ESG Integration Into Venture Capital

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Abstract

Although ESG (Environmental, Social, and Governance) research on companies and investment portfolio is widespread, most of data and research is from established companies, driven by the increasing societal emphasis on sustainability and adherence to evolving compliance standards. However, there is a lack of ESG-focused studies on early-stage and venture capital. This study seeks to fill the gap in research on the ESG maturity of start-ups by surveying 225 start-ups in the portfolio of a UK- based venture capital, thereby providing a unique insight into the overall awareness of ESG among start-ups by presenting genuine samples. The findings provide implementation advice on optimal approaches to incorporate ESG issues into venture capital, and improve and leverage the dynamic between venture capital and start-ups to influence start-ups to adopt and comply with ESG integration.

Keywords: ESG, venture capital, startup, UK

1 Introduction

This study, conducted in 2021, is in collaboration with ABC Capital (ABC), a pseudonym used for privacy purposes. ABC Capital, a UK-based early-stage investment fund manager and business angel network founded in 2012, provides seed capital and support to promising international start-ups. The combination of ABC's angel syndicate and seed investment funds offers a unique investment model enabling business angels to invest directly or through a diversified portfolio, and has invested over £30 million in over 225 companies since its inception.

Environmental, Social and Governance (ESG) criteria, first introduced in the 2006 UN Principles for Responsible Investment (PRI) and the "Who Cares Wins" study, are now being integrated into the financial evaluations of companies [1].

ESG integration, the incorporation of ESG information into investment decisions to improve risk-adjusted returns [2], has increased significantly in recent years. Over $500 billion flowed into ESG-integrated funds in 2021, contributing to a 55% growth in assets under management in ESG-integrated products [3]. According to Bloomberg analysis, assuming 15% growth, half the pace of the past five years, ESG assets under management could climb to more than a third of the projected $140.5 trillion global total by 2025 [4].

As ABC recognised the importance and urgency of ESG strategy formulation and policy implementation for its interests, as a strategic move, and for compliance, this study assesses the ESG performance of ABC's current portfolio to develop an ESG integration plan, support start-ups within its portfolio, and achieve sustainable growth.

To achieve these aims, an 82-question survey is taken in relation to 225 companies within ABC's portfolio, as well as interviews with ESG experts from ESG data service, ESG investment, and the ESG advisory industry, and analysis of ESG integrated financial cases published by the Chartered Financial Analyst Institute (CFA) and the Principles for Responsible Investment (PRI) on individual stock and portfolio levels.

The project survey analyses various ESG criteria applicable to start-ups, including legal due diligence, ESG maturity assessment, resource management, supply chain monitoring, product design, diversity and inclusion training, and data privacy management. The results provide a comprehensive understanding of the portfolio's ESG performance, and the project's ESG performance is mapped against a start-up's ESG benchmark report published by venture capital firm 500 Start-ups in 2020 to comprehend the project's relative competitiveness.

This study details two methodologies and their implementation challenges in real practice compared to theoretical practice in the conclusion and discussion sections, performance and issues revealed by the survey, and interviews regarding daily ESG operation and business models, ESG financial analysis, ESG investment strategy, the power dynamics between venture capital and founders, and sustainable investment regulation compliance.

This study's analyses and recommendations, along with venture capital's efforts, aim to promote sustainable growth of start-ups, venture capital, and society.

2 Literature review

2.1 Drives for implementing ESG in the long term and disputations about ESG investing

ESG is present in every aspect of business, including corporate governance, financial evaluation, corporate strategy, and business model innovation.

Regarding finance and investments, ESG is closely related to sustainable and responsible investment, with its rise attributed to the capital market's need to incorporate ESG information into investment decisions for improved risk-adjusted returns.

Despite ongoing debates about the long-term benefits of ESG investments, it is too early to establish such claims. Companies and investment institutions are receptive to ESG integration due to positive performance, regulatory compliance and capital-raising competitiveness.

Common corporate standards include the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). Early adopters of SASB guidelines include GM, Merck, Nike and JetBlue.

Sustainable measures are also the focus of investor-level regulation. The European Commission introduced The Sustainable Finance Disclosure Regulation (SFDR) in March 2021, which intends to make sustainable investment objects the core of the EU's financial system [5] and will affect financial institutions, alongside the Taxonomy Regulation and Low Carbon Benchmarks Regulation, to impose ESG disclosure requirements on asset managers and financial markets participants. Along with AIFM, managers providing services to AIFM will be affected, including European Venture Capital Funds (EuVECAs).

Fidelity International's report suggests a link between dividend growth and ESG quality, with companies with strong sustainability ratings experiencing the highest historical dividend growth of over 5% in the past five years [6].

However, Critics argue that excessive enthusiasm for sustainability may be inflating the trend without understanding investment drivers and approaches. Past experiences show that "irrational price increases often lead to a predictable decline"1, creating a market bubble driven by momentum.

Barclays compared the MSCI ESG Leaders Index and its parent MSCI ACWI, finding that the ESG Leaders Index had a marginally lower price/earnings ratio, with both around 27 times trailing earnings [7].

2.2 Methodologies on a company level

According to Environmental Finance, and despite disputes, the ESG data and service market, encompassing software, scoring, due diligence, reporting, and analysis, is expected to reach over $5 billion by 2025 due to increased institutional investor interest following the COVID-19 pandemic.

a. ESG scoring and rating

Major providers like MSCI, S&P, and Morningstar use ESG Scoring and rating, with Morningstar's subsidiary, Sustainalytics, covers 13,000+ companies, while MSCI focuses on over 14,800 issuers, 680,000 equity, and fixed-income securities. Said providers employ various methodologies, including fundamental and quantitative analyses, management interaction, and ESG profile review to understand and prepare for future ESG plans.

b. ESG due diligence

ESG due diligence consists of desk research and site visits, including KPI records, proxy records, and management interviews. Apart from the ESG due diligence toolkits offered by consultancies that cover all aspects of ESG, for some real economy sectors, site visits are used to check factors like worker accommodation, manufacturing lines, and the working environment [8].

2.3 ESG integrated financial methodologies

The aforementioned ESG methodologies do not directly correlate with companies' financial performance on solid quantitative grounds. Currently, financial institutions are developing methodologies to determine connections between ESG performance and financial forecasts. For example, the CFA institute has a three-circle framework pertaining to company research, security and portfolio [9].

The security level, as the middle circle, is linked to security valuation, which involves fundamental analysis being applied to adjust previous financial valuations, and contains practices for equities and fixed income securities.

The portfolio level, as the outer circle, contains the following criteria: risk management, portfolio construction, portfolio weightings, portfolio scenario analysis and asset allocation.

2.4 ESG in Venture Capital and Start-ups

In the past year, venture capital have become significantly involved in ESG investment. In 2020, the UK's development finance institution CDC Group published a Responsible Venture Capital report to address the lack of publicly available advice on responsible investment for the venture capital industry.

However, ESG issues were under-represented in the early-stage of their portfolio companies compared to more mature securities in private equity and public funds.

In 2020, the 500 Start-ups Corporate Venture Capital Survey surveyed 93 start-ups, revealing the ESG performance of early-stage start-ups, which serves as a benchmark for this study's discussion and conclusion sections.

500 Start-ups also published the Getting Started with ESG: A GUIDE FOR EARLY-STAGE START-UPS guidance, outlining strategies for start-ups to start focusing on energy efficiency, water usage reduction, waste and recycling, recruitment and hiring diversity, change communication, and other aspects [10]. However, detailed targets were not provided and ESG criteria were limited.

2.5 Summary of current research

Over the past five years, ESG studies on companies and funds have grown, driven by increased awareness of corporate social responsibility and compliance needs, with a focus on corporate ESG issues and ESG investment. ESG investment methodologies are still evolving, thus, a substantiated conclusion has yet to be drawn.

However, two important factors have been neglected. Most studies focus on mature companies and their securities with more years of data, and there is a lack of ESG research on early-stage start-ups and start-up-focused venture capital.

For ESG investment, each financial institution and fund manager has individual algorithms and modifier inputs, making it harder for venture capital to determine the correlation between start-ups' ESG performance and financial performance.

Despite enthusiasm for venture capital ESG integration, no clear guidance exists for integrating ESG issues and investment and complying with regulations.

3 Methodology

3.1 Research Structure

As the basis for the ESG integration strategy for venture capital, two research questions were designed to understand the following areas:

First, in terms of the invested start-ups level: Are start-ups within ABC's portfolio engaging in the best practice of ESG? To resolve the question, two sub-steps were involved:

1. To access the overall ESG performance and maturity of start-ups within ABC's portfolio;
2. To identify the areas of improvement to determine how to best assist them with ESG issues.

Second, in terms of the ESG investment level: Based on the first research question, how does ESG impact the valuation of start-ups and how can venture capitals optimise their investment in the ESG domain? What are start-ups ESG value propositions for investors?

Third, as illustrated below, how should venture capitals comply with the ESG related regulations?

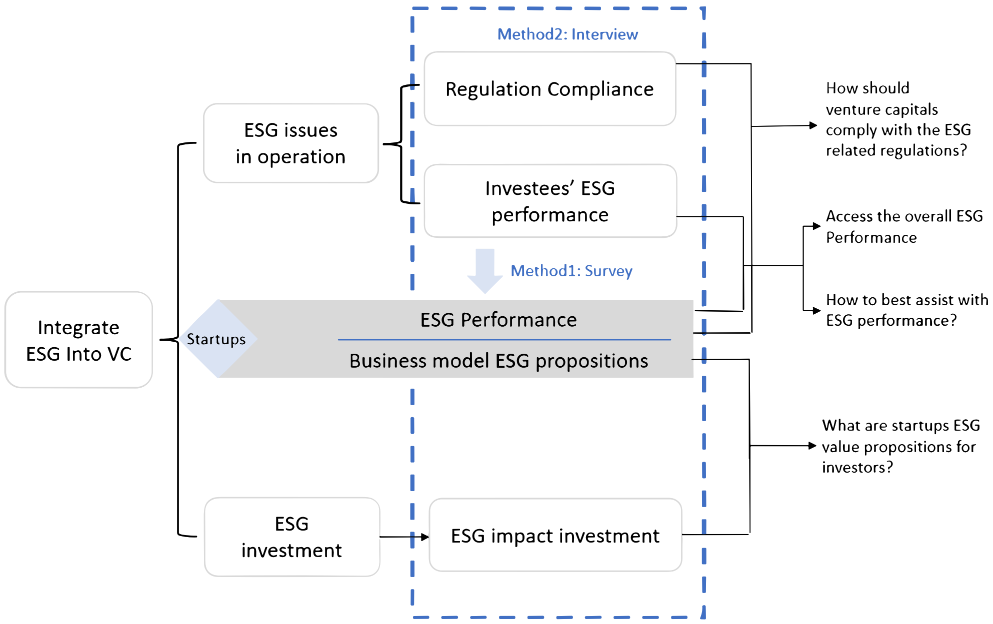

Fig. 1 The roadmap of the present study

For the present study, quantitative research, qualitative research was applied.

3.2 Quantitative research

For the present study, a survey consisting of 81 questions were used, so as to assess the current ESG performance of the start-ups within ABC's portfolio and understand how can ABC's best assist said start-ups to reach their potential and meet regulatory standards. The aim was to conduct the survey with 225 companies within ABC's portfolio from 2nd Aug 2021 to 2nd Sep 2021. Participants filled in the survey anonymously, the whole survey took around 25 to 30 minutes.

3.2.1 Survey design

The survey was designed under the Task Force on Climate-related Financial Disclosures (TCFD) framework and the Global Real Estate Sustainability Benchmark (GRESB)'s ESG due diligence toolkit.

The survey was used to examine the following: respondent profile, current ESG standing and trends, as well as maturity by ESG dimensions in the environment, and social governance. Respondents were notified before the survey that there was no known and reasonably foreseeable risk of harm for responding to the questionnaire. Survey respondents suitable for the survey had to have visibility into company strategy, operational performance, investments, and historical/ongoing/planned ESG efforts.

Aside from ESG maturity, the survey covered legal disclosure questions to business resilience. One legal disclosure question was "Does your company engage in any sectors prohibited by our excluded investment policy?". One business resilience question was "Does your company's business model depend on environmentally scarce and non-renewable resources?"

Through answering the survey, respondents would learn new knowledge and measuring metrics for a company's ESG performance.

3.2.2 Data collection and analysis

Before analysis, the gathered data were prepared. The dataset was checked for missing data and outliers, for which the "outlier labelling rule" was used. All values outside the calculated range were considered outliers [11]. The data were then analysed using the statistical application Qualtrics.

3.3 Qualitative Research

In order to gain further insight into the ESG integration in real practice, semi-structured interviews were conducted with the following ESG experts:

Interviewee 1: Ms J.F, the founder of DEF(a pseudonym used for privacy purpose), an ESG data service provider;
Interviewee 2: Mr Y.L, the equity research analyst of a Swiss based investment bank;
Interviewee 3: Mr E.V, the head of ESG real asset of an international insurance company;

Interviewee 4: Mr T.M, the Director of ESG and Responsible Investment at a. leading financial market advisory company, and the former UK Head of Sustainability and Responsible Investment at one of the big four advisory firms.

Interviews were conducted over the phone and lasted approximately 20 minutes each. Answers were recorded via note-taking.

4 Results

4.1 Quantitative

4.1.1 General

To acquire a general picture of companies in terms of basic non-ESG information, there are 7 aspects that need to be considered, including capital raised, number of employees, sectors of business, business models, product types, and others.

Regarding capital size, because ABC focused on the early-stage seeds round, the average round size was £289k. Thus, most of the answers were concentred in this range [12].

64.29% of the companies that raised capital under £500k; Next, 21.42% of respondents had raised between £500k to £2Million. The highest capital raised was between £10M to £50M.

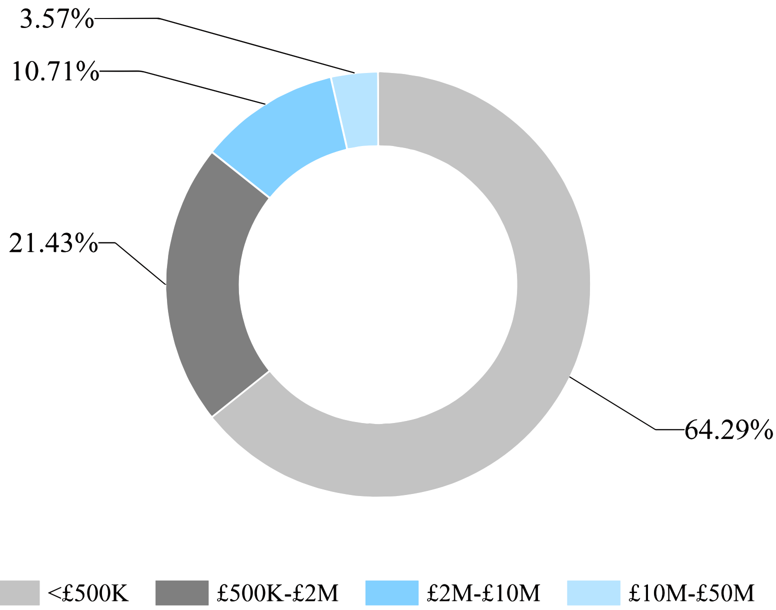

Fig. 2 Capital raised breakdown

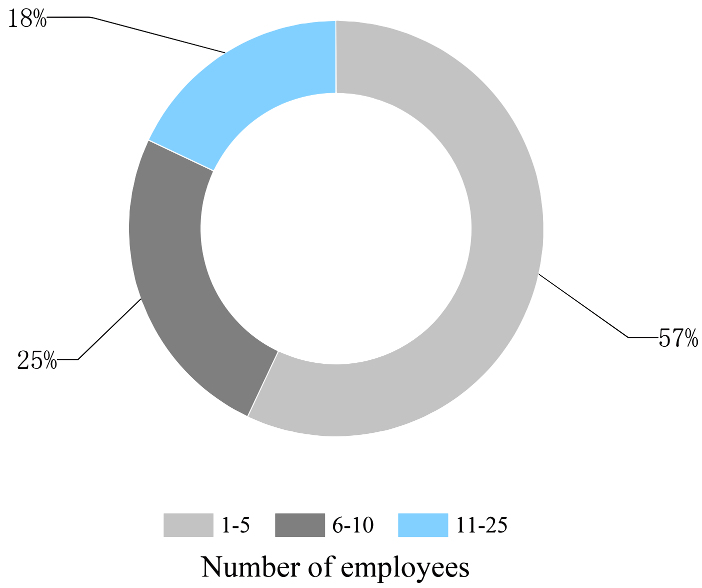

Fig. 3 Numbers of employees

With regard to the number of employees, 57% of respondents had employees between one to five, while 25% of respondents had between six to ten. The largest number was 24 employees.

The investment of ABC covers a wide arrange of sectors, with some start-ups crossing sectors. The most concentrated sector was online platform and marketplace, at almost 30%. This was followed by mobile and online solutions at 20% and science and tech innovation at 17%.

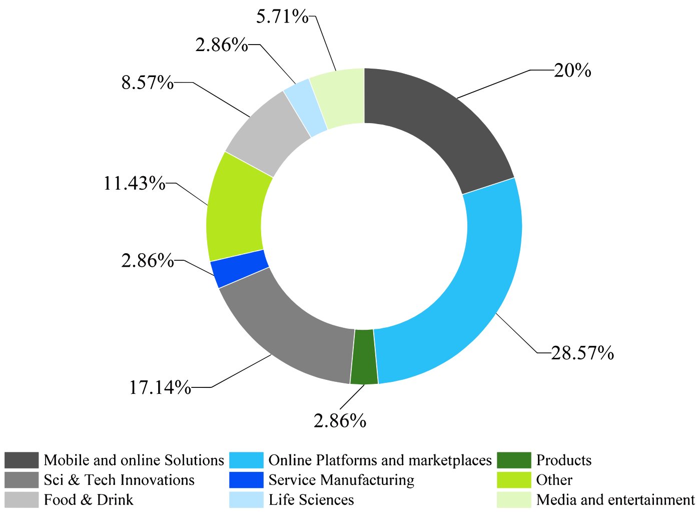

Fig. 4 Sectors breakdown

With regard to the respondents' start-ups, 64.3% adopted the Business to Business model (B2B), 21.4% adopted the Business to Business to Consumer model (B2B2C) and 14.3% adopted the Business to Consumer model (B2C).

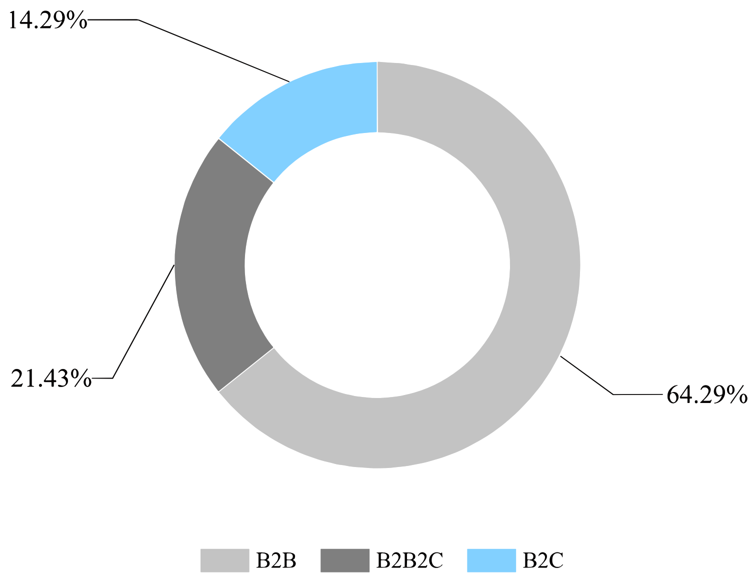

Fig. 5 Business models breakdown

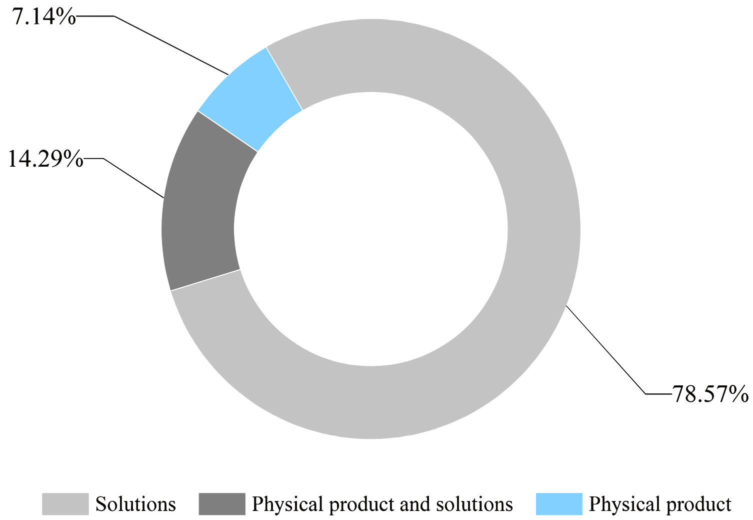

Fig. 6 Product types breakdown

In terms of product type, 78.57% of respondents reported that they were providing pure solutions without physical products, which is also reflected by the large portion of online platform and mobile and online solutions.

Around 85% of respondents' reported that their business were operating in the UK and Europe, 11% of which were also operating in North America. All of their headquarters are located in the UK.

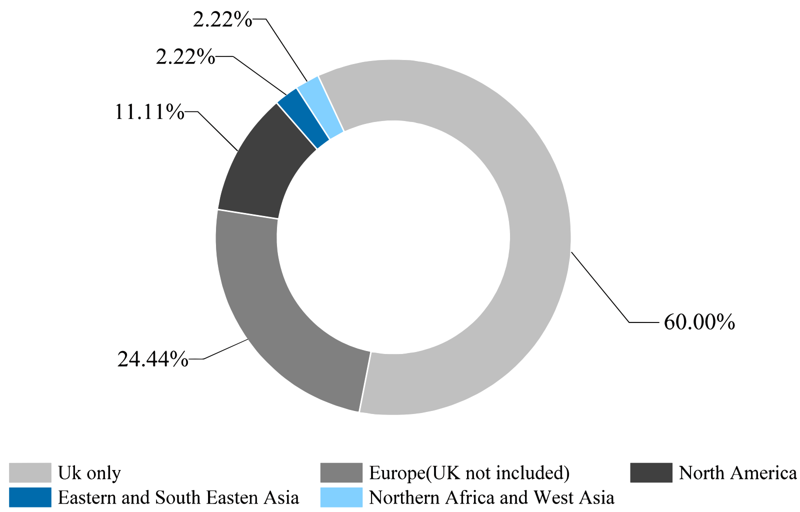

Fig. 7 Locations breakdown

4.1.2 Overall ESG

In the self-assessment, 46% of respondents believed that an ESG policy outlining details of their approach and commitments would help manage key ESG risks and opportunities.

Respondents were given a 0-3 scale to measure how they would rank the overall maturity status of their company's ESG policy (if there was any), processes and systems. The scales were interpreted as below:

0 = Not considered;

1 = Immature (no formal policies but started discussing);

2 = Partly developed and implemented at a departmental level (developed and implemented within departments but not centrally coordinated, and not subject to regular review and improvement, and not consistently applied);

3 = Mature (policy, procedures and systems are coordinated centrally, are well established and embedded, reviewed and continuously improved; management system certification, for example, ISO).

Among the respondents, 46.15% considered ESG policies, process and systems, while 38.36% partly developed and implemented ESG policies, process and systems at a departmental level.

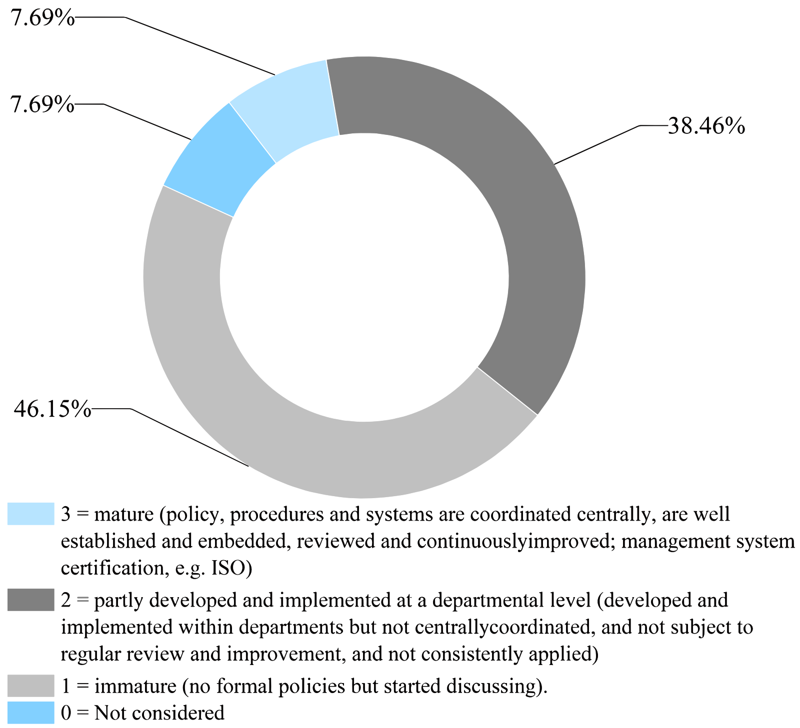

Fig. 8 ESG maturity self-assessment

Regarding whether the company assigned a designated person for day-to-day ESG matters, 31% of respondents answered yes, and 69% answered no. At the same time, almost 60% of companies have assessed issues that the company business model may cause with regard to consumer health, safety or privacy, and the following reasons were given therefor:

> "We are regulated by the Financial Conduct authority and have put security measures in place to protect user's data";
> "UGC Content Filtering and Low Power/Emissions Solutions";
> "Currently going through ISO27001 policy development";
> "Informally, only in discussion amongst co-founders";
> "Going through ISO27001";
> "Risk to customer privacy of data".

In respect of risk concern, when asked "What do you see as the business risks that might arise as a result of ESG?"

The biggest concern was reputational risk (30%), followed by data breach (20%) and loss of revenue (13%).

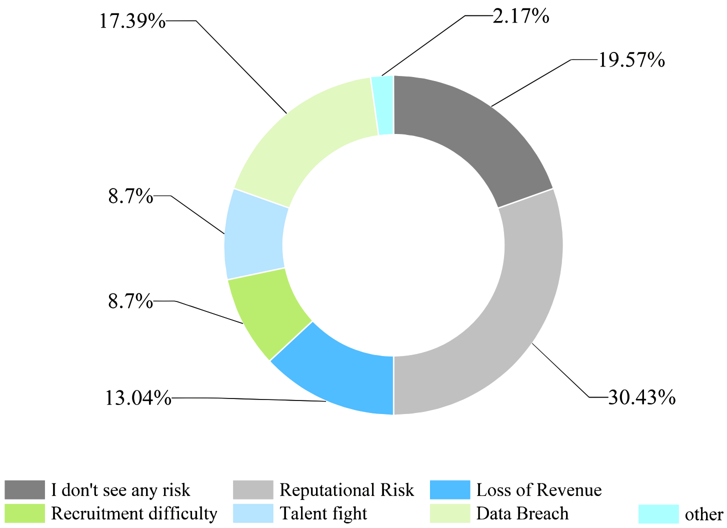

Fig. 9 ESG failure risk concern

No company engaged in any sectors prohibited by major excluded investment policies.

For the proactivity of respondents in implementing the specific ESG areas across businesses, 0 represented Not considered, 1 represented Plan made; 2 represented Plan made and implemented; and 3 represented Implemented and tracked. The following areas were assessed: diversity and Inclusion, health and security, climate change, supply chain monitor, data ethics and security, good governance, and regulatory compliance. The results show according to the mean of the scores, the most proactive areas were data ethics and security, good governance, and regulatory requirements. The least proactive areas were climate change and supply chain monitoring.

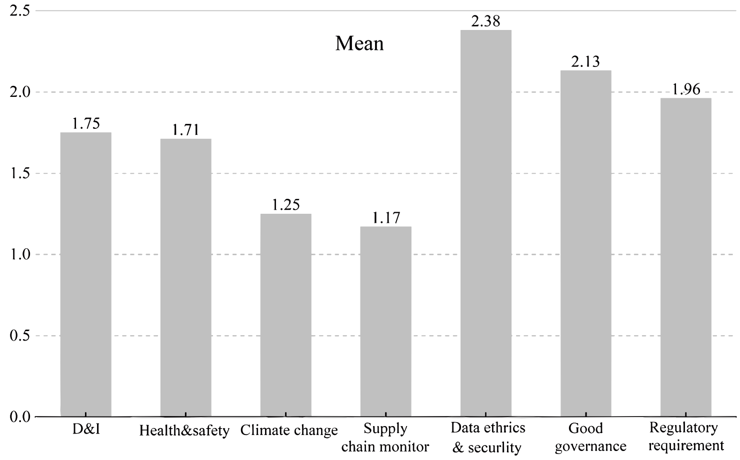

Fig. 10 The mean of ESG proactivity self-assessment

For data ethics and security, more than half of respondents were implementing and tracking in practice, while 35% of respondents were planning to implement. In the "Not considered" group, supply chain monitoring ranked as the highest answered. The reasons are specified in the next chapter of discussion.

Overall, for every area of ESG factors, the most concentrated proactive stage was on the level of plans being made and implemented.

The results of the survey also show that 63% of respondents were aware of the SDGs (UN Sustainable Development Goals).

With regard to taking steps to integrate detailed goals into the company's business strategy and contribute to the goals through providing services and products, the top five goals were: reduced inequalities, industry, innovation and infrastructure, gender equality, Climate action, and good health and well-being.

4.1.3 Environmental specific

For environmental policies, 35% of respondents had an environmental policy in their companies, while 65% did not.

In terms of legal due diligence, the respondents' companies did not encounter any serious environmental incidents or regulatory breaches during the last three years.

More than 40% of companies had not implemented the following policies in their daily operation: resource efficiency, waste management, air noise and water emission, and sustainable materials and packaging. For implanting respondents, resource efficiency was the highest, followed by waste management.

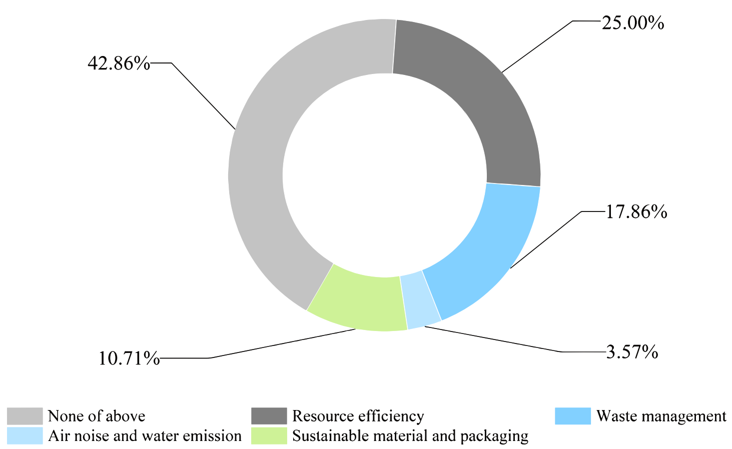

Fig. 11 Environmental policies breakdown

In the business model of the respondents, 91% do not depend on environmentally scarce and non-renewable resources. However, one company was dependent.

When assessing climate change issues, investors are encouraged to consider the IIGCC/PRI "A Guide on Climate Change for PE Investors". Regarding whether the company monitors and reports their carbon and/or other greenhouse gas (GHG) emissions such as methane, nitrous oxide, and others, only 8.6% of companies reported doing so. At the same time, 45% of respondents believed their companies' products and/or services would lead to environmental benefits.

The most popular initiatives that were already in place to start improving environmental performance were: encouraging virtual meetings (20%), optimising data usage (18%), implementing energy saving (11%), carbon offsetting (11%), and recycling and reusing scheme (9%).

4.1.4 Governance specific

Among the respondents, 82% reported tracking the diversity split of their employee Base, C-Suite, advisory committee and board. Among those who left their tracking figures, 40% had female employee ratios between 20%–50%.

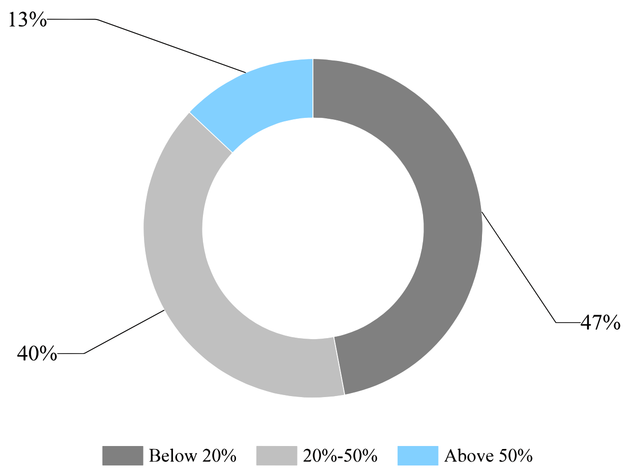

Fig. 12 Female employees ratio

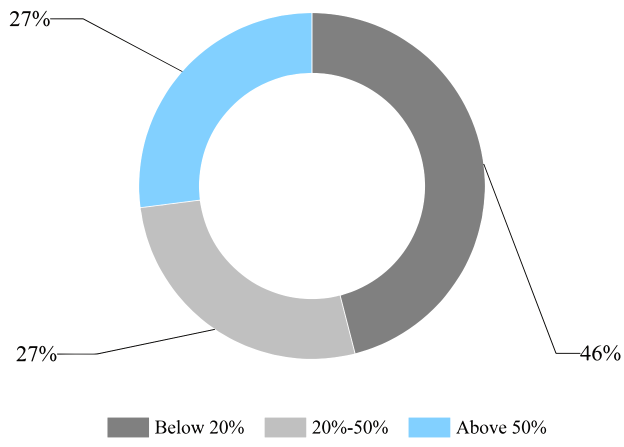

Fig. 13 Underrepresented employees ratio

Similar to the female employee ratio, close to half of the companies had less than 20% underrepresented employees. However, for the remaining companies, the ratio above 50% was higher than that of the female employee ratio.

Among the companies, 72% had policies relating to anti-discrimination, diversity and equal opportunity.

In the policy development scope, the following three stages could be observed:

The most junior stage: Have a D&I statement;
The medium stage: Have a D&I strategy;
The most mature stage: Implementing D&I strategy and have D&I goals to pursue.

From the results, two extremes were found. Companies had either discussed without acting (50%) or started implementing and had certain D&I goals to reach.

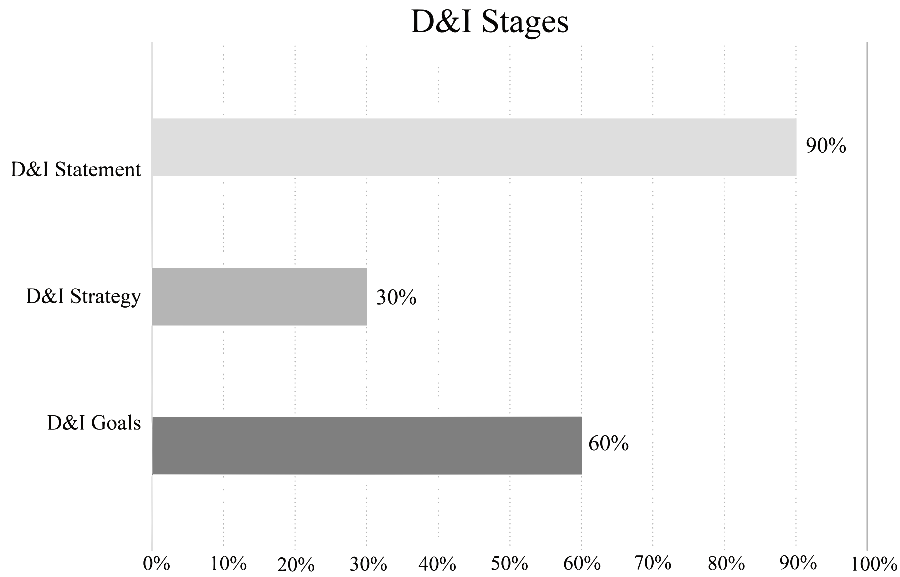

Fig. 14 D&I stages breakdown

Notably, 72% of respondents had no training or support tools for employees or leadership, relating to D&I, unconscious bias or anti-harassment. In the labour law domain, the most adhered labour laws were: fair dismissal procedure/practices (15.65%), health and safety policy (14.78%), parental leave pay, statutory sick pay (14.78%), and pension plan (13.4%). In addition, 59% of respondents answered they have someone responsible for Talent/ HR in their companies. When asked "do all team members (full-time, part-time, interns, apprentices, contractors) have a formal contract in place?", 95% of respondents answered yes, while only one answered no. Said respondent was self-employed. Among the companies, 77% had not implemented a formalised H&S (Health and safety) management system that set out clear organisational responsibilities and management arrangements for implementing the H&S policy.

The mechanisms that companies have in place for tea communications, review and feedback include daily stand-up, open forum, monthly review, software (Slack, Notion), and open door policy. Among the companies, 59% monitor happiness, engagement and the mental health of their team, 82% hold exit interviews, and 52% hold anonymous policies for complaints, grievances and whistle-blowing processes. Such methods included: email, discussion with the founder, employment portal, dedicated email address that is monitored, and sexual harassment reporting form.

Further, 67% of respondents track staff turnover, and no company had any serious social related complaints/claims/enforcement actions over the last three years (for example, related to employee rights, human rights abuses, or discrimination).

For the companies that already had products and/or services that were socially beneficial (for example, related to employee rights, human rights abuses, or discrimination), the proportion was 33%. The areas of their products/services included: unbiased hiring, responsible AI, better ESG reporting by companies and significant aid in remote learning.

When asked how corporate governance was managed across the company, the most frequent answers given were: regular staff meetings, code of ethics, and financial controls. Only one respondent answered that their company was not big enough for corporate governance.

When asked "Which of the following governance bodies do companies have", 56% of respondents had a board, 24% had an executive committee, and 8% had an audit committee. One respondent had an advisory board. Meanwhile, 65% of companies had a formalised financial control system.

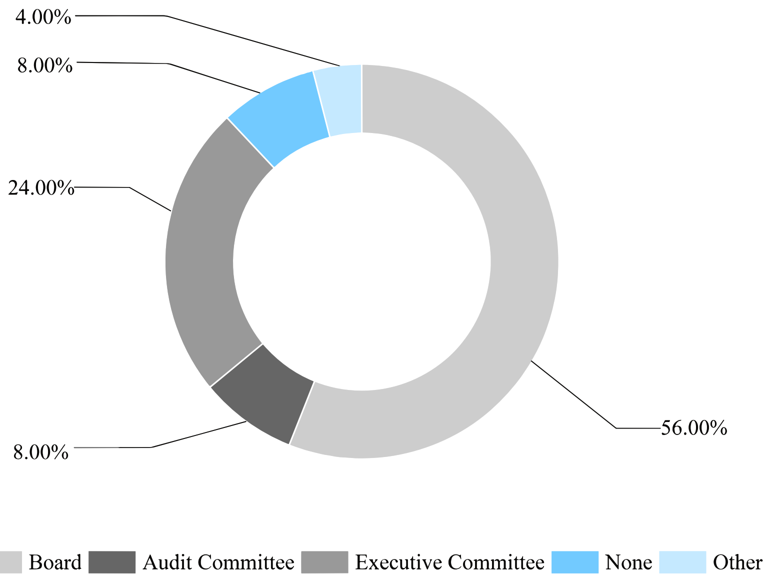

Fig. 15 Governance body breakdown

4.1.5 Social specific

Regarding their client/partner selection process, 71% of respondents had types of clients they would not work with or sectors they would not do business with.

According to the examples given by respondents, said sectors included: Illegal business, tobacco, and porn. A few specified answers also stated that they conduct due diligence, research and ethical checks before deciding whether to engage with a partner. Moreover, 94.12% of companies have taken steps to comply with the EU General Data Protection Regulation (GDPR), while 47.06% of companies stated that they rely on specific laws, regulations or policies in the regions in which they operate.

Said laws, regulations and policies included:

PCI, FCA, SCA (3DS);
GDPR, UK Data Protection Act;
FCA, ICO;
EU Regulation on AI.

Regarding tax, 58.82% of companies had policies to ensure tax transparency and avoid tax avoidance/evasion. For data security, 23.35% of companies were aware of vulnerabilities in their company's data security (for example, use of shared clouds). However, no companies had breached the law.

Among the respondents, 70.59% answered they collect personally identifiable information (PII) through products or services, among which 75% collect the data to meet the purposes of optimising their products and services and complying with legal obligations. One of the respondents answered that they collect data to serve customers as a data processor.

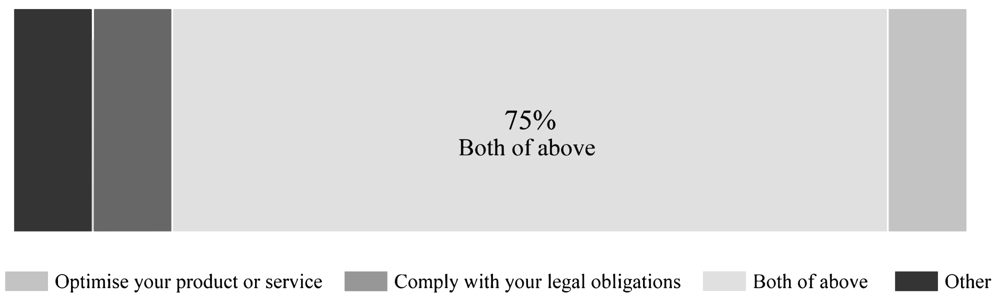

Fig. 16 Purposes of PII collection

Among the companies, 30% combine data collected from users with other data sets. Said third party datasets included: FCA authorised data, GDPR complaint providers such as LinkedIn, and Geolocation (free database from Maxmind). The collected information was classified as sensitive by 53% of companies, and 70.5% of companies had a dedicated member in charge of data security/ privacy at their companies.

At the same time, 94% of companies had data privacy policies, and all respondents were 100% transparent with their users on how they use the data they collect or insights they derive about them through the use of their products (that is, the use of their data visible to them at the time of engaging with their product). Additionally, 29.5% of respondents expected their data management process to be affected by regulations in the near future.

With regard to product design, 59% of companies had incorporated ethical principles into their product design.

In terms of awareness of anything that could be impacting the inclusivity, accessibility and integrity of their products, there were two main factors for companies: team composition and diversity. AI explicability was the highest answered. However, for unintentional consequences, 54% of companies had not considered such issue. For those that had considered such issue, the top concerns were physical harm (8.33%) and user safety (8.33%).

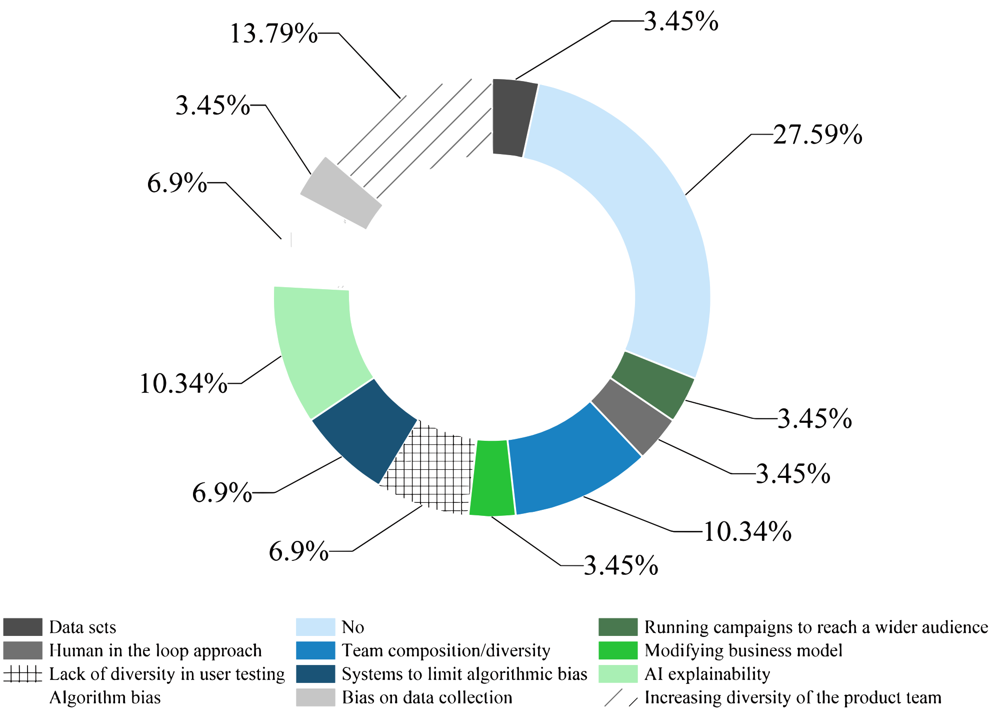

Fig. 17 Factors attribute to inclusivity, accessibility and integrity of product design

When asked if their technology did anything their users were not aware of, or would feel disrespected if they find out about, all respondents answered no. At the same time, all respondents believed that, within their company, there were sufficient processes and tools built-in to ensure meaningful transparency, auditability, reliability and suitability of the product output.

When asked to specify who was responsible for any tech failures in the organisation and if they had procedures in place for redress, one respondent answered the CEO, while the rest of the respondents answered an employee with a technology position, such as the CTO, VP of engineering, or DevOps engineer.

In terms of the supply chain, 75% of respondents consider social and environmental factors when evaluating/monitoring their suppliers (for example, including D&I, labour opportunities, underrepresented/ minority groups, locality, and fair pay), 41% had initiatives to monitor supply chain change, and 65% stated that their business model does not rely on the current supply chain setup.

4.2 Qualitative

4.2.1 Interview 1

The first interview was conducted with Ms. J.F, the founder of DEF, an ESG data management and analytics service provider within ABC's portfolio. Found in 2020, DEF believes their approach brings technology and artificial intelligence solutions to the entire ESG process for companies. In the interview, their clients' profiles were discussed, in addition to the motivations for their use of ESG data service, their data collecting method and industry standards.

Through the interview, most of DEF's clients were revealed to be at the IPO or pre-IPO stage. The biggest drive was to obtain an ESG score and to meet the regulation and reporting standards, as well as to meet investors' ESG disclosure needs. For start-ups, because the sizes were small with uncompleted functions, they had not heard from any clients in early-stage start-ups that wanted the ESG data service. DEF only uses surveys to collect ESG data, because most of their clients were at the pre-IPO stage, unlike the established and listed large corporations that have already published their ESG performance, which can be tracked from multiple channels, such as public resources. DEF does not create their own surveys, and instead uses major templates.

Though there are multiple ESG data providers in the market, with famous providers such as MSCI and S&P, there are no dominant standards on ESG criteria, as well as for the ESG survey scale. Some of the scales are from 1-10, while some of them are from 1-5. The founder could not foresee consolidated standards within the next 5-10 years.

As the founder is also in touch with investors, such as large mutual funds and also venture capital, Ms. J.F described that she found most of the funds, no matter big or small, but in terms of integrating an invested company's ESG performance into their investment decision making, they were at an early stage of research and exploration, and were still trying to determine how to proceed.

For DEF Data, a start-up themselves, sometimes they were required to disclose more ESG data to investors compared with other companies, as DEF is often considered to be part of impact investment.

4.2.2 Interview 2 and interview 3

The second and third interviews were conducted with investment professionals, Mr. Lu, the equity research analyst of a Swiss based investment bank, and Mr. E.V, the head of ESG real asset of a British multinational insurance company with over £300bn assets under management across 14 countries. Discussions regarding ESG analysis into financial valuation and ESG investment focus were delivered.

Through the interviews, each asset manager was revealed to have adopted their own models regarding ESG valuation adjustment. As an emerging domain, the modifiers and their coefficients that could integrate ESG in valuation and financial forecast remain under exploration. To be able to find the correlations, financial performance data are needed, in addition to ESG data. However, approximately 8-10 years is needed to obtain such data.

When asked about their expectations as the insurance investor, the limited partner, of the venture capital, the general partner, on ESG investment, Mr E.V answered that they would probably investigate the venture capital's invested sectors (how can these start-ups bring sustainable social value) through their products and services rather than looking into the ESG adjusted valuation. This was because for early-stage start-ups, as fast growing and high-risk entities, their financial valuations can hardly reflect and align with the rapidly changing environment.

4.2.3 Interview 4

The fourth interview was with Mr. T.M, the Director of ESG and Responsible Investment at a leading financial market advisory company, and the former UK Head of Sustainability and Responsible Investment at one of the "big four" advisory firms. Through the interview, the perspectives of large size investors (such as limited partners) were observed, in terms of their investment into general partners (such as venture capitals) or directly into sectors, and their expectations. There was also discussion on the impact brought by the SFDR, and how funds can best comply.

The advice for early-stage start-ups on ESG criteria given from investors included that a company should consider how their business models can align with the ESG impact, both positively and negatively. Further, companies should try to articulate where they want to go and if they are bringing any social good on a broader scope, as well as how they can commercialise these ESG opportunities, while being open to the negative impacts.

For smaller size companies, there are always opportunities to create impact, especially for those impact related funds. Those impact related funds could be your possible investors and they always want to help, start-ups or venture capitals need to find common ground in terms of how their values can be aligned.

Regarding compliance, if a fund wants to declare themselves as Article 8 or Article 9 funds, they will face more regulation requirements and will need to justify their proposal. To prevent greenwashing, the marketing communication should not go against the SFDR.

5 Discussion and conclusions

5.1 ESG maturity of start-ups

5.1.1 Benchmark comparison

In order to further elucidate the findings of the survey, the ESG Annual Report published by the venture capital called 500 Start-ups was used as a benchmark. In their report, 500 start-ups analysed their results after surveying 93 start-ups.

	Not as good as				Better than		Similar to	
	ESG awareness	H&S policy	D&I training	Under-represented ratio <20%	Female employee ratio 20-60%	Formal contract	Data privacy policy	Non-discrimination policy
Benchmark	80%	59%	45%	21%	31.50%	88.20%	95.70%	76%
ABC Capital	46%	23%	28%	46%	40%	95%	94%	72%

Fig. 18 Survey result compared to the benchmark

a. Not as good as the benchmark: Underrepresented ratio, D&I training, guideline policy on Health & safety, and ESG awareness

When asked "Are there guidelines in place to manage potential health and safety risks for staff, customers and supply-chain partners?", 59.1% answered yes in the benchmark. In ABC, 23% had a health and safety policy, which was lower than the benchmark.

Regarding the underrepresented employee ratio, a larger gap can be observed. The benchmark only had 21.51% of start-ups with an underrepresented employees ratio below 20%, while 34.5% of start-ups had an underrepresented employees ratio between 80%–100% [10]. However, in the present survey, 46% of respondents had an underrepresented employee ratio below 20% and the ratio of underrepresented employee above 50% in total was 27%, which were both below the benchmark. Considering 500 Start-ups' portfolio mostly covers the US, where the diversity in population is higher than in the UK, there might be bias in direct comparison.

In the benchmark report, 45% of start-ups had participated in diversity and inclusion training, while in the present survey, only 28% of start-ups had diversity and inclusion training.

In the self-assessment, 46% of respondents believed that an ESG policy outlining details of their approach and commitments would help manage key ESG risks and opportunities, while in the bench mark, this awareness ratio was 80.4%.

b. Better than the benchmark: Formal contract and Female employee ratio

In terms of female employees, the benchmark report mainly surveyed the percentage of females in the board and managerial positions. Meanwhile, the present study used only the percentage of female employees was surveyed. However, considering that in seed stage start-ups, there are not many hierarchies, the percentage of female employee ratio below 20% was 47%, while in the benchmark report, the female managerial ratio below 20% was 46.8%. In the benchmark report, the ratio of 20%-60% was 31.5% [10]. For ABC respondents, 40% of start-ups had a ratio between 20%-50%, which was better than the benchmark.

In the formal contract aspect, in ABC, 95% of respondents answered yes, and only one that answered no was self-employed. Such results can be considered equal to 100%. In the benchmark report, 88.2% of employees of the company had a formal contract of employment.

c. Similar to the benchmark: Data privacy policy, Non-discrimination policy

In the benchmark report, 95.7% of start-ups answered that they had data privacy policies and processes. In ABC. the yes rate was 94%, which was similar. For non-discrimination policies, the difference was subtle. In the benchmark report, 76.3% of start-ups had non-discrimination policies. In ABC, 72% of respondents had non-discrimination and diversity related policies.

5.1.2 Legal due diligence

Through the survey, the following legal due diligence was observed. Among the respondents, none had been involved in the following activities:

a. Serious environmental incidents or regulatory breaches which their company was involved in during the last three years;
b. Serious social related complaints/claims/enforcement actions over the last three years (for example, related to employee rights, human rights abuses, or discrimination);
c. Breaches in the company's data security within the last three years (for example, hacking attacks or data leaks).

5.1.3 Other findings

a. Data security concerns and actions

Because most of the respondents' sectors were in online platforms and marketplaces (30%) and mobile and online solutions (20%), the respondents focused on ESG issues related to data privacy. In the ESG risk concern, data breach was the second largest concern, accounting for 20%. Meanwhile, 23.35% of companies were aware of vulnerability in their company's data security (for example, use of shared clouds), while 53% believed the information they collect could be classified as sensitive.

Data ethics and security is the most proactive ESG criteria in the self-assessment of maturity, and over half of respondents answered that they were implementing and tracking in practice. At the same time, 35% of respondents were planning to implement. Further, 94% of companies had data privacy policies and 70.5% of companies had a dedicated member in charge of data security/privacy at their companies, while 94.12% of companies had taken steps to comply with the EU General Data Protection Regulation (GDPR).

All respondents were 100% transparent with their users on how they use the data they collect or insights they derive about them through the use of their products.

The concerns and actions above indicate that in ESG issues, especially in data privacy, awareness and management should be the focus, rather than how bad the risks could be. Even if the failure of one issue will have a significantly negative impact, being aware and planning and managing ahead is the way to mitigate the risks.

b. Business model reliance on ESG

Business model risk regarding ESG issue is also worth noting. Almost 60% of companies have assessed issues that the company business model may cause with regard to consumer health, safety or privacy, mostly on social and governance criteria. On environmental criteria, only 9% of business models depended on environmentally scarce and non-renewable resources.

As learned from the interview with Mr. T.M, the Director of ESG and Responsible Investment at a leading financial market advisory company, from an investor's perspective, how a company's business model is aligned with ESG is important. Being able to create social value and be open to the negative impact is important for attracting further investment.

c. Product impacts and benefits

In respect of environmental benefits, 45% of respondents believed their companies' products and/or services would lead to environmental benefits. For social benefits, 33% of companies already had products and/or services that would lead to social benefits, such as unbiased hiring, responsible AI, better ESG reporting by companies, and significant aid in remote learning. However, considering many respondents probably have not carefully thought about the impacts their products and services could bring, such percentage could be deemed mediocre. A plan to dive deeper into the social and environmental impacts could possibly be beneficial for determining some positive values and impacts brought about by those start-ups.

d. Regulation sensitivity

The survey results also show that many of the invested start-ups rely on, and are sensitive to, regulations.

Among the companies, 47.06% rely on specific laws, regulations or policies in the regions in which they operate. Said laws, regulations and policies included: PCI, FCA, SCA (3DS), GDPR, UK Data Protection Act, EU Regulation on AI, and others. In the near future, 29.5% of respondents expected their data management process to be affected by regulations Since almost half of the companies rely on specific laws, a close follow up of the legal changes should help those start-ups to better position themselves.

e. Policy, assigned person and training

With regard to policies, the areas that start-ups were providing a fair level of guidance for were: data privacy, diversity and inclusion, and tax. For Diversity and inclusion, 72% of companies had policies related to anti-discrimination, diversity and equal opportunity. For tax, 58.82% of companies had policies to ensure tax transparency and avoid tax avoidance/evasion.

Regarding policies, the areas that did not have good coverage and had space to improve were environmental policies and health and safety polices, with 65% of respondents not having an environmental policy and 77% not implementing a formalised H&S (Health and safety) management system that sets out clear organisational responsibilities and management arrangements for implementing H&S policies.

Regarding the assignment of people to specific areas, data security and HR accounted for 70.5% and 59% of the respondents' answers. However, on overall day-to-day ESG matters, 69% of companies had not assigned a designated person.

Sometimes, in addition to policies and specific assignment, training sessions are needed to reinforce the process. While many large corporations conduct trainings on diversity and inclusion, 72% of the respondents did not have D&I training in place.

5.2 Implementing issues in real practice: the power dynamics between venture capitals and start-ups

For submitting mandatory documents in practice, ABC Capital is required to do so quarterly. However, in non-mandatory submission practice, as one of the C-suits mentioned, sometimes they have to repeatedly send reminders to founders to complete documents such as surveys. The aforementioned phenomenon is also reflected in the article 'Power dynamics in investor-founder-relations', in which the author illustrated the power equilibrium between investors and founders in the whole life cycle of the investor-founder relationship, commencing at the first contact and lasting until the exit. The author found that before investing, neither investor nor founder really knows what to expect in their first meeting. For the founder, the question is how strong their alternatives are. In the worst-case scenario with little liquidity in the bank, they might face insolvency, and thus, might not have a best alternative to no agreement (BATNA) at all, leaving them in a vulnerable position. At this stage, the investor has more leverage in the relationship.

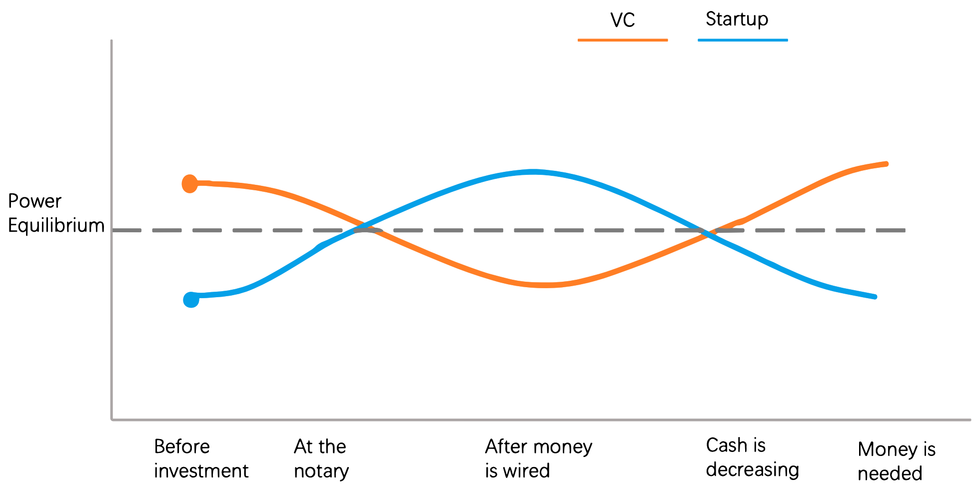

Fig. 19 Power dynamics between VC and start-ups [13]

A switch occurs after the notary session, wherein things change significantly at the precise moment the investor has actually wired the money. At this point, the Principal-Agent analogy really kicks in, as the investor gives away his strongest leverage in the relationship. The investor will have some contractual reporting rights, a board seat and veto rights for essential decisions, but will not be operational, and, in this circumstance, the investor must fully rely on the transparency of the founder. The founder on the other hand has what they need. The founder is now fully focused on the company and is likely to perceive more value in customer conversations than reporting calls.

Although start-up company ESG disclosure has not been implemented as a mandatory requirement for start-ups, if a venture capital wants to initiate in ESG disclosure and take the lead in its peers, actions on ESG disclosure at pre-contract stage at an organisational behaviour level should be considered and discussed [13].

6 Final thoughts

Based on the aforementioned results and discussion, the following recommendations are proposed for ABC capital in ESG integration in terms of two aspects: 1. How to best assist with start-ups with their ESG performance and ESG value proposition? 2. How can venture capital take the opportunities of ESG investment.

6.1 ESG value proposition, general policy template and assigned personnel

Venture capital can take several actions, such as initiating ESG workshops to help start-ups define ESG impacts, which will facilitate meeting client and investor ESG expectations. As the survey results show weak published environmental, health and safety policy ratios, venture capital could publish ESG policy guidance, which start-ups could then adapt. Venture capital could also monitor start-ups to ensure they have ESG-issue-designated personnel to hold the responsible parties accountable and support the corporate governance structure. These steps will aid the fulfilment of ESG criteria, which is important for ESG implementation, especially given the tendency for regulation in ESG implementation monitoring.

6.2 Publishing the venture capital's ESG statement online

Publishing ABC's ESG statement online will not be immediately effective for the SFDR due to operating in the UK unless it has registered funds for marketing under Article 42 of the AIFMD.

ESG-related pre-contractual disclosures supplement existing disclosures required under relevant regulatory frameworks (AIFMD, UCITS, etc.). Manager website disclosures involve online publication of certain ESG policies and apply to EU fund managers but may also apply to non-EU fund managers marketing funds in the EU. Thus, ESG statements and policies should be quickly published online.

6.3 ESG data collection and financial model optimization

In the present study, a quantitative correlation with the start-ups' financial performance could not be found due to the lack of historical ESG data. If ABC could start collecting and analysing start-ups' ESG data and develop their own algorithm for ESG integrated financial analysis and valuation (for example, adding an ESG modifier, ESG scenario and sensitivity analysis), this would help to optimise a more accurate forecast of financials and a smooth transition for capital raising on ESG measures. In the future, such measures could be potentially applied to the SFDR if ABC manages or advises EU-domiciled funds, even if those funds are not privately placed in the EU.

6.4 Infiltrate ESG into the relationship between venture capital and founders

This study found that venture capital did not have fair impacts on ESG issues due to the power dynamics between founders and venture capital, which persist until the venture capital exits.

Investors and founders will undergo multiple relationship cycles, emphasizing the importance of optimising the relationship without abusing power. Pre-investment and post-investment ESG management are important for full ESG integration. At the pre-investment stage, ESG values and plans must be communicated. Afterwards, founders must be available to assist investors, especially concerning ESG issues. If a fund settles on periodic ESG disclosure, founders should understand this prior to investment and comply with disclosure requirements similar to financial requirements.

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