Illustration of approach – needs tailoring to specific GP situation

Investment heatmap can help identify most attractive industries for climate-change-focused investment

Low attractiveness (see footnote)

High attractiveness (see footnote)

'Verticals' – investment sectors

Asset light → Asset-heavy

'Horizontals' – Action areas driving climate impact	Education	Other services (incl. HR)	Financial services	Health-care & medical devices	Media & telecom-muni-cation	Tech-nology (Soft- & Hard-ware)	Tourism & leisure	Retail incl. e-com-merce	Delivery & logistics	Transport	Consumer Goods	Water & agri-culture	Energy	Manufac-turing & *industrial goods*	Real Estate
Risk & impact assessment															
Improve awareness															
Drive mitigation															
Promoting collaboration															
Improve resilience															

Sources: Matrix developed by INSEAD 20J team using research from IFC (2019), Bloomberg (2018), RBC Global Asset Mgmt, 2018 Respensible Investing Survey, Bain (2020), HBR (2019), etc.
Note: shading shows attractiveness for climate-change-focused PE&VC investment based on growth and intensity of competitiveness; darker green indicates higher intensity

Illustration of approach – needs tailoring to specific GP situation

Core requirement for successful investment thesis is competitive edge – focus on areas of strength

Industry expertise

Retail expertise with deep knowledge of B2C businesses

Software experience derived from other portfolio businesses

Management capabilities

Marketplace development know-how proven in management of multiple portfolio companies

Commitment to lean management, curated over more than two decades of previous investments

Strategic commitment

Long-term investment horizon compatible with climate investing

Regional understanding and clear commitment demonstrated by investment track record

Illustration of approach – needs tailoring to specific GP situation

Cross-reference attractive areas with your strengths to derive focus for climate change investing

Low attractiveness (see footnote)

High attractiveness (see footnote)

Suggested focus areas based on identified GP strengths

'Verticals' – investment sectors

Asset light → Asset-heavy

'Horizontals' – ESG investment approaches	Education	Other services (incl. HR)	Financial services	Health-care & medical devices	Media & telecom-muni-cation	Tech-nology (Soft- & Hard-ware)	Tourism & leisure	Retail incl. e-com-merce	Delivery & logistics	Transport	Consumer Goods	Water & agri-culture	Energy	Manufac-turing & *industrial goods*	Real Estate
Risk & impact assessment															
Improve awareness															
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Sources: Matrix developed by INSEAD 20J team using research from IFC (2019), Bloomberg (2018), RBC Global Asset Mgmt, 2018 Respensible Investing Survey, Bain (2020), HBR (2019), etc.
Note: shading shows attractiveness for climate-change-focused PE&VC investment based on growth and intensity of competitiveness; darker green indicates higher intensity

Overall, two verticals & tow horizontals are most attractive 'spaces to play'

General approach

Focus on these areas, based on **specific characteristics that drive attractiveness**

Concrete opportunities should be **looked for across these verticals and horizontals**

Recommended verticals

- **Retail & E-commerce** – large climate impact, high-growth sector and complementarity with strengths
- **Technology** – long term climate change play, with opportunities to integrate with government initiatives

Recommended horizontals

- **Awareness** – address 'root cause' of climate change action with consumer awareness; business models need specific scrutiny
- **Resilience** – large medium-term impact, practical approach with potential to move one step ahead leveraging government & MNC activity

Please see exemplary deep dives on next pages for details and business model examples

Illustration of approach – needs tailoring to specific GP situation

Vertical deep dive: Retail incl. e-Commerce

Matrix: Primary focus on 'Fashion' & 'Driving mitigation'

Key
Attractiveness
Low *High*

Segment attractiveness

Size of potential & impact

Large climate change impact

- Fashion industry generates 20% of water waste and 10% carbon emissions globally
- Consumers are forming more sustainable behaviors as their awareness grows

Speed of adoption

Sustainable sector growth

- Driven by fashion giants are responding by raising their sustainability commitments
- E.g. Zara pledges by 2025 to only use organic, sustainable or recycled materials

Relevance & expertise

Strong pre-existing capabilities

- Experienced investor in retail and past success in market place development

Business models to pursue

Sustainable Materials: Leveraging innovative technology to develop alternative more environmentally friendly materials

AlgiKnit, FLOCUS, frumat, MANGOMATERIALS™, ORANGE FIBER, PAPTIC

High-Tech Manufacturing: New manufacturing technology to reduce waste and allow for increased recycling

Teemill, SGTi, NANOTEXTILE, Planet Care

Eco-Friendly Marketplaces: Online marketplaces focusing solely on sustainable fashion catering for increasing consumer demand

mamoq, Style Lend, The RealReal (AUTHENTICATED LUXURY CONSIGNMENT), rated good on you

Recycled Fashion: Technology developed to allow designers to find and create new products with recycled clothing

circular.fashion, Reverse Resources

Sources: UN environmental program; https://luxiders.com/innovations-changing-fashion/

Illustration of approach – needs tailoring to specific GP situation

Horizontal deep dive: Awareness

Matrix: 'Awareness' across industry verticals

Key
Attractiveness
Low *High*

Segment attractiveness

Size of potential & impact

Large climate change impact

- UN sees driving grassroot actions as main lever of improving carbon footprint & climate impact
- Requires shift in behaviours to drive scale and achieve meaningful impact

Speed of adoption

Strong consumer climate sentiment drives growth

- Climate megatrend will substantially push demand
- Questions around monetisation of certain business models revolving only around awareness persist
- Marketplaces which drive collaboration or switch of behaviours (and hence vendors) likely to have higher business viability

Relevance & expertise

Pre-existing capabilities

- Well-positioned to leverage platform and marketplace expertise in helping portfolio businesses monetise and improve on cash flow

Business models to pursue

Personal carbon impact: big data solutions providing tangible overview of a person's impact, monitoring their consumptions and suggesting ways to offset negative effect

offCents, wren (Offset your carbon footprint), JouleBug, greenmeter

Company carbon impact measurement: easy plug-ns for companies to automate their carbon reporting & provide overview of ways to decrease/offset environmental footprint

normative, CARBON GRID PROTOCOL

Energy consumption optimisation: uses smart tech & AI to help consumers improve understanding of energy spent, advise & enable reduction and monetise saved energy

verv, BOXLABS

Carbon-reduction marketplaces: marketplace platforms offering assessment of carbon effect, suggestions on alternative energy solutions & link to best vendors

CHOOSE ENERGY, OTOVO

Sources: https://www.rocketspace.com/corporate-innovation/24-innovative-startups-making-climate-change-impact-in-2019; https://www.cbinsights.com/research/supply-chain-sustainability/ ; https://sifted.eu/articles/minespider-ethical-supply-chain/

Section II

Chapter 5

Attractive partnerships: Understanding the LP landscape

Impact-focused foundations, family offices and syndicates are most common LPs, with traditional institutional investors showing interest

Key findings	Details
Foundations, Family Offices and Syndicates are the most common LPs in impact space	• Large majority of impact focused GPs studied have **at least one Foundation** (e.g. Shell Foundation), HNWI / **Family Office** (e.g. Gates Foundation), **or a Syndicate** pulling together impact investors (e.g. Impact Assets) • **ImpactAssets is a facilitator of direct impact investing** within donor-advised funds, and is the most common "LP" representing 568 impact investment positions • **The overall universe appears to be concentrated,** with same LPs repeated among many GPs
Impact GPs tend to attract impact-focused pockets of capital	• **LP universe mainly comprised by impact-focused investors**, with the names being recognizable brand names in the philanthropy space: Gates, Bush, Dalio, Pritzker or Sorenson family offices and foundations • **Traditional LPs are starting to put aside pockets of capital for impact / ESG / sustainability** positions, e.g. CALPERS' Sustainable Investments (SI) Program or California Endowment (TCE) Program-Related Investments (PRIs) or Mission Related Investments (MRIs)
Larger funds attract a more diverse LP base	• **Larger funds** (e.g. TPG Rise, LeapFrog, KKR, Bain, DBL Partners) **have a more diversified investment base** with traditional LPs such as Pension Funds, Insurance Companies or Sovereign Wealth Funds • Usual LP base is oftentimes **complemented by corporates contributing capital for mission-specific causes** (e.g. Danone, Pepsi and P&G funding Circulate Capital or Caterpillar, SHV Energy and Bekaert funding Emerald Technology Ventures)

At the same time, relatively small circle of familiar names is at the core of impact investors across LP types

Syndicates

Syndicates of private investors are the most common and active LPs among impact funds studies

Foundations & Family offices

Number of Family Offices / HNWIs and corporate foundations target impact investing through their family offices and philanthropic causes

Traditional LPs

Traditional LPs are active in the space, often through impact dedicated pockets of capital

Source: CDC Group 2018

3 observations concerning the LP landscape are important

Size of climate change PE funds

- There are virtually no **minimum size requirements** for funds, with even smaller ones attracting capital from prominent LPs
- At the same time, we do see **somewhat of an emerging class of funds with larger AUM,** esp. by larger PE houses

Structure and focus of fundraising process

- Fundraising takes place in a **more unstructured manner** and shows no clear emerging trends (beyond general growth)
- LPs **care most about the track record of funds**, both in terms of financial returns and achieved impact
- Generally, **first-time funds have a hard** time in attracting capital – this appears to be **even more true in climate-change investing**

Composition of LP basis

- Most investments have a **strong anchor LP** driving the fundraising process
- Such anchor LPs are **oftentimes syndicates of investors** working together, with ImpactAssets a prominent on
- The **LP basis per fund tends to be less diversified** than for traditional investments, and with some focus on impact-specific pockets of capital

However, as described previously, we see a **growing interest and influx of various 'traditional investors'** (incl. some MNCs, see chapter 6) into this space, indicating a certain 'maturing' in climate change investing

Source: Team analysis based on developed climate change fund list and press research

Section II

Chapter 6

Consistent commitment: Operationalizing climate change investment

One key step for ensuring scalability is to embed ESG-action along fund value chain, beyond deal sourcing

Detailed on next pages

A Fundraising

- Identify and target ESG- and specifically **climate-change focused investors**
- **Communicate attractive ESG** levers & proposition throughout value-chain
- **Tailor investment allocation** - employ fund structures or terms ensuring that LPs concerned with particular ESG issues are directed to investments aligned with their views *(when scale of fund achieved)*

B Target identification & investment analyses

- Incorporate climate-focused **ESG criteria** into target identification, investment analysis and decision-making processes
- Evaluate **historical impact of company** along with future potential
- Potentially appoint **third party rating agency** to evaluate and benchmark ESG performance at point of acquisition

Growth and performance

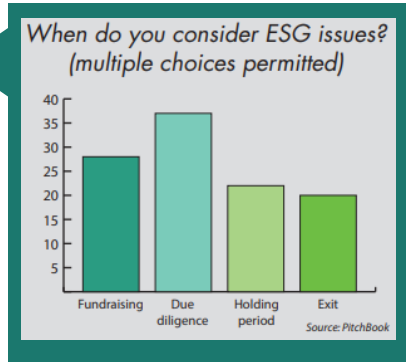
- Be **active owners** & incorporate ESG into ownership policies
- Seek appropriate **disclosure on ESG progress**, initiatives & impact by portfolio companies
- Establish norms and **facilitate learning** across portfolio companies where appropriate
- Work together with portfolio companies to guide **effective implementation** of ESG goals

C Monitoring & reporting

- Incorporate **2-3 main ESG-related KPIs** for monitoring and reporting of portfolio companies in the VC fund
- **Communicate ESG performance** progress to LPs (together with financial & operational milestones)

D Exit

- Design mechanism for **measuring cumulative ESG impact**, as well as financial performance
- Governance structure to ensure **lasting impact**



Source: The evolution of ESG investment in Asia, by Mark Uhrynuk, Alex Burdulia and Norah Mugambi, The Asset ESG Forum

ESG fundraising; presents both opportunities for improved LP engagement, and challenges

Opportunities

- First criteria for LPs will be to understand whether GP management are '**good corporate citizens**'
- Investors increasingly seek opportunities with both impact and financial returns, meaning **a climate focused strategy will stand out**
- ESG provides basis and structure for **quality, in-depth engagement** with LPs beyond financial return and market
- Formulating a robust climate-focused investment process can be **a unique point of advantage** to attract investors

Challenges

- Weakness or inconsistency in presentation of ESG credentials can be a red flag for LPs; strategy and **pitch must be robust**
- LPs will be looking to see if **ESG is embedded in GP investment processes**, alternatively if it is just a marketing tool
- Although a climate change strategy is intended to be focused, introducing ESG more broadly **may raise LP questions on other topics** e.g. gender diversity
- Education and engagement with LPs is likely to be **more resource-intensive** in fundraising stage, especially in Asia where this concept is less mainstream

Global taxonomy of climate change investing frameworks, evaluation and reporting systems is growing and maturing

	Authority	Description	Users
Principles for Responsible Investing	United Nations	• International network of investors working together to put six targeted principles of ESG investing into practice • Based on fundamentals of ESG integration	Asset owners, investment managers & institutional investors *Deep-dive on selected approaches on next slide*
Taskforce for Carbon Disclosure	Financial Stability Board	• Voluntary climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders • Wholistic consideration of physical, liability and transition risks associated with climate change	Companies, banks, investors
Morningstar Globe Ratings	Morningstar	• Sustainability Rating used to help investors understand the vulnerability of their investment portfolios to environmental, social, and governance (ESG) factors	Investors in public markets, unit trusts, ETFs
European Taxomony	European Union	• Classification system for sustainable activities and a framework to facilitate sustainable investment. Provides screening criteria for activities that can make a substantial contribution to climate change mitigation or adaptation	Governments investors, companies
Climate Bonds Standard	Climate Bonds Initiative	• Standardised set of verification criteria for green bonds • Tool allowing investors and intermediaries to assess the environmental integrity of bonds	Banks, lenders

Sources: Climate bonds initiative, UNPRI, FSB, Morgan Stanley Sustainable Finance Briefing Feb 2020

There are two approaches to incorporating climate change indicators in target assessment

Recommended option

Incorporating climate-impact in company valuation itself

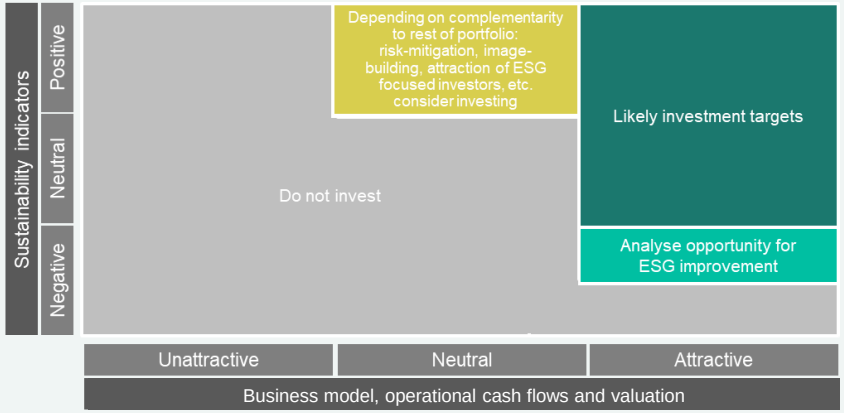
Approach

- Adjustments to projected EBITDA/ operating cash flows
- Less pronounced down-side scenario due to climate-related risk mitigation
- Consider lower required multiple for climate-impact investment
- Incorporate sector-specific measures of efficiency in climate impact in valuations
- Adjust valuation to reflect expected ability of company to create and sustain lasting impact

Pros & Cons

- ⊕ More flexible approach
- ⊕ More explicit prioritisation of climate impact
- ⊖ Potential loss of focus on true value growth levers
- ⊖ Risk of confusing LPs with investment approach

Considering climate change indicators as a separate criteria to value creation



- ⊕ Straightforward and easy-to-justify approach
- ⊕ Maintains strong focus on fundamental financial valuation, with sustainability as separate criterion
- ⊕ Easy to incorporate in existing processes & practices
- ⊖ Will require robust methodology to avoid challenges of ‘greenwashing’

Source: UN Principles For Responsible Investment - ESG Integration: How Are Social Issues Influencing Investment Decisions?

Example method to assessment of climate-impact

Example focuses on use of carbon impact as key metric

Example: MSCI use of TFCD evaluation ratios for investment portfolio companies

Identify and present carbon emissions trend, to help investment decision-making and portfolio management:

- Absolute terms
- Against benchmarks (e.g. sector/ region specific)

Shortcomings include:

- Will not be suitable to all investments; for example these metrics will not directly address 'awareness'

	Carbon Emissions tons CO2e / $M invested	Total Carbon Emissions tons CO2e	Carbon Intensity tons CO2e / $M sales	Weighted Average Carbon Intensity tons CO2e / $M sales
Question:	***What is my portfolio's normalized carbon footprint per million dollars invested?***	***What is my portfolio's total carbon footprint?***	***How efficient is my portfolio in terms of carbon emissions per unit of output?***	***What is my portfolio's exposure to carbon-intensive companies?***
Key Strengths:	✓ Allows for comparison regardless of portfolio size ✓ Enables portfolio decomposition and attribution analysis	✓ Most literal carbon footprint from GHG accounting perspective ✓ Absolute number can be used for carbon offsetting	✓ Provides overall intensity of portfolio by adjusting for company size ✓ Allows for comparison regardless of portfolio size	✓ Applicable across asset classes, including fixed income ✓ Simple and intuitive calculation ✓ Does not require corresponding market cap or sales data ✓ Enables simple attribution analysis and portfolio decomposition
Key Weaknesses:	○ Requires underlying issuer market cap data ○ Ownership perspective means it is only applicable to equity portfolios ○ Sensitive to changes in market value of portfolio	○ Limited usefulness for benchmarking and comparison to other portfolios due to link to portfolio size ○ Requires underlying issuer market cap data ○ Ownership perspective means it is only applicable to equity portfolios	○ Complex calculation, challenging to communicate and understand ○ Requires underlying issuer market cap data ○ Ownership perspective means it is only applicable to equity portfolios	○ Does not capture any measure of investor responsibility ○ Sensitive to outliers

Ideally, tailor metrics and assessment methodology to investment needs and LP preferences

Source: MSCI, TCFD

Exits must be carefully planned to ensure financial and non-financial ESG value is retained

Objectives

Maximise contribution that climate performance can make to ROI

Seek to attract buyer for whom **ESG would be a priority** or even a legal requirement

Prepare **credible ESG materials** for exit

Ensure the company's ESG management **system is self sustaining**

Mitigate any post-exit ESG **reputational risks**

Activities

Plan the Exit
Collate relevant ESG materials for bidders

Private sale
Prepare offering document, road show presentations, vendor DD documents etc

Public flotation
Include ESG data in offering memorandum
Consider how to maintain commitments post-sale

Outputs

Financial modelling taking into account climate impact and risks, and any additional ESG factors required

Information memorandum including information on company's cumulative ESG performance over the investment period

Source: CDC Group 2018

Mini case-study of an impact exit: Bamboo exiting Svasti

Background

10th Feb 2020*:* Bamboo Capital Partners exits investment from ***Svasti Microfinance,*** selling majority of stake to ***Nordic Microfinance Initiative (NMI).*** Bamboo had a 19.5% stake in Svasti, estimated 6-7x return on invested equity

• Since Bamboo's investment, Svasti Microfinance has serviced over 300,000 women customers across 57 branches in 4 Indian states. Number of active borrowers was over 190,000 by Dec '19 (vs 9,050 in Mar '11)

• Bamboo helped grow Svasti's portfolio of borrowers 20x and number of employees 10x since its investment in 2011 (from 73 employees to a team of 783)

Founded in 2008, **Svasti** brings about positive change in society through providing ***access to finance for all sections of society using innovative technology***, with a special focus on women.

Learnings & best practices

- **Buyer likely active in the space**: e.g. NMI has $50 million exposure to India's six microfinance-oriented firms
- **Publicity and clarity of measurable impact** outcomes is key to attract impact-focused later stage fund/investors
- **Readiness to provide historical cumulative impact performance data & projections** during due diligence (together with typically shared financial and operational data)
- **Handover process to next investor to ensure continuity of impact** – including sharing of tracked performance, non-proprietary metrics, forecasts, etc.

Sources: https://economictimes.indiatimes.com/industry/banking/finance/nordic-microfinance-initiative-raises-its-investment-in-svasti-microfinance/articleshow/71974435.cms?from=mdr; http://www.bamboocp.com/news/bamboo-capital-partners-exits-investment-from-svasti-microfinance-after-growing-its-portfolio-of-borrowers-over-twenty-times-and-number-of-employees-over-tenfold/attachment/svasti-microfin-picture/

Potential exit routes mainly focused on sales to other later-stage VCs, PEs & some strategic buyers (MNCs)

Climate-impact still dominated by 'too young' business models for IPO

Deep-dive on the profile of main potential exit partners in PE/VC space on next slide

Sell to Private Equity & VC

60%+ of all exits in impact-related investments:

Players: TPG Rise, KKR Global Impact, Bamboo, Leapfrog, North Sky Capital, Vital Capital, Mirova Natural Capital, Quona Capital, Sarona Asset Management, etc

Mini-case: Adobe Capital & Natgas

Adobe Capital, founded in 2012 and based in Mexico City, creates social and environmental impact by investing in impactful growth-stage enterprises in Latin America. Natgas is a Mexican alternative low-carbon fuel supplier. Adobe's investment in Natgas from 2013-2017 was sold to PE firm Northgate Capital at an IRR of 22%, as well as moderate environmental impact

Sell to a Corporate

30%+ of exits in impact-related investments:

Players: Shell Ventures, ABB Technology Ventures, BP Ventures, Aster (Schneider Electric), EnBW Ventures, Nestle, Engie New Ventures, EON, Equinor, Next47 Siemens, P&G, Total, Prudential…

Mini-case: Shell, Schneider & Sense USA

Sense specialises in tracking devices and home automation solutions enabling energy efficiency and convenience. It uses home monitoring system 'listening' to the electronic signatures of electrical devices using sensors on the main breakers in electrical panels and records them. In 2019 they raised 28m of Series B funding with Shell Ventures and Schneider Electric as lead investors

Exit through IPO

Very few exits through IPO – mainly focused on asset-heavy businesses in renewable energy space; few examples relevant for asset-light business-models

Mini-case: Lok Capital & MAS Fin.Services

Lok Capital is a hands-on venture capital fund with a focus on investing in financial inclusion, healthcare, agriculture and livelihoods - with social performance goals and standards. MAS Financial Services offers microfinancing for small businesses in India. Lok Capital existed MAS though and IPO in 2015.

Source: https://thegiin.org/adobe-capital-exit-from-natgas, Crunchbase

Impact GPs investing in the region are potential exit partners

North Sky Capital

HQ: USA

Regions: NAM, EU, APAC

AUM: $1b+

Investment focus: clean energy infrastructure

Typical portfolio company value: $20-50m

Developing World Markets

HQ: USA

Regions: LATAM, AFRICA, APAC

AUM: $1b+

Investment focus: clean energy infrastructure

Typical portfolio company value: $5-20m

Goodwell Investments

HQ: Netherlands

Regions: AFRICA, APAC

AUM: $100-500m

Investment focus: media, technology, mobile impact

Typical portfolio company value: $5-20m

Vital Capital

HQ: Switzerland

Regions: AFRICA, APAC

AUM: $100-500m

Investment focus: nutrition, health, housing, impact

Typical portfolio company value: $5-20m

Mirova Natural Capital

HQ: France

Regions: LATAM, AFRICA, APAC

AUM: $100-500m

Investment focus: natural resources, conservation, agriculture

Typical portfolio company value: n/a

Sarona Asset Management

HQ: Canada

Regions: LATAM, AFRICA, APAC

AUM: $100-500m

Investment focus: clean energy infrastructure

Typical portfolio company value: $20-50m

Quona Capital

HQ: USA

Regions: LATAM, AFRICA, APAC

AUM: $100-500m

Investment focus: media, technology, mobile impact

Typical portfolio company value: $20-50m

Media Development Investment

HQ: USA

Regions: APAC, AFRICA

AUM: $100-500m

Investment focus: media, technology, mobile impact

Typical portfolio company value: $5-20m

Source: https://www.impactassets.org/ia50_new/?filters=

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