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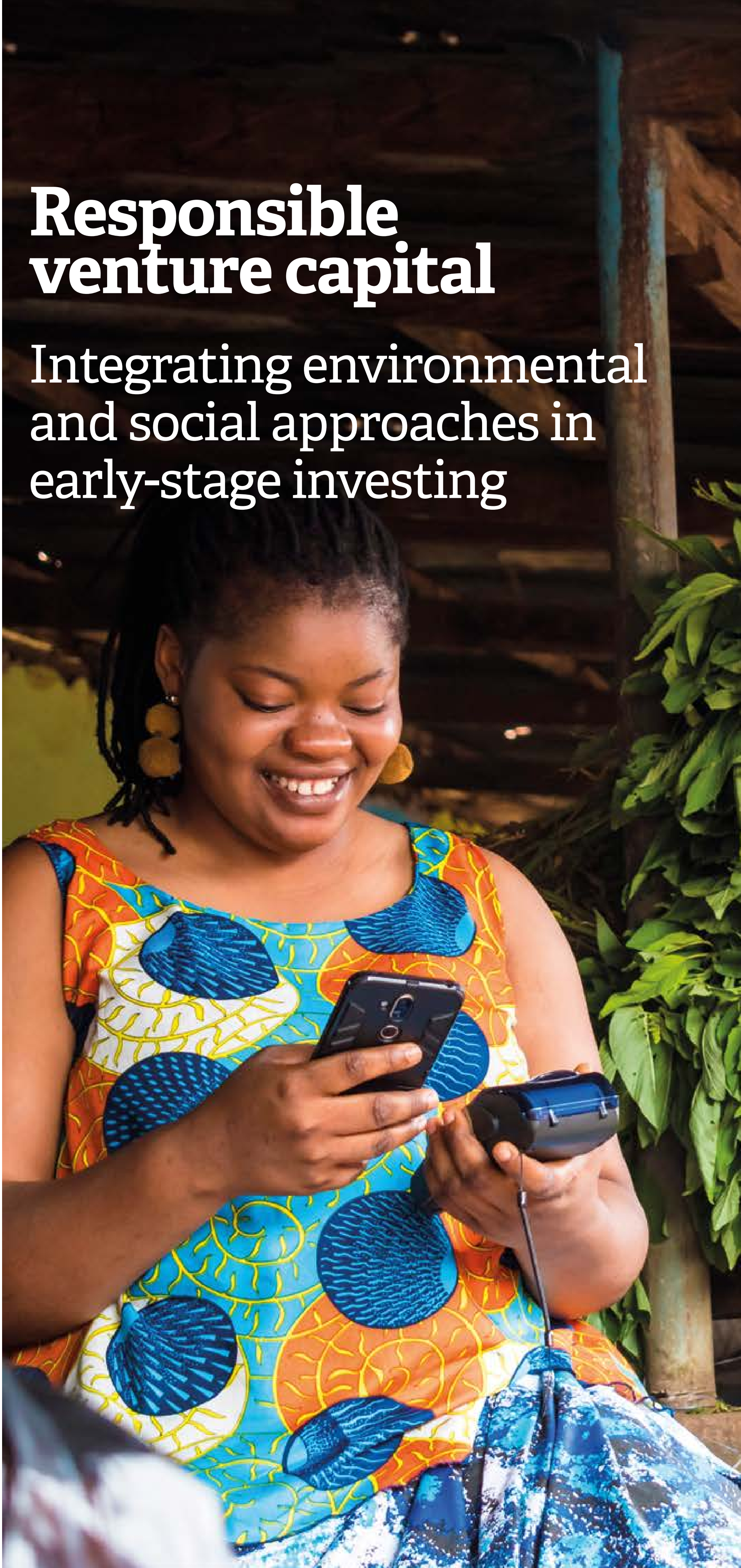
Good practice note

Responsible venture capital

Integrating environmental and social approaches in early-stage investing



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We are grateful for the contributions of the interviewees listed in Appendix F.

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Foreword

Venture capital (VC) is a new asset class in many emerging markets and has the potential to achieve development at scale. Successful VC-backed companies often provide significant jobs, skills and a route into formal employment in countries with growing populations and high youth unemployment. The technology-based firms generally targeted by VC investors can also leapfrog market constraints to enable large-scale access to essential products and services, including for under-served groups. Given these opportunities, CDC and FMO have been actively supporting the growth of the VC industry in our markets.

As pragmatic investors in challenging markets, we tailor our approach to the nuances of each asset class. Equally, as development finance institutions, we have a deep commitment to responsible investment. Therefore, this report is intended to provide practical advice about how to invest responsibly in early-stage businesses in emerging markets; managing environmental, social and governance (ESG) risks and identifying opportunities, while supporting the growth of innovative companies.

There is currently little guidance for responsible investors in the VC industry. For example, the well-established ESG management systems for private equity often do not cater for the challenges of early-stage VC investing. Similarly, international ESG standards are not yet well-defined for many of the issues commonly faced by technology-based VC companies, including concerns about the gig economy, the risk of artificial intelligence perpetuating discrimination and the responsible use of data. Conversely, there are opportunities for VC-backed companies to support women's economic empowerment, provide decent work and tackle climate change.

This report does not provide answers to all of these evolving issues, but it provides a framework for VC investors to consider and manage the ESG risks and opportunities most applicable to them. We hope you find it useful.

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Chief Impact Officer
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About this report

What is responsible investment?

A definition of 'responsible investment' could cover various approaches. For example, sustainability, socially responsible investing, ESG integration, applying a human rights lens, impact investing and gender-smart investing, among others. This report refers to responsible investment in the broadest sense, drawing on each approach where appropriate.

The objectives of responsible investment can include:

- **Managing risks –** Risk management provides downside protection to funds and portfolio companies. This could include, for example, protecting a start-up from a damaging social media backlash or future-proofing a disruptive business model against regulatory change.
- **Adding operational value –** Proactive ESG management can improve the performance of companies in all sectors. For instance, good practice in human resources can help attract and retain the best talent.
- **Identifying strategic opportunities –** Adopting a responsible lens can help investors to spot new trends and areas of potential growth. For instance, by designing products for underserved female markets, creating technology that empowers workers or addressing demand for renewable energy through off-grid solar.

What is venture capital?

Defining the asset class

There is no simple definition of VC investing. VC focuses on companies that can achieve rapid, capital-efficient growth to build businesses of significant scale and value over a relatively short period. VC investments span a broad array of sectors and include a mix of technology (such as software, online marketplaces and fintech) and tech-enabled businesses (such as energy and health services that need physical infrastructure).

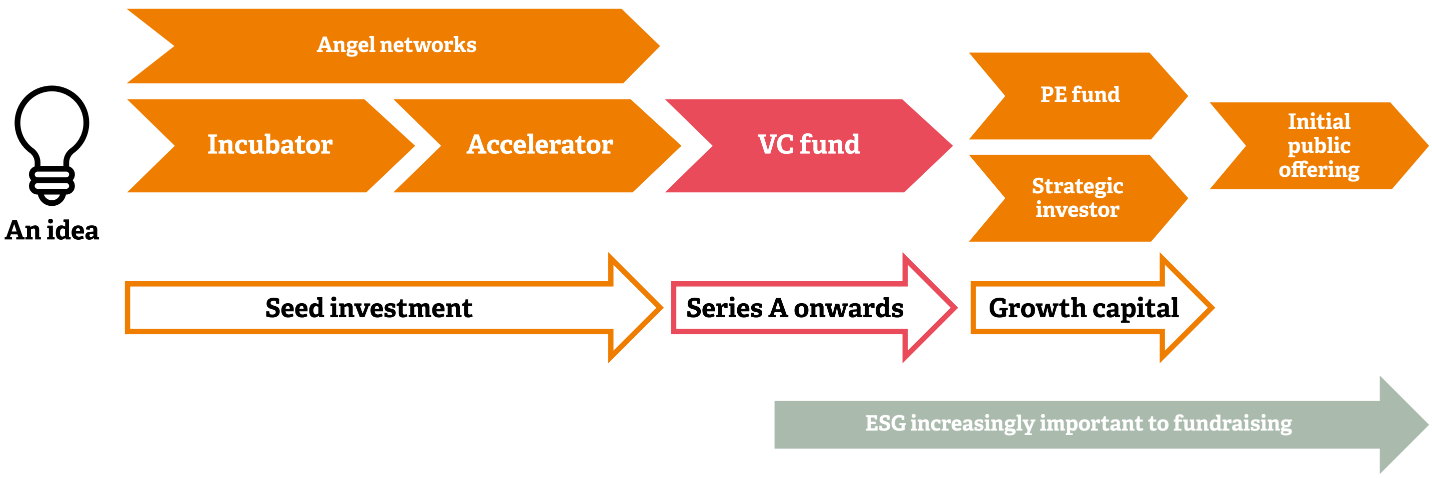
What distinguishes VC from other types of early-stage investing – including small and medium-sized enterprises – is the potential to achieve capital-efficient scale and greater uncertainty around ultimate success. To maximise diversification and the likelihood of picking a winner, VC funds typically have large portfolios of around 20–30 companies. In comparison, a fully committed private equity (PE) fund would normally have around 10 companies.

Higher risk-return profile

In part due to the higher failure rate of their investments, VC funds generally require much higher returns from successful portfolio companies than traditional PE investors. For example, a 'Series A' VC investor typically targets companies that could make a 10x return on their money. As a result, venture investments tend to be very high risk and suffer much higher failure rates than PE. As a rule of thumb for well-performing early-stage VC funds in developed markets, a third of investments will be written off, a third might return cost and a third will return 5x or more, and pay for the fund. Figure 1: VC ecosystem highlights potential sources of funding for a company as it scales.

The greater risk for VC comes from investing in companies that are pre-profit (sometimes pre-revenue) and usually rely on innovative and unproven business models. It is therefore very hard to predict a particular outcome. The winners tend to be companies that have a transformative impact on a large industry, potentially providing large numbers of jobs and impactful services.

Figure 1: VC ecosystem



Purpose of this report

Objectives

This report is designed to provide practical advice for VC fund managers, to help them:

1. Understand the strategic context of good ESG management.
2. Identify material ESG risks and opportunities for each investment.
3. Implement practical actions at the fund level to incorporate ESG issues into their investment processes.
4. Summarise practical actions that their investee companies can implement.

Audience

The target audience for this report is broadly mainstream VC fund managers and their advisors who invest in tech and tech-enabled businesses from seed stage onwards. Incubators and accelerators are not explicitly covered, although the guidance is broadly applicable. The report focuses on emerging markets, but should be applicable for VC fund managers globally.

For investors that use a VC model in traditional sectors – including some impact investors – other guidance and standards may be more applicable, including well-established frameworks for the PE industry.

Geography

The report is focused on fund managers investing in emerging markets, where the ESG regulations and enforcement mechanisms are unlikely to provide the same protections that would be found in developed regions. Thematic ESG risks and opportunities also differ between emerging and developed markets. However, many of the principles and approaches related to the VC model itself are applicable to the global industry.

Scope

This report does not cover corporate governance, business integrity and compliance issues, such as anti-bribery and corruption, anti-money laundering and counter-terrorism financing. These topics are of critical importance for investors and companies, and are addressed in detail elsewhere (see CDC's ESG Toolkit for Fund Managers – Business integrity).

Executive summary

This report seeks to address the lack of publicly available advice on responsible investment targeting the VC industry. Existing guidance typically focuses on other asset classes, such as PE or listed equity. While there are similar principles for good ESG management between asset classes, VC has specific nuances, risks and opportunities.

The business case

VC investments range from very early-stage companies (when founders only have an innovative idea), right up to established companies listed on stock exchanges. This report focuses on the earlier end of the spectrum, when VC-backed companies are generally nascent. At this stage, ESG risks and opportunities are generally perceived to be lower than PE investments in more 'mature' companies which typically have larger workforces, client bases and/or physical footprints. However, while early-stage VC requires a different ESG lens, it can be critical to success. The ESG business case can be underpinned by various drivers – depending on the type of business – such as:

- **Financial performance** – A growing body of academic and investment research suggests that ESG issues have a material impact on the financial performance of companies. For example, a meta-study of over 2,000 studies by Deutsche Asset Management identified a strong positive correlation between ESG strategies and financial performance, with the strongest positive correlations identified for businesses operating in developing markets. Research on the impact of ESG in VC is more limited. However, a similar trend is possible for the reasons listed below, among others.
- **Fundraising** – Limited partners (LPs), including development finance institutions (DFIs), impact and other responsible investors, increasingly expect VC funds to demonstrate a meaningful approach to responsible investment.
- **Exits** – The ESG performance of a company can be an important factor in raising follow-on capital or exiting to larger PE funds, strategic investors, multinational corporations or launching an initial public offering. Indeed, ESG disclosure requirements are increasing on stock exchanges globally.
- **Consumer expectations** – The purchasing decisions of customers, particularly millennials, are increasingly influenced by ESG values.
- **Labour productivity** – Attracting and retaining skilled workers is often crucial to success for tech companies in emerging markets.
- **Reputational risk** – A good reputation is critical to the success of many tech businesses. Companies are particularly vulnerable to negative reputational impacts during the early stages of growth, given the significant influence these can have on fundraising efforts and customer growth.
- **Market access** – Tech companies are particularly likely to seek or have established global markets. Therefore, applying appropriate ESG standards will facilitate the greatest market access.
- **Regulatory environment** – VC-backed companies often use disruptive technology or business models that are not effectively regulated by existing legal frameworks. Careful ESG management can help future-proof firms against interventions from regulators that negatively affect their business.

ESG risks and opportunities

The VC model is associated with particular ESG challenges. For example, investee companies often have limited resources, a lack of ESG expertise, rapidly evolving business models, high growth rates, aggressive hiring, limited governance and compliance processes, and increased vulnerability to negative reputational impacts.

ESG risks are highly diverse and company specific. However, the following ESG topics are among the most relevant for VC-backed companies:

- **Job quality** – Labour and working conditions for employees and contractors are likely to be among the most pressing ESG issues for VC-backed companies. Early-stage companies should adopt a basic human resources (HR) management system. These will vary by sector, but will often include:
  - Working hours, minimum pay and overtime.
  - Harassment.
  - Occupational health and safety.
  - Approach to gig economy workers.[i]
  - Attracting and retaining talent.
- **Gender** – There is growing evidence that greater diversity at the company and fund manager level leads to various commercial benefits.
- **Supply chains** – There is increasing pressure for businesses to consider ESG issues – such as labour and working conditions – beyond their own operations, and through their supply chains. Sectors relevant to VC with heightened supply-chain risks include agriculture, manufacturing and cleantech.
- **Data privacy and ethical use** – This is a core business issue for many companies that receive VC funding. Companies need robust systems for collecting, using and sharing customer data.
- **Data security** – Data security is also critical, especially for companies operating in the tech sector. A major security breach can be very damaging for a start-up. Companies must implement appropriate measures that ensure sufficient levels of data security.

i The 'gig economy' is generally defined as short-term, flexible contracts connecting clients and service providers through an online marketplace.

As well as these issues, a wider range of ESG risks and opportunities apply to specific sub-sectors. For example, companies operating in the cleantech and agritech sectors, and companies with manufacturing operations, need to consider a range of environmental issues, such as resource efficiency, waste and climate change.

In identifying and managing these issues, it is important to ensure that the approach is proportionate and appropriate to the size of the company and the resources available.

ESG integration at VC funds

VC fund managers are advised to integrate ESG into their investment processes to enable effective management of risks and opportunities across their portfolio. Figure 2: Integrating ESG into the investment process highlights key objectives at each stage of the investment cycle. Given the small teams and time constraints of most VC fund managers, the approach needs to be streamlined and tailored to the specific fund strategy.

The core elements of an effective ESG management system include:

- **ESG policy** – Each fund manager should develop an ESG policy, outlining a core set of responsible investment principles and summarising the fund manager's approach for integrating ESG into its investment processes.
- **ESG requirements** – Fund managers should identify a set of ESG requirements or standards, which should include adherence to all applicable ESG laws and regulations as a minimum. Depending on the fund's LPs, a list of excluded activities (such as gambling, pornography or arms) may also be a formal requirement.
- **Roles and responsibilities** – There should be a clear allocation of responsibility for ESG at the fund manager, including adequate resources and expertise for day-to-day implementation (matching the fund's risk exposure). While many firms manage ESG through their investment teams, other options include having an in-house ESG specialist (more common for funds focusing on higher-risk sectors) or engaging external advisors. For higher-risk investments, a dedicated advisor may be most appropriate. For lower-risk investments, it may be possible to expand the scope of other advisors to cover ESG. For example, a legal advisor may be able to cover compliance with local labour laws.
- **Managing failure** – Many VC-backed companies will ultimately fail, and VC fund managers can play an important role in helping to ensure that these companies are wound up responsibly. This could include supporting entrepreneurs to ensure transparent communications to employees, providing advice on welfare support, and developing a common retrenchment framework aligned with international standards.
- **ESG reporting and disclosures** – An annual ESG summary may be required by some LPs. Even if not a mandatory requirement, VC fund managers should consider preparing a short annual ESG summary for LPs and/or for public disclosure. Some LPs may also require material ESG incidents to be reported at the time they occur.

Figure 2: Integrating ESG into the investment process

Screening
Early investment reviews should identify excluded activities and ESG-related 'fatal flaws'.

Due diligence
Potentially material ESG risks and opportunities should be assessed.

Term sheet and legal documents
Where gaps against the relevant standards are identified, an ESG action plan should be agreed with the investee company.

Ownership and monitoring
The investor needs to engage with investee companies on an ongoing basis to address the due diligence findings and to oversee ESG issues as the business grows.

Follow-on investments
ESG risks and opportunities should be re-assessed during follow-on rounds.

Exit
A VC fund should support the company in demonstrating to potential buyers how ESG risks have been mitigated and opportunities realised. This process will be greatly facilitated by following the previous steps.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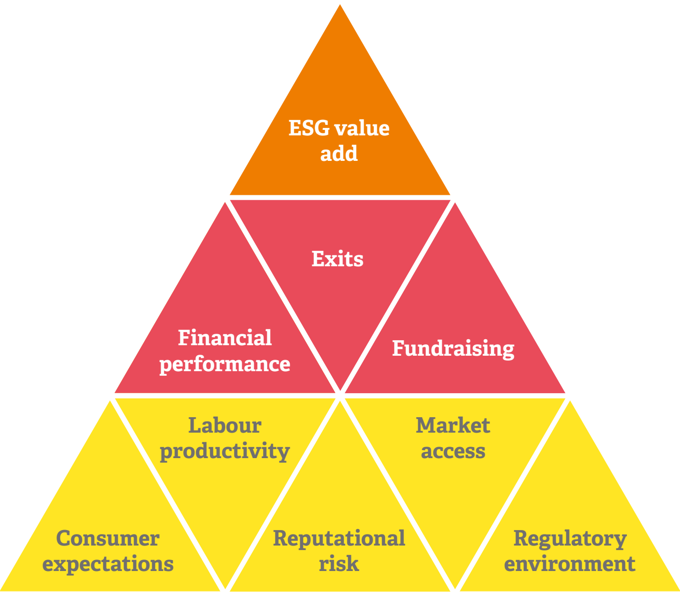
The business case

The business case for VC fund managers to integrate ESG into their investment practices is growing. ESG can add value through various drivers, including those in Figure 3.

Figure 3: Business case drivers



Financial performance

ESG integration has become increasingly mainstream across all asset classes. For example, signatories to the Principles for Responsible Investment – launched in 2006 – represented US$90,000 billion in assets under management in 2018.[1] Global capital flows are therefore increasingly targeting companies with ESG-aligned outputs and those that can demonstrate good ESG management at the operational level.

A positive correlation between ESG and financial performance has been demonstrated through an increasing body of research. There is clear evidence that the financial performance of later-stage companies benefits from good ESG management, and of the material impacts that ESG issues have on the profitability and valuations of companies. Recent studies include:

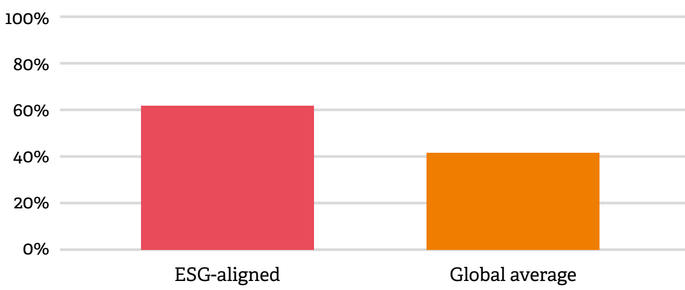
- **Harvard Business School** – A study found that companies that invest in and perform well on their material sustainability issues significantly outperformed those that performed poorly on these.[2]
- **University of Oxford** – A review of 200 academic studies showed that 80 per cent found stock price performance is positively correlated with good sustainability practices and 90 per cent concluded that good sustainability standards lower the cost of capital.[3]

Research shows that businesses in emerging markets typically demonstrate the strongest positive correlation between ESG and financial performance. Certain ESG risks tend to be more prevalent in emerging markets. Shareholder protections may be weaker, environmental standards are generally laxer and corruption is often more prevalent. Effective management of ESG issues can therefore be a positive differentiator. Studies include:

- **Deutsche Asset Management** – A 'meta-study' drawing on more than 2,000 articles on the links between ESG and financial performance demonstrated a strong positive correlation between ESG strategies and financial performance.[4] The study also found that businesses operating in emerging markets had the strongest positive correlations.
- **Blackrock Investment Institute** – A comparison of traditional indices with MSCI's ESG-focused derivatives of each index demonstrated that annualised total returns since 2012 matched or exceeded the standard index, with the most significant outperformance demonstrated in emerging markets.[5]

Research on the relationship between ESG and financial returns in VC is more limited, but the following sub-sections highlight potential areas of ESG value addition. Some limited information is also emerging which suggests that VC-backed companies targeting ESG themes are more likely to secure follow-on investment in developed markets. For example, see Figure 4: VC-companies reaching round two (2009–2016).[6]

Figure 4: VC-companies reaching round two (2009–2016)



▲ ***Note:*** *The authors have not verified this third-party data.*

Fundraising

A strong approach to ESG can be a differentiator for VC funds, supporting their fundraising and helping them to stand out in a crowded market. LPs increasingly expect funds to incorporate ESG issues into their investment processes. This is already having a pronounced impact on the PE sector and the same trend is increasingly relevant to emerging markets VC. DFIs have partly driven this trend. However, impact investing has grown rapidly to US$502 billion assets under management by end of 2018 and is likely to accelerate this trend.[7] Positive ESG case studies from portfolio companies can also help build a VC firm's brand as a responsible investor, while demonstrating the 'value add' achieved with investee companies. For DFIs and responsible investors, ESG integration can also help facilitate co-investment opportunities.

Exits

The ESG expectations placed on companies will grow as the business scales. VC-backed companies can help facilitate investment from new sources by demonstrating good ESG practices. For instance, as companies target investment from PE funds, strategic investors and potentially list, there will be a growing expectation that they meet and then exceed minimum international standards. An initial public offering (IPO) is often the ultimate objective of a VC-backed company. The Johannesburg Stock Exchange, for example, has growing ESG requirements, including mandatory ESG reporting. Embedding good practice early on can be more efficient than a retrospective approach.

Consumer expectations

Customers/consumers are increasingly influenced by environmental and social values, and this is a particularly strong driver for younger generations. A report commissioned by Unilever in 2017 showed that a third of customers are now buying from brands based on their environmental and social impact.[8] The study also suggests that purpose-led purchasing is important in emerging markets, with 88 per cent of shoppers in India reporting that they feel better when buying sustainable products, compared to only 53 per cent in the UK. Younger generations are more likely to be influenced by ESG issues than consumers in older age groups, and tech-savvy millennials are a particularly important consumer group for many VC-backed companies with potentially global markets. For some business models, it is therefore critical to understand how purchasing decisions are influenced by ESG values.

Labour productivity

Attracting and retaining skilled workers is often crucial to success for tech companies in emerging markets. Thoughtful management of labour issues can improve productivity and efficiency, reduce absenteeism and cut staff turnover. For example, a 2019 meta-analysis of 339 studies, covering 1.9 million employees, found a strong positive correlation between employee satisfaction and productivity.[9]

Reputational risk

VC-backed companies are often particularly vulnerable to negative reputational impacts, which can significantly influence fundraising efforts and customer growth. For instance, a social media backlash against an early-stage company can be difficult to recover from. Furthermore, early-stage companies are less likely to have the resources to effectively manage the fallout from such an incident.

Market access

Strong ESG practices can help VC-backed companies increase their access to international markets. While there is considerable local and regional variation, ESG standards are typically higher in developed regions than many emerging markets. This relates to both legal requirements and their enforcement by regulators, as well as the expectations of business partners and end consumers. Given that tech companies often target global markets, early adoption of good ESG standards can facilitate market entry and help de-risk the company in the eyes of business partners.

Regulatory environment

Proactive management of ESG issues can help 'disruptors' future-proof their business models against regulatory changes. During the last two decades there has been a strong trend of increasingly stringent ESG regulations across all regions, and this is expected to continue. VC-backed companies often disrupt the status quo by using new technologies or business models, and sometimes operate ahead of local regulatory frameworks. This can result in significant operational impacts from the introduction of new regulations as regulators catch up. For example, ride-sharing companies such as Uber, Ola and ZipGo have been excluded from some markets as local regulators have implemented bans.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ESG risks and opportunities

2.1 The VC model

There are well-established frameworks for managing ESG issues in the PE industry. While similar themes apply, there are also important differences associated with the VC model and early-stage investing, including:

- **Capacity** – Early-stage companies focus on testing and refining their business model as they grow. As a result, ESG risks can often be overlooked. Similarly, VC fund managers typically have small teams and large portfolios, which potentially limits the support they can provide. An early and clear assessment of ESG issues is therefore critical to enable effective prioritisation.
- **Expertise** – Management teams are often inexperienced and may have little knowledge of ESG. For instance, a talented entrepreneur will not always have the skills to manage a rapidly growing workforce.
- **Reputation** – While having less capacity and expertise to manage ESG issues, VC-backed companies are also more susceptible to reputational risk. A social media backlash – for example over working conditions or data privacy – can have a debilitating effect on a pre-profit company seeking customers and investors.
- **Evolving business model** – During the early stages of development, the whole business model can shift direction in response to market demand, potentially opening new and unforeseen ESG risks and opportunities. Unexpected changes in strategy can cause particular problems if the company's products or services are adapted for new sectors with inherent ESG risks and challenges. There is also a risk of company strategies diverting into areas that could breach a fund's exclusion list. For example, face-recognition technology used by the military or gaming software used by gambling firms.
- **Timing ESG actions** – It can be challenging for VC funds to time ESG interventions at high-growth portfolio companies. There is a fine balance between allowing companies room for manoeuvre and adding value by formalising processes.
- **Governance** – Early-stage companies may lack formal governance and compliance processes, with little or no oversight of ESG at the board level. VC fund managers generally have comparatively small teams and may not be able to support all companies in a large portfolio.
- **Limited influence** – VC funds often take minority stakes which are diluted through future funding rounds, just as the level of ESG risk grows. Fund managers may therefore become reliant on the strength of their relationship with a founder or management team to exert informal influence.

2.2 Core ESG issues for VC

During the early stages of a start-up, a company's resources will be very constrained. It would often therefore be unreasonable to expect a company to have formal systems and processes in place or dedicated resources for managing ESG issues. At this stage, the key priorities for the company are to:

- Understand key ESG issues relevant to the business.
- Identify priority actions to manage ESG risks and opportunities.
- Re-assess ESG risks and opportunities as the concept and business model evolves.
- Begin creating an ESG-focused culture in the company at an early stage. This is easier to establish while the company is still small.

As a company grows, the ESG risks and opportunities may increase in magnitude and scope. The company should develop approaches that match the level of risk. Key priorities include:

- Assessing the ESG risks and opportunities in more detail.
- Developing formal management systems for managing ESG issues; starting with streamlined and basic systems, and developing these as the company expands.
- Ensuring there are sufficient resources allocated for managing the key ESG issues, including overall responsibility and oversight at board and senior management level, clear allocation of responsibilities for day-to-day management, and sufficient expertise at each level (including ESG training for relevant employees, as needed).
- ESG monitoring and reporting of key performance indicators, which inform changes to the management system.

Environmental issues

The environmental impacts associated with VC-backed companies depend on the business model and scale, but are generally lower and often different to traditional sectors. Therefore, this report focuses on core social issues. However, there some common environmental themes for VC-backed companies. For instance, energy efficiency of data centres or managing e-waste. Figure 5: E&S risks and opportunities by sub-sector also highlights key environmental issues. While poor management of environmental issues can result in negative impacts – including fines and reputational damage – proactive management can lead to significant cost savings through improved resource efficiency and minimising waste.

Sub-sectors each have their own ESG risks and opportunities. Of these, manufacturing is likely to be the highest risk because it typically has a larger operational footprint and more direct ESG impacts. It is relatively rare for early-stage companies to engage in large-scale manufacturing though. Where manufacturing is part of the business model, it is often outsourced, which creates separate supply-chain challenges. Figure 5: E&S risks and opportunities by sub-sector summarises some of the main issues in five sub-sectors. This list is far from exhaustive and there is significant variation between companies in the same sector. For example, a company that manufactures, installs and maintains off-grid solar panels will have a very different risk profile to a software company that provides remote energy efficiency solutions; although both could be considered cleantech.

For further guidance on these issues and additional sector context, see CDC's ESG Toolkit for Fund Managers: E&S topics and Sector profiles. http://toolkit.cdcgroup.com/

Figure 5: E&S risks and opportunities by sub-sector

	Manufacturing	Cleantech	Agritech	Medtech	Fintech
Environmental	Resource efficiency	Resource efficiency	Resource efficiency		
	Climate change	Climate change	Climate change		
	Waste management	Waste management (including e-waste)	Waste management (including organic and hazardous waste)	Waste management (including bio-hazardous waste)	
	Air, noise and water emissions				
	Sustainable materials and packaging				
Social	Product safety	Product safety	Food safety	Product safety	
	Consumer protection	Consumer protection	Consumer protection, including smallholders	Patient welfare	Consumer protection
				Data security and privacy	Data security and privacy
	Supply chain	Supply chain	Supply chain, including forced and child labour	Supply chain	
					Selling practices and transparency
		Land acquisition	Land acquisition		
			Animal welfare		
					Non-discrimination (including in artificial intelligence)
					Financial inclusion and affordability
	Occupational health and safety		Occupational health and safety		
	Community health and safety				
	Forced and child labour				Forced and child labour

Case study: Customer protection in the cleantech sector

An increasing number of cleantech companies provide customers in remote rural areas with access to renewable electricity through off-grid solar devices and associated products, such as radios and refrigerators. Customers typically purchase these on credit with a long payback period, thereby making them accessible to less affluent families.

Customers are often uneducated and therefore vulnerable to being exploited and coerced into signing up to products and packages they do not understand. To mitigate this, companies should prepare very simple contracts in local dialects to ensure that customers make informed decisions. Verification that a customer understands the product via a pre-sale call with a central support team not incentivised by sales is also good practice.

Companies that aggressively pursue vulnerable customers for payment and repossess equipment when payments are missed can run the risk of negative reputational impacts. In practice, many companies take a flexible approach and support their customers with revised payment plans. A company's approach to defaulting customers should therefore be an important point of due diligence and monitoring for investors.

GOGLA has developed a consumer protection code. The code includes a set of principles and an assessment framework to help companies assess their practices.

2.2.1 Job quality

Labour and working conditions for employees and contractors are likely to be among the most pressing ESG issues for most VC-backed companies. Early-stage companies often do not have basic HR policies or procedures in place, nor the necessary expertise and capacity to manage employment relationships effectively. Risks may be limited in the early stages of development when a company only has a handful of employees who are mainly incentivised by the company's long-term performance. However, labour and human rights risks can escalate as a company grows and begins to employ larger numbers of lower-paid and, potentially, more vulnerable workers. Challenges with contractors or 'platform users' in the so-called gig economy are discussed in the next sub-section.

Labour issues can affect company performance and sap a significant amount of management time. Without effective HR policies and formal employment contracts in place, companies are exposed to heightened risks related to discrimination and harassment, excessive working hours, inaccurately calculated compensation, unfair and unlawful disciplinary practices, and not having an effective grievance mechanism. This can result in a range of commercial implications, including high turnover and low productivity of employees, as well as negative impacts on a company's reputation. As already highlighted, good management of labour issues can instead result in commercial benefits.

Good management practice – Human resources management system

- **Put in place company HR policies, practices and formal employment contracts**. A company should formally document its approach to employment in its HR policies, practices and employment contracts. This should incorporate details on the minimum age of employment, compensation (including for overtime), working hours, lawful deductions, pay cycle, benefits, social insurance, rest periods, holidays, disciplinary and dismissal practices, maternity protection, workplace environment, occupational health and safety, discrimination and harassment, privacy and human resource development.
- **Create and distribute an employee handbook**. Along with employment terms and conditions defined in a written labour contract, an employee handbook made available to all employees is a helpful communication tool.
- **Complete a risk assessment**. Companies should assess any labour and human rights-related risks in its hiring, recruitment, retention and related practices, and in the working conditions it provides.
- **Ensure worker rights for all employees and contractors**. A company should ensure appropriate labour rights and protections are in place for all types of employees in its workforce, including directly employed permanent employees, part-time employees, temporary employees, interns, apprentices, contractors, sub-contractors and homeworkers.

Further guidance on good labour and HR practices includes International Labour Organization (ILO) core conventions, IFC Performance Standard 2 – Labour and Working Conditions, and the ETI Base Code.

The next sub-section gives additional context about some of the most significant risks related to labour and working conditions:

2.2.1.1 Working hours, minimum pay and overtime

Working hours are typically regulated within national legislation, but long working hours are widespread among start-ups. Driven by the pressure to launch a product and generate revenue, founders often expect their employees to work long hours. They may also expect them to work through weekends and holidays. Such excessive working hours have implications on creativity, problem solving, productivity and absenteeism. A study by Stanford University showed employee output falling sharply after a 50-hour working week, and even more dramatically after 55 hours.[10] In an industry that thrives on innovation and attracting talent through dynamic working environments, a thoughtful approach to working hours is likely to be beneficial overall.

Commercial pressure and limited experience can lead to unlawful practices around compensation at start-ups. These can result in workers not being paid on time, receiving less than the legal minimum wage and/or not receiving contractual overtime pay. If working hours are not recorded through a time-keeping system, wages may not be calculated accurately.

There are risks associated with using equity as a form of remuneration, particularly when employees have limited knowledge of equity participation. Risks are particularly apparent for employees who have not been through similar negotiations in the past and may not fully understand the relative value or risks associated with different forms of equity participation. Where employees are inexperienced, companies should consider taking additional time or appointing a third party to provide advice about complex forms of remuneration.

Case study: *pi* Ventures – Ensuring minimum wage for all employees and contractors

pi Ventures is an early-stage investor based in India, focusing on disruptive ventures that solve real-world problems through applied artificial intelligence. The firm recently engaged a legal firm to conduct an ESG audit across all of its portfolio companies, spanning various sectors including healthcare, enterprise and logistics.

While conducting the audit for one of its healthcare companies, the legal firm learned from speaking with contract staff that the contractor firm was paying some of its employees below the minimum wage. The fund manager raised the issue with the investee company, which in turn engaged with the contractor firm to ensure that payment of all contract staff adhered to local regulations. *pi* Ventures supported the investee company to put new policies and guidance in place, including putting appropriate payment thresholds in vendor contracts to prevent a recurrence.

As well as promoting good practice, the fund manager hopes that this will help to address the high turnover of the contract staff in the company.

2.2.1.2 Harassment

The concentration of power within a dominant founder – without checks and balances – can create difficulties in the working environment, including harassment. A deep gender imbalance across the tech industry means that sexual harassment is prevalent. Indeed, a survey of over 200 women working in Silicon Valley found that 60 per cent had received unwanted sexual advances, most of which were from a superior, while one in three women had feared for their personal safety because of work-related circumstances.[11] The absence of a harassment policy, whistleblowing or grievance mechanism, and disciplinary procedures can allow this behaviour to go unchecked. Long-term implications include reputational damage, lower productivity, turnover of employees and the risk of litigation.

Fund manager level – Harassment

The risk of harassment also applies at the fund manager level. While such issues are not known to be widespread, there have been some notable incidents reported publicly involving senior partners at VC firms. The risk of sexual harassment also extends to a fund manager's relationship with potential investees. There have been cases of fund managers abusing their position of power over potentially vulnerable entrepreneurs who are struggling to fund their businesses. Some US-based LPs have become so concerned about allegations of sexual harassment that they have begun to include 'clawback' clauses in limited partnership agreements to mitigate the financial risk if allegations emerge.[12] In turn, the clause is designed to be replicated in the fund's shareholder agreements with portfolio companies.

Good management practice – Harassment

Recommendations for companies:

- **Create employee–management communication channels, including a grievance process**. This should enable all workers to make complaints, including anonymously, without fear of retaliation, discrimination or harassment, and receive appropriate responses and timely updates. The number and nature of complaints or legal actions identified and registered may be an indicator of the effectiveness of a company's HR practices. Section 31 of the UN Guiding Principles on Business and Human Rights provides an overview of effective grievance mechanisms, while Shift's Remediation, Grievance Mechanisms and the Corporate Responsibility to Respect Human Rights provides more detailed practical guidance.
- **Track new employee hires and employee turnover by gender**. Ideally, this would start from an early stage in operations, when embryonic HR practices are first established; and before they become harder to change. The diversity of an organisation's new hires can be an indicator of the company's commitment and efforts to attract the best talent and to implement inclusive recruitment practices. High employee turnover can indicate levels of dissatisfaction and indicate a potential inequity in the workplace if turnover is particularly high in certain groups.

Recommendations for fund managers:

- **Put in place guidelines on appropriate behaviour**. These could be, for example, within a broader code of conduct or employee handbook, or standalone discrimination and harassment policies (see #MovingForward resources and ILPA Code of Conduct Guidelines for additional guidance).
- **Use disciplinary procedures**. Funds should have transparent, consistent procedures to sanction bad behaviour, and maintain zero tolerance for workplace harassment.

2.2.1.3 Occupational health and safety

Occupational health and safety (OHS) risks at tech and tech-enabled firms are typically low, but should not be overlooked. The main risks include:

- **Life and fire safety** – In their early stages, tech companies are often highly mobile, moving between incubators, accelerators and co-working spaces. Life and fire safety should be factored into office selection, given the potentially devastating impact of a serious incident.
- **Ergonomics** – One of the biggest risks to health and well-being of desk-based workers is poor ergonomics, which can result in back and neck injuries, musculoskeletal disorders, eye strain and migraines. Companies should provide appropriate equipment and training to employees.

Good management practice – Occupational health and safety

- **Use a basic health and safety (H&S) management system.** While H&S management systems should be appropriate to the company's size and activities, all companies should have:
  - A policy that sets out the company's commitment to the H&S of its employees.
  - Assessment and identification of H&S risks to employees based on the company's operations and premises.
  - Procedures and controls in place to adequately manage each of the risks identified.
  - Appropriate levels of H&S training for employees.
  - A system for monitoring, reporting and investigating H&S incidents.
  - Dedicated responsibilities for board-level oversight and day-to-day implementation of H&S practices.

Case study: *pi* Ventures – Supporting investee companies on fire safety

pi Ventures is an early-stage investor based in India, focusing on disruptive ventures that solve real-world problems through applied artificial intelligence. The firm recently engaged a third party to conduct an ESG audit across its portfolio of investee companies.

During a site visit to a healthcare investee company based in India, the auditor identified a number of fire safety risks, including a lack of available fire exits and insufficient signage. The findings were shared with the company so that they could be addressed as part of an action plan, to the extent possible given the constraints of the existing shared office space. The company was in the process of fundraising, and – once this was completed – it moved to a larger office location. The company applied the learnings about fire safety to ensure that its new premises met all fire-safety requirements.

Case study: PayGo Energy – Managing health and safety across the value chain

PayGo is a VC-backed company based in Kenya, which provides its customers with pay-per-use liquid petroleum gas (LPG) through smart meters which attach directly onto LPG cylinders. This removes the cost barriers of buying the LPG cylinders up-front, enabling more people to use LPG instead of dirtier alternative fuels such as charcoal and kerosene. The company's business models include buying gas cylinders from suppliers and installing the cylinders directly for its customers, and providing smart meters to gas marketers who then take responsibility for the installation of their own gas cylinders.

During PayGo's first financing round, it was required by several of its main investors, including Energy Access Ventures, to develop an ESG action plan. According to PayGo management, guidance from investors was particularly helpful in prioritising actions and developing a longer-term roadmap.

Safety was identified as one of the high-priority areas, with an obvious risk from explosions and fire safety. Investors ensured that third-party specialists assessed the company's H&S policies and operating procedures. This covered not only PayGo's own products and operations, but included audits of PayGo's upstream suppliers of gas cylinders and downstream gas marketers. H&S key performance indicators are monitored and reported to the board periodically, alongside status updates on the implementation of H&S actions and the wider ESG action plan.

PayGo recently closed a Series A financing round co-led by existing investors. As part of this process, the company updated its ESG action plan in line with investor requirements, to identify ESG priorities that should be implemented through its next stage of development.

Road and passenger safety

Road and passenger safety is a key challenge in many VC-backed companies. For all road-based apps, such as ride-hailing businesses, the risk of accidents and fatalities is high, especially in emerging markets where driving standards and infrastructure are often sub-optimal. Countries in Africa have the highest rates of road traffic deaths in the world at 26.6 per 100,000 population, compared with 9.3 in Europe.[13]

Good management practice – Road safety

- **Implement measures to mitigate the risk of road safety incidents**. Companies with employees and sub-contractors who do a significant amount of driving should consider implementing the following measures to mitigate the risk of road safety incidents, among others:
  - Defensive driver training.
  - Route planning to avoid black spots.
  - Fatigue management and close oversight of night-time driving.
  - Alcohol and drug policies.
  - Regular vehicle maintenance.
  - Feedback mechanisms to identify dangerous driving.
  - Speed monitoring or limiting devices.

Case study: SafeBoda – Turning road safety into a unique selling point

SafeBoda is an app-based motorbike-hailing company in East Africa that focuses on road safety. The company aims to modernise the informal transportation industry. Since the app was launched in 2017, SafeBoda has quickly expanded to 9,000 drivers in Kampala and 1,000 in Nairobi (as of March 2019).

Riders are given training on defensive driving, first aid, bike maintenance and customer care. Drivers and passengers wear helmets and high-visibility jackets during trips. The rating and feedback system also allows unsafe driving to be identified and corrected. In addition to training and equipment, drivers benefit from access to customers through the app, asset finance and insurance. Weekly payments to an e-wallet – with an integrated saving scheme – help drivers to save money; for example, for their children's school fees.

SafeBoda monitors accident data and tracks average speeds to identify opportunities for improvement. In a market where road safety is a major challenge, SafeBoda is attracting customers and differentiating itself by focusing on safety.

Mental health

High-stress environments with long working hours can also contribute to challenges with mental health. Entrepreneurs can experience above-average levels of stress, burnout and depression. Data from emerging markets is scant. However, a recent study found that 30 per cent of all entrepreneurs experience depression, which is significantly above the 7 per cent average in the US. The study also identified an increased prevalence of other mental health disorders.[14]

Good management practice – Mental health

VC fund managers often act as mentors to entrepreneurs, informally and formally by participating on investee boards. VC firms may therefore be well-placed to identify potential difficulties. Mitigation measures could include:

- **Develop internal guidelines for investment team members**. These can set out how to engage responsibly with entrepreneurs, and raise awareness among investment team members of the heightened risks for entrepreneurs of stress, burnout, depression and – in extreme cases – suicide.
- **Consider developing guidelines for entrepreneurs**. These can help raise awareness of their own health and well-being.

2.2.1.4 Gig economy

Technology platforms are restructuring the traditional relationship between company, employee and customer. The business model is based on people having temporary jobs or doing separate pieces of work (or 'gigs'), each paid separately, rather than working for an employer. It is common in ride-hailing and food-delivery models, among others. The technology platforms behind many of these new business models act as an intermediary or facilitator between independent service providers / contractors and consumers / end users. This has blurred the lines and relationship between the platform and the contractors / independent service providers. While the text below refers to 'workers', this does not necessarily assume that they should be considered as company employees in the traditional and/or legal sense (as this may depend on national law).

The rise of the 'gig economy' offers benefits and disadvantages to short-term contractors. It can provide flexible working hours, the ability to hold multiple gigs, increased access to credit, training, a demonstrable track-record of formal work and – potentially – a route into more formal employment. The benefits are particularly important in emerging markets, where formal employment opportunities are often very limited for lower-skilled workers.[15] However, there are also risks, including:

- The workforce not necessarily receiving the national minimum wage (due to payments 'per gig'), and typically no paid holiday or sickness benefits.
- No right to redundancy payments or protection against unfair dismissal.[ii]
- No guaranteed work or regular hours.
- Limited or no control over working hours for companies, with the risk of excessive hours.

ii While most apps or platforms will not consider this as 'dismissal' from an employment standpoint, such businesses have codes of behaviour that enable them to block or remove users/service providers from the platform, often with little or no recourse.

- Limited ability to raise complaints, often with limited or no communication lines to raise grievances.
- A lack of oversight, leading to safety concerns for both workforce and customers.

Local labour laws vary greatly between countries, creating different types of gig economy. Some governments are introducing new regulations to give workers in the gig economy additional employment rights, such as holiday pay and a decent wage. Where implemented, such changes can have a significant impact on the cost base of the effected company.

Good management practice – Employment in the gig economy

- **Ensure there is a good understanding of how HR laws interpret gig economy workers and how these may evolve in their countries of operation**. The employment status of gig economy workers varies between countries and is sometimes considered a grey area between employee and contractor. Both the company and its investors will also need to understand the sensitivity of a company's profitability to planned or potential changes in regulations around the classification and rights of workers in the gig economy.
- **Establish a grievance mechanism that is readily accessible to all workers, including contractors and independent service providers**. This should allow grievances to be raised on an anonymous basis, without fear of retribution, and include a formal process for addressing and closing issues raised. This will help the company to identify and address any issues with its workers before they escalate into more significant problems.
- **Measure normalised earnings of the independent service providers and compare with minimum and living wages**. While there might be data-collection and methodological challenges involved, companies should try to collect and analyse these data, if for no other reason than to answer criticisms factually. Also, data collection and analysis might reveal that excessively long hours – including those that might imperil users' H&S – are required to earn a reasonable wage.

Case study: Reputational risks inherent in certain business models

A VC fund manager consulted for this report described a pipeline deal in a gig economy platform that connected care-givers to those in need of care. However, due diligence showed that the company had insufficient controls in place to mitigate the risk of carers being abusive to vulnerable patients. Background checks were deemed to be insufficient to mitigate the risks. In the absence of more robust preventative measures, the fund manager decided that the risks and associated reputational impacts were too significant to proceed.

Companies in the gig economy are often unable to exercise significant control or supervision over their contractor workforces, which can lead to increased H&S and safeguarding risks for customers, particularly those from vulnerable groups. Investors need a clear understanding of these risks and whether mitigation measures can reduce the risk to an acceptable level.

2.2.1.5 Attracting and retaining talent

Attracting and retaining the best talent is particularly important for VC-backed companies. For example, there is a global talent shortage of experienced computer programmers and many emerging markets often have few skilled workers. VC-backed tech companies can operate in niche areas that require substantial training and development. Research from LinkedIn indicates that the tech industry had the highest turnover rate in 2017 at 13.2 per cent, and it cites high demand and rising compensation as a key driver for this.[16] Increasing global mobility also increases demand and poaching of top talent.

The costs to a business of employee turnover are significant. While costs vary between sectors and businesses, estimates suggest they could be in the region of 50 per cent of salary for entry-level positions, 125 per cent of salary for mid-level positions, and over 200 per cent of salary for senior executives.[17] Conversely, the development of strong HR processes that attract and retain talent can add significant value to a company.

Loss of intellectual property is a significant risk in the tech sector and can be particularly damaging for start-ups. The departure of key staff can result in the loss of innovative ideas and can include the theft of intellectual property by disgruntled ex-employees. This could potentially aid a competitor in developing and launching a product to market first.

Recruiting new talent is a significant challenge for start-ups. Small companies typically have very limited HR resources. Therefore, identifying, recruiting and developing new talent can be particularly difficult.

Good management practice – Attracting and retaining talent

While compensation and benefits play a significant role in attracting and retaining talent, companies can also focus on:

- **Implement formal hiring practices and apply these consistently**. A critical part of retaining talent is to ensure the right people are hired in the first place.
- **Provide opportunities for career development**. Formal systems and processes for career development are typically limited at small companies. However, it is important that managers provide feedback on performance, understand how employees want to develop and provide relevant support. Training and professional development can significantly boost retention, as well as enhancing performance.
- **Support career advancement**. A lack of advancement is regularly cited among the top reasons why people leave a job. Management should support lateral moves within a company as a way of retaining employees when advancement opportunities are limited.
- **Engage employees regularly**. Regular platforms for two-way communication between management and employees is important. Employee engagement surveys and employee forums provide opportunities for anonymous feedback, and identify areas for improving employee satisfaction and retention.

Case study: Andela – Attracting and developing talent

Andela provides full-time software engineers based in sub-Saharan Africa to support global clients. The company recruits people with raw talent and gives them intensive training to become computer programmers.

Andela has successfully recruited and trained over 1,100 developers since 2014, and established tech campuses in Kenya, Nigeria, Rwanda and Uganda, along with offices in Egypt and Ghana. Andela's main asset is its employees. Andela's ability to attract, develop and retain top talent is crucial to its business model.

Andela engages heavily with its employees to understand what matters to them and how to maximise their productivity. Examples of the issues identified and Andela's responses include:

- A loss of productivity from working on old machines that break down.
  - Andela now provides its employees with a brand-new Apple Mac.
- Too much time lost commuting in heavily congested cities such as Lagos.
  - Andela now provides lodging close to offices for those who need it.
- Employees relying on one large carbohydrate-heavy meal a day.
  - Andela now provides employees with regular meals and snacks.

These benefits are provided alongside a range of others, including the intensive training and comprehensive healthcare. A relatively flat hierarchy, which emphasises a collaborative and co-operative environment, is also seen as an attraction.

Andela's talent programme also focuses on gender diversity. Over 50 per cent of non-programmers and 20 per cent of programmers are women, and the company has ambitious goals to increase this further. The biggest challenge is a lack of female applicants, so Andela is providing mentoring and support to young women to create a talent pipeline.

2.2.2 Gender

Female founders receive a small fraction of total VC investment, highlighting a significant pool of untapped talent. A 2018 study by Boston Consulting Group showed that businesses founded by women deliver higher revenues than those founded by men, generating more than twice as much per dollar invested.[18] However, only two per cent of VC-funded firms have a female CEO.[19] This is not only a supply issue, but also results from implicit bias in the investment process and homogenous investor networks that can leave strong female-led firms without adequate investment. Experiential studies have shown that pitches are 60 per cent more likely to receive funding when delivered by men rather than women, even when the content of the pitch is identical.[20]

Companies can improve their financial performance through improved gender balance at board and senior management levels. There is growing evidence of a positive correlation between a company's financial performance and having women in senior positions.[21] However, fewer than five per cent of VC-funded firms have women on their executive teams.[22] Similarly, there are likely to be benefits from having a diverse workforce at all levels.

The rise of 'gender-lens investing' provides new funding opportunities for companies with business models that have a positive impact on women across the value chain. Gender-lens investing targets businesses that advance women in leadership positions, promote employment for women, and deliver products and services that improve women's lives. A 2018 study by the Wharton School identified 87 funds deploying capital with a gender lens to 828 companies in 2018, a significant increase from the 58 funds deploying capital to 524 companies in 2017.[23] In addition, the 2X Challenge has been established by the G7 DFIs to promote and mobilise more investment in women's economic empowerment.

Fund manager level – Gender

Greater diversity helps fund managers to identify a wider spectrum of investment opportunities, avoid 'group think' and enhance returns. Based on a study in the Harvard Business Review of over 2,300 global venture and micro-venture fund managers, only eight per cent of full-time investment partners are women.[24] This trend extends across all regions. However, research shows a strong positive correlation between the proportion of female partners and financial performance. VC firms that increased female partner hires by 10 per cent saw an average spike of 1.5 per cent in overall fund returns each year, and 9.7 per cent more profitable exits.[25] However, only 15% of senior investment teams across PE and VC are gender balanced (defined as 30 to 70 per cent female).[26]

Good management practice – Gender equality and women's economic empowerment

Make sure investors are aware of opportunities and biases. Fund managers should be aware of the significant untapped opportunities to invest in high-quality female-founded, female-led and female-inclusive businesses, and the potential financial outperformance that such opportunities could present. Fund managers should also be aware of potential biases in their investment processes, and incorporate safeguards such as training on unconscious bias.

Ensure business models fully incorporate female consumers. Companies should understand the female consumer base for their products and services, and explore the potential for untapped female markets.

Promote gender diversity in recruitment. Companies and fund managers should incorporate the following measures into their recruitment processes:

- Market and advertise positions proactively to female candidates using gender-neutral job descriptions.
- Use competency-based recruitment processes with standardised interviews and evaluation criteria.
- Ensure salaries at the job-offer stage are equal.
- Protect against unconscious bias.

Support retention, development and advancement of women. Measures could include the following:

- Ongoing performance evaluations should be well structured, including objective evaluation criteria and guidelines for giving consistent feedback that is actionable and specific.
- Highlight role models by showcasing female leaders in the company.
- Provide mentoring to high-potential women to help them navigate their career path, and qualify for promotions and key assignments.
- Provide flexible working arrangements where feasible. A study by Boston Consulting Group found that 58 per cent of female employees cited flexible working arrangements as the most effective intervention for improving gender diversity across all industries worldwide.[27]
- Develop maternity and paternity policies. At a minimum, companies and fund managers should follow local regulatory requirements.
- Ensure decision-making panels for promotions are diverse, to avoid affinity bias from male-dominated panels.
- Regularly calculate whether there is gender pay gap (the difference in mean salaries between men and women across the company). Where a pay gap is identified, measures should be implemented to address this.

Manage other types of diversity and equal opportunity. Other types of diversity and inclusion should be actively managed through a similar approach to ensure equal opportunities across minority groups. Companies and fund managers should develop equal opportunity and anti-discrimination policies, and ensure that their HR-related processes and decision-making incorporates the principles of diversity and equal opportunity.

2.2.3 Disruption and regulatory change

VC-backed companies typically use new models or technology which disrupt the status quo. Sometimes these companies operate ahead of local regulatory frameworks, especially in emerging markets. As a result, there may be little or no regulatory oversight. Where companies are effectively self-regulating, investors can play an important role in ensuring that responsible practices are implemented. Operating in a responsible manner should protect the company from a customer backlash and prepare it for tougher regulatory conditions.

Case study: Mobile gambling in East Africa

Mobile gambling has grown rapidly across East Africa in recent years, particularly in Kenya, Uganda and Tanzania. Increasing mobile phone and internet penetration has contributed to the rise of gambling apps.

As a result, addiction has become a significant challenge, especially among younger unemployed people who turn to mobile gambling in the hope of winning easy money. According to a 2016 report by Digital Skills Observatory, a third of Kenyans now use their phone for betting.[28]

National authorities are beginning to address the negative social impacts. Regulatory action has particularly targeted foreign betting firms that send profits abroad. In Uganda, the government announced in January 2019 a ban on the registration of new foreign betting companies, while existing ones will not have their licences renewed. In Kenya, the government is planning to introduce a new tax regime for mobile and online gambling.

Case study: Regulatory challenges for ride-sharing companies

When the ride-hailing company Ola began operations in India in 2010, it was not covered under the existing Motor Vehicle Rules of 1988. Since then, it has been repeatedly hit by temporary bans as national and local regulators have scrambled to develop appropriate frameworks. Ola does not own cars or directly hire drivers. The company therefore argues that it is merely a technology provider that helps connect drivers to customers. The lack of clarity around national regulations has resulted in vehicle seizures and driver fines. In India, traditional cab companies and taxi unions have also stepped up strikes and protests against aggregators such as Ola.

Similarly, a bus-sharing company called ZipGo Technologies had to suspend operations in Bengaluru, Karnataka, in December 2015 after it was sanctioned for violating rules and operating without permits. According to regulators, there was no provision for ZipGo to operate services that directly compete with the state-run city bus service under the Karnataka Motor Vehicle Rules of 1989.

2.2.4 Supply chains

There is increasing scrutiny on businesses to consider ESG issues in their supply chains. Companies can be severely affected by serious ESG incidents at supplier firms, with potentially significant impacts on reputation and brand value, and loss of customers and consumers. Many VC-backed companies rely on outsourced service providers, which can create risks. For example in the agritech sector, companies may aggregate produce from a large number of smallholder farmers. The agritech company could therefore be accused of profiting from poor labour practices, including child and forced labour.

VC-backed companies with exposure to agriculture, manufacturing and cleantech are likely to face particular risks. For example:

- Hardware and other electronics may contain so-called conflict minerals (tantalum, tin, tungsten and gold) mined from fragile and conflict-affected states, such as the eastern provinces of the Democratic Republic of Congo (DRC). The extraction of conflict minerals is associated with human rights abuses and can fund local militias. There has been significant regulatory scrutiny of conflict minerals in recent years, including supply-chain auditing requirements under the US Dodd–Frank Act.
- Cobalt is a critical component of lithium-ion batteries and is widely used in the cleantech sector. The DRC has the world's largest reserves of cobalt. Therefore, products containing cobalt face similar supply-chain risks as conflict minerals.

Proactive supplier engagement can also provide significant opportunities. In addition to the mitigation of risks, a supplier programme can provide upside benefits such as a more robust and reliable supply chain, and improved access to markets. Where there is the potential to engage directly with suppliers, the company may also benefit from improved product quality, optimised delivery schedules and reduced costs.

Case study: Soko – Maximising opportunities and mitigating risks in the supply chain

Soko is a VC-backed jewellery business based in Kenya that designs ethically sourced, fast-fashion jewellery and accessories. The company sells to consumers in developed markets through hundreds of fashion boutiques, large retail chains and directly to consumers through the company's e-commerce channels.

Soko manages its production via a growing network of over 2,000 Kenyan artisans. Soko partners with its artisans, enhancing production skills and quality, supporting them to manufacture new designs and helping them to build their workshop assets. The artisans can increase their incomes by 4–5 times by partnering with Soko, relative to making jewellery independently.

However, poor working conditions are a key ESG risk. With financial support from Novastar, one of Soko's VC investors, the company hired a consulting firm to assess and design mitigation measures. The consultant's recommendations have been implemented, including:

- Development of OHS and labour policies that meet international standards on handmade manufacturing enterprises.
- A loyalty incentive programme that encourages artisans to improve their ESG practices. As an example, the loyalty programme gives artisans preferential access to loans for equipment or workshop improvements.
- Training over 2,000 artisans in 150 workshops on fire safety, first aid, use of personal protective equipment, environmental issues and compliance with labour law, and identifying a safety champion in nearly 30 workshops who will receive ongoing training.

This engagement contributes to better working conditions in the workshops, creates stronger relationships with the artisans, improves the quality of products, develops a more robust supply chain and acts as a potential differentiator with end consumers interested in buying from an ethically minded company.

Good management practice – Supply chains

- **Develop a supplier code of conduct**. Companies should develop a supplier code of conduct, incorporating human rights, labour standards and environmental expectations. Suppliers should be asked to adopt the code – or provide an existing code – as part of the procurement process.
- **Undertake an initial screening to identify potential ESG risks and opportunities in the supply chain**. This exercise should include an assessment of outsourced service providers, partners and platforms that the company interacts with. It could begin with primary suppliers and expand to secondary and tertiary suppliers, as appropriate or applicable, over time. However, most VC-backed companies are likely to have low-risk supply chains.
- **Engage with suppliers**. Where potential ESG risks or opportunities are identified, the company should engage with the relevant supplier to clarify whether these are being adequately managed, and request improvements where necessary. Small companies often have limited or no influence over their suppliers, so where suppliers show no willingness to engage and address potentially material risks, the company should consider collaborating with others to increase leverage, or switching to an alternative supplier.

2.2.5 Data privacy and ethical use

Data privacy is a core business issue for many tech companies, which often handle large amounts of personal information. The privacy of customer data is a key concern for customers and regulators. Privacy is a fundamental human right recognised in many international and national human rights conventions.

Regulations on selling customer data vary greatly between countries. Where countries do not have strict regulations, the use of customer data may rely on self-regulation, which is open to abuse and unethical practices. Companies may suffer a significant backlash from customers where data has been mishandled. Similarly, the business model of companies that rely on readily available data can be severely damaged by changes in the regulatory environment.

Health data is particularly sensitive and some health apps face significant risks associated with user privacy. A 2019 study by the British Medical Journal found that several popular health apps share data with other companies.[29] This could lead to private health information being passed onto other organisations such as credit agencies and insurance companies or used to target advertising. The study also found a significant lack of transparency, with data being shared despite developers often claiming that they do not collect personally identifiable information.

There is also a risk of tech-based companies perpetuating harmful societal biases. For instance, the baseline data used by artificial intelligence (AI) may contain biases or gaps. As a result, outputs from AI may unintentionally reinforce prejudices based on gender, ethnic or religious grounds, among others. For example, income and assets in many developing countries are counted on a household basis and are often credited to the male 'head' of household. This can significantly undervalue women's economic contribution and earning power, which could negatively impact a women's ability to take out a loan. Conversely, identifying such a bias could represent a business opportunity.

Assessing potential data biases and developing mitigation measures may reduce the risk. Diversity at all levels of the business and formal governance mechanisms – such as an ethics committee – may also be beneficial. Several large AI ethics organisations have been founded in recent years, such Oxford's Institute for Ethics in AI, which may increasingly shape the debate.

Good management practice – Data privacy

- Be transparent about how data is gathered, used and secured, and how it might be shared or disclosed to others. This can be set out in a data privacy notice, with the information provided in a clear, concise and easily accessible manner.
- Collect as little personal data as possible.
- Only collect data by lawful means.
- Do not disclose personal customer information, except with clear consent.
- Directly communicate to customers any changes in data protection policies or measures.
- Consider how long data needs to be held. For example, some jurisdictions have a right to be forgotten.
- Assess input data and manipulation processes. Companies should assess whether input data could contain harmful biases or inaccuracies. Identifying biases should allow the company to develop mitigation measures.
- Consider aligning with good practice, such as the OECD Privacy Guidelines.

Fintech: Unintentional discrimination in algorithms

A VC fund manager consulted for this report described how a fintech company providing software for microfinance lenders in India developed a credit algorithm for customers which was found to have a negative bias against people from a certain region, regardless of their credit-worthiness. This was unknown and invisible both to the developers of the algorithm and the lenders, and while unintentional, it nonetheless resulted in the unlawful discrimination against certain groups and individuals.

2.2.6 Data security

Data security is of critical importance to tech companies. A major breach can cripple a company's operations and result in a loss of customers, legal proceedings, fines and significant reputational damage. Cybersecurity issues have increased in frequency and severity in recent years, with cyber criminals becoming increasingly sophisticated. While the US has had the most data records lost or stolen since 2013, India is the next biggest hotspot, followed by China.[30]

Global regulations on data privacy and data security are becoming more stringent. For example, the EU General Data Protection Regulation (GDPR) has put strict new requirements on the use of personal data by all companies that have customers in the EU. The scope of GDPR and similar regulations therefore extends well beyond companies that are physically based in the EU, including to emerging markets..

Good management practice – Data security

- **Follow simple guidance on the basic steps for cyber security at small companies**. For example, see Cyber Essentials. Good practice steps include developing policies, establishing effective firewalls and anti-malware software, extending security measures to mobile devices, controlling access to data and services, using robust practices for backing up data, and training employees.
- **Consider aligning with international standards**. While formal certification may be inappropriate for start-ups, international standards can be a useful point of reference for developing a data security management system. There are various global standards, including ISO 27001.

Case study: Impact of data security breaches on company reputation and valuation

Many global tech companies have been affected by high-profile data breaches, including Yahoo, Uber, Facebook and Reddit, among many others. Research suggests that data breaches can have significant negative impacts on the share prices of listed companies, both in the short and longer term.[31]

While the impacts on private companies are harder to quantify, breaches can result in significant reputational damage. For example, a hack at Zomato (an Indian food delivery app) in 2017 impacted the accounts of 17 million users. Customer details were subsequently available for sale on the dark web. As a result, the company had to ask all users to reset their passwords and provide guidance on data security.

03

ESG integration at VC funds

VC fund managers should integrate ESG into their investment processes to manage risks and opportunities. Effective integration requires adopting simple ESG processes throughout the life cycle of a fund. These processes represent the fund or fund manager's ESG management system. It is good practice to document this management system in a short manual.

This section draws on existing good practice for PE funds, but tailors the guidance for VC. While good practice for VC funds aligns with existing PE frameworks,[iii] VC typically faces a different risk profile and more limited ESG capacity (at the fund manager and portfolio company level). Therefore, a streamlined approach is typically appropriate for early-stage VC funds. Nonetheless, each management system should be carefully adapted to the specific fund strategy.

The following sub-sections provide an overview of the main components of an ESG management system for early-stage VC funds. For larger-cap or later-stage VC funds, a more detailed PE-style management system may be more appropriate.

3.1 Responsible investment policy

VC fund managers should identify a core set of responsible investment principles and values. These should be captured succinctly in a responsible investment or ESG policy. Good policies typically set out a firm's values and how these apply to their investment style. The policy should be clear, concise and signed by a senior partner. The policy should be communicated to all team members. In some cases, it may be beneficial to disclose the policy via a website.

The policy and management system should be reviewed at least annually and updated as necessary. The update should reflect dynamic risks and opportunities, new ESG themes and improvements based on experience implementing the management system.

3.2 ESG requirements

The ESG management system should clearly state the ESG requirements that the fund plans to apply to its portfolio. Adopting international ESG standards is particularly important when a fund is investing in emerging markets (where national regulations and enforcement may be weaker) and across multiple jurisdictions (where standards may vary significantly between countries). Investee companies are unlikely to fully comply with these requirements at the point of investment. However, the fund manager should agree an appropriate timeline with the company to align with these requirements. For fast-growing companies, improvements might be tied to specific milestones. For example, hiring an HR manager when the company has X employees or developing an e-waste management policy when sales pass Y threshold.

At a minimum, it is recommended that VC fund managers adopt the following ESG requirements for all investee companies:

- All applicable ESG-related laws and regulations in the jurisdictions where the company operates.
- The ILO core conventions on forced labour, child labour, equal remuneration, discrimination, freedom of association and collective bargaining.

Fund managers should also consider adopting an exclusion list. All DFIs and many other responsible investors have exclusion lists that they require their fund managers to replicate. Even when current LPs do not have specific requirements, an exclusion list could help to protect the firm from reputational damage and help with future fundraising. Commonly excluded sectors include:

- Arms industry – For example, drones or software that improves the accuracy of weapons.
- State security – For instance, face-recognition technology that could contribute to human rights abuses.
- Gambling
- Prostitution
- Pornography

Fund managers should also consider their approach to companies which supply controversial sectors. For example, a software firm whose only clients are in the gambling industry might also pose reputational risks.

Companies with fluid business models can create additional risks and complexity. Early-stage VC funds may invest in a business before its strategy is clearly defined. This creates the risk of an unexpected pivot in strategy that the fund manager or LPs find ethically challenging. Potential mitigation measures include careful consideration of a company's possible trajectory before investment, veto rights, inclusion of the exclusion list in legal agreements and a board seat, among others.

3.3 ESG roles and responsibilities

Roles and responsibilities for ESG should be clearly defined within a fund's ESG management system. Different approaches include:

- **A member of the investment team taking responsibility**. A single ESG officer – rather than spreading responsibility across the team – is desirable because it ensures consistency across a wide portfolio and allows for a concentration of skills and experience. Ideally, the ESG officer will regularly engage with investees. Active management of ESG adds much more value than back-office reporting alone.

iii See CDC's ESG Toolkit for Fund Managers: Fund E&S management systems: https://toolkit.cdcgroup.com/management-systems/fund-esms

- **Outsourcing to external consultants**. External ESG specialists can help develop a fund's ESG management system. Consultants can also provide support with due diligence and monitoring, particularly for higher-risk investments. However, experience in the relevant sector is crucial to ensure that the consultant adds value. For lower-risk deals, fund managers could consider expanding the scope of other providers. For example, legal due diligence can cover compliance with national labour laws.
- **Hiring a dedicated ESG officer on a full or part-time basis**. While this approach is increasingly common in the PE industry, it is less common in VC firms. Nonetheless, VC fund managers investing in sectors with higher ESG risks or that want to become ESG leaders should consider this approach.

A senior partner should also have oversight of ESG and responsibility for ensuring that the firm has appropriate capacity. Training should be provided to investment teams and other employees with ESG responsibilities.

Case study: Novastar – ESG management in practice

Novastar is a VC firm that invests in sub-Saharan Africa, focusing on companies with innovative business models that widen access, improve quality and lower costs for the mass market.

Novastar agrees a legally binding ESG action plan, focusing on material issues, with company management at the pre-investment stage. The firm also supports new investee companies to develop a basic environmental and social management system to ensure that key ESG issues are managed effectively.

A representative from the fund will typically sit on the portfolio company's board, and the firm ensures ESG is included as a standing item on the board agenda. Investee companies are required to provide quarterly updates of progress against their ESG action plan, and material ESG incidents are reported immediately to the fund, which reports these onwards to its investors. The ESG action plan is reviewed and updated during each subsequent funding round. ESG expectations typically increase as the company grows.

3.4 Actions by stage of investment

Appendix A summarises the recommended ESG actions for VC fund managers at each stage of the investment cycle. This includes simple and practical actions that should be implemented during screening, due diligence, monitoring, follow-on investments and exit.

The time and effort committed to ESG at each stage should be commensurate with the scale of risks and opportunities. This will depend on:

- The inherent risk of the sector.
- The extent of its physical operations.
- The size and stage of investment.

Many VC-backed companies will ultimately fail and should be wound up responsibly. Each time a company fails, it is likely that employees will lose their jobs. Particularly in emerging markets, workers may be more vulnerable and less able to quickly secure another role. While this is an unavoidable part of VC investing, VC firms – particularly when they hold board seats – should push for responsible winding up. Meeting regulatory and investor requirements can reduce legal risks and protect a VC firm's reputation.

Good management practice – Managing failure

- **Use proper and transparent communications**. These should ensure that entrepreneurs and employees are informed about key decisions in a timely manner.
- **Consider developing a common retrenchment / redundancy framework**. Funds could develop a common retrenchment framework that aligns with local legal and international standards, such as the payment of severance packages in a timely manner (see IFC's Good Practice Note: Managing Retrenchment).[32]
- **Give advice about welfare support**. This should be shared with company management, who can in turn provide it to their employees.
- **Provide guidance for investment teams**. This should set out appropriate steps on managing companies that fail.

3.5 ESG reporting and disclosure

Fund managers should consider preparing an annual ESG report. Whether or not LPs require an annual ESG report, it provides an opportunity to highlight the fund's active management of ESG issues, the operational value added to investees and the impact achieved by the portfolio. The metrics tracked in an annual ESG report can also demonstrate improvements over time; potentially providing data that helps with exits and fundraising. PE funds and impact investors are increasingly disclosing ESG data publicly. VC firms have an opportunity to differentiate themselves through similar disclosures.

Fund managers should also record data about serious incidents and – where required – report to LPs. Serious incidents typically include fatalities, severe injuries, harassment, material breaches of the law, strikes and major fires. For example, companies with large workforces engaged in higher-risk activities, such as logistics, are likely to be particularly exposed to serious accidents. Incident investigations should identify the root causes of accidents and identify corrective actions. Monitoring and analysing serious incident data is also important for preventing recurrences. For instance, analysing accident data in the logistics industry might highlight specific routes, times of day, models of vehicle or drivers who present higher risks. Clear corrective actions can be implemented for each root cause and help the company to improve over time.

Appendix A – ESG actions by stage of investment

The following table summarises the recommended actions for a VC fund manager to consider at each stage of the investment cycle.

The time and resources committed to each stage should match the scale of ESG risks and opportunities associated with the investee company.

Recommended actions	References or tools
Stage 1 – Screening	
Screen for ESG-related 'fatal flaws' in the business model. Assess whether investee company operations involve (or are expected to involve) any excluded activity.	Exclusion list
Stage 2 – Due diligence	
Analyse potentially material ESG issues and assess the company's performance against the fund's ESG requirements. Due diligence actions could include requesting relevant ESG documentation, reviewing publicly available information and meeting company management. Consider a site visit for higher-risk businesses with a physical footprint.	Appendix B – High-level ESG due diligence questionnaire for VC
Consider potential ESG implications from foreseeable changes in the business model.	
Include a streamlined summary of ESG issues in the investment committee paper.	Appendix C – Template for IC papers
Where appropriate, agree an ESG action plan to address material ESG risks and opportunities following investment, including milestones that reflect the fast growth of VC-backed companies.	
Incorporate ESG clauses in legal agreements, as required.	Appendix D – ESG legal considerations for equity agreements
Stage 3 – Monitoring	
Engage with the company on material ESG issues through the holding period, addressing due diligence findings and encouraging ongoing ESG management as the company grows.	
Adopt a risk-based approach to portfolio management, with greater engagement on higher-risk companies.	
Re-assess risks and opportunities when the company passes certain thresholds, with the fund manager setting its own risk thresholds as appropriate. For example, when more than X people are employed, when there are X customers / users, or when operating X vehicles / locations.	
Monitor applicable key performance indicators. For example, employee retention rate, number of ESG non-compliances, H&S incidents, customer complaints or number of data security breaches.	
Stage 4 – Follow-on investments	
Re-assess ESG risks and opportunities during each follow-on round of funding. Use new funding rounds to check for improvements and confirm that previous requirements have been fully addressed. Include an updated ESG action plan and ESG legal clauses in new legal agreements, as appropriate.	Appendix B: High-level ESG due diligence questionnaire for VC Appendix D: ESG legal considerations for equity agreements
Stage 5 – Exit	
Support the company in demonstrating to potential investors how ESG risks have been mitigated and opportunities realised.	
To the extent possible, ensure that good ESG practices remain in place following exit. For example, by ensuring that the company has a self-sustaining ESG management system.	

Appendix B – High-level ESG due diligence questionnaire for VC

The following questionnaire is a generic template for VC funds during ESG due diligence.

Indicative questions for all companies:

- Who has overall responsibility and oversight for ESG? What resources are available for day-to-day management of ESG issues?
- Does the company have any processes or systems in place to identify and manage ESG risks and opportunities, including those associated with its supply chain? If yes, please provide relevant documentation.
- Do all employees have a formal contract of employment? Is there a human resources policy in place and/or employee handbook? How does the company ensure compliance with national employment regulations? If the business model relies on lower-skilled workers, further due diligence on labour issues – such as child labour or minimum wage – may be appropriate.
- Is the company aware of any potential health and safety risks for its staff, customers and supply-chain partners? If yes, how are these risks managed?
- Please provide details of the company's data security policy. What processes does the company have in place to protect sensitive data (such as customer and employee information)? Has the company implemented an IT security management system?
- Has the company experienced any ESG-related incidents or regulatory non-compliances, including H&S, labour, data security or environmental issues? If yes, please give details on the root causes and corrective actions.

Indicative questions for manufacturing, agriculture and healthcare start-ups:

- Describe any chemicals / hazardous substances used or present on-site, including storage and handling arrangements.
- Does the company consider and incorporate the use of more environmentally friendly and safer raw materials / chemicals in the production process?
- What are the main types of waste generated? How are these managed and disposed of? Has the company implemented any waste management initiatives to minimise or reuse / recycle waste?
- What are the company's energy and water sources? Are there any initiatives to monitor usage, reduce consumption and improve efficiencies?

Appendix C – Template for IC papers

Where the findings of the ESG due diligence are material, it is important to communicate them to the fund's investment committee (IC). The findings will allow the IC to make an informed decision and may help triangulate the outcomes of other due diligence workstreams.

IC Paper – ESG comments	
Risk category	(Low, medium-low, medium-high or high)
Current risks and opportunities	
Long-term risks and opportunities	
Founders' commitment to ESG	
Gaps against fund's ESG requirements	
Estimated cost of corrective actions	
Limitations of ESG due diligence	

Appendix D – ESG legal considerations for equity agreements

Fund managers should seek to include relevant ESG legal clauses in equity agreements with investees. These clauses help set expectations with investee companies, provide useful protections and allow fund managers to formally meet the expectations of their LPs.

This appendix is for guidance purposes and provides an outline of the areas that should be considered. It does not consist of actual clauses that can be inserted into equity agreements. Legal specialists should be engaged for legal drafting.

Recommended topics to consider:

- **Excluded activities** – Representations, warranties and covenants that the company is not and will not engage in excluded activities.
- **ESG compliance** – Representations and warranties that breaches of ESG laws have been disclosed. Covenants ensuring ongoing compliance with the fund's ESG requirements.
- **ESG claims** – Representations and warranties that no ESG-related claims have commenced or been threatened against the company.
- **Adherence to ESG action plan** – Where the company does not currently comply with the investor's ESG requirements, an ESG action plan – which closes the gaps against the ESG requirements over a reasonable timeframe – should be included in the legal agreement.
- **Serious ESG incidents** – The company must notify the investor promptly (e.g. within three days) in the event of a serious ESG incident occurring and provide details of proposed actions to remedy the situation. The legal clause should clearly define what constitutes a 'serious ESG incident'.
- **Information and inspection rights** – The fund should have access to ESG information and the right to conduct site visits on a periodic basis.

Appendix E – International standards and good practice

The international standards typically applied by DFIs in emerging markets are not tailored for very early-stage companies in the tech industry. Nonetheless, they may be a useful point of reference and later-stage investors may expect alignment.

IFC Performance Standards on Environmental and Social Sustainability

The IFC Performance Standards are used as the key reference framework by many DFIs. There are eight performance standards set out over 50 pages. Each standard also has an associated guidance note. The standards address the following topics: assessment and management of E&S risks and impacts; labour and working conditions; resource efficiency and pollution prevention; community health, safety and security; land acquisition and involuntary resettlement; biodiversity conservation; indigenous peoples; and cultural heritage.

www.ifc.org/performancestandards

World Bank Group Environmental, Health and Safety (EHS) Guidelines

The guidelines are technical documents – linked to the IFC Performance Standards – which contain good international industry practice for a range of sectors.

www.ifc.org/ehsguidelines

ILO Fundamental Conventions

The ILO's core conventions set out basic principles and rights at work. Most countries have ratified all or part of the core conventions. They include forced labour, child labour, equal remuneration, discrimination, freedom of association and collective bargaining.

www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm

UN Guiding Principles for Business and Human Rights

The principles set out standards for preventing and addressing the risk of adverse human rights impacts linked to business activity.

www.ohchr.org/documents/publications/GuidingprinciplesBusinesshr_eN.pdf

Sustainable Development Goals

The 17 goals address global challenges, including poverty, gender equality, clean energy and innovation. They are not a standard that investors and companies can explicitly comply with, although it may be possible to align with individual goals.

www.undp.org/content/undp/en/home/sustainable-development-goals.html

Appendix F – Interviewees

We would like to thank interviewees from the following organisations, who have contributed expertise and guidance to the development of this report:

VC fund managers

- Aavishkaar
- Accion Venture Lab
- Ada Ventures
- Church Commissioners (Church of England)
- CRE Venture Capital
- Earth Capital Partners
- Endeavour Insight
- Energy Access Ventures
- Novastar Ventures
- Omnivore
- Partech Partners
- pi Ventures
- Stellaris Venture Partners
- VentureEast

VC-backed companies

- Andela
- Big Basket
- M-Kopa
- PayGo Energy

DFIs

- CDC Group plc
- Dutch Good Growth Fund
- FMO
- International Finance Corporation
- Swedfund

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