ISSB meeting

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Project	**Research Project – Human Capital**
Topic	**Evidence of effects on an entity's prospects**
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Purpose and Objective

1. This paper addresses the ISSB research project on human capital, investigating the evidence of human capital-related effects on an entity's prospects. The research question is 'Whether, how and to what extent do human capital-related risks and opportunities affect an entity's cash flows, its access to finance or cost of capital over the short, medium or long term?'

2. In this paper, the staff summarizes key findings from extensive stakeholder engagement, evidence obtained through a literature review and previous ISSB research to provide a holistic understanding of effects on an entity's prospects informed by the activities outlined in Agenda Paper 2B in July 2024.[1]

3. The staff is not seeking any decisions from the ISSB.

[1] See AP2B: Biodiversity, ecosystems and ecosystem services and human capital research projects, Research design and approach, July 2024, for background on the human capital research project and the research area of evidence of effects on an entity's prospects.

Structure of the Paper

4. The paper is structured as follows:

   (a) Approach to the research

   (b) Summary of findings and next steps

   (c) Analysis

      (i) Effects on an entity’s prospects

      (ii) Key topics and industry relevance

   (d) Appendix A: Description of research methodology

Approach to the Research

5. Extensive stakeholder engagement was conducted from June 2024 to January 2025, including over 300 individuals from 158 investor organisations and other stakeholders in the investment value chain using bilateral discussions and roundtables. These organisations were headquartered in Europe, North America, Africa, Latin America and the Caribbean, the Asia-Oceania region and the Middle East.[2] See Appendix A for details.

6. Staff collated and analysed over 50 research publications about the implications of human capital-related risks and opportunities. Specifically, staff were seeking evidence of whether and how these risks and opportunities are likely to affect an entity's prospects. The findings highlighted in this paper are informed by relevant and

[2] Much of the stakeholder engagement that informed this research took place in conjunction with the Investor Interest research – highlighted in AP4A *Research Project – Human Capital, Approach to research on evidence of investor interest in human capital-related risks and opportunities*. On each stakeholder call targeted questions were asked on effects on an entity’s prospects, as outlined in Appendix A.

credible publications from academics, multilateral institutions, and investor and industry reports.

7. Staff also reviewed the ISSB's Standards and accompanying materials and the SASB Standards and related materials, to inform the development of an initial analytical framework for assessing human capital-related effects on an entity's prospects.[3]

Summary of findings and next steps

8. Human capital is a valuable resource with interconnected dependencies and impacts across the value chain, shaped by an entity's business model and its external environment. While an entity depends on a suitably skilled and right-sized workforce for market competitiveness, its ability to recruit, develop and retain employees is affected by its workforce impacts and external drivers. These workforce dependencies and impacts give rise to human capital-related risks and opportunities with effects on an entity's cash flows, access to finance and cost of capital (see paragraphs 16 to 24).

9. Most investors seek to capture human capital in their valuation of companies despite its absence in statements of financial position and "mispricing by markets" (Regier & Rouen, 2020) (Edmans, 2011). Comprising a considerable portion of operational expenses, workforce expenditures are treated as costs versus investments in future performance for financial accounting purposes. The degree of causality and extent of human capital-related effects on entity prospects is somewhat obscured by lack of disclosure and the hidden and indirect costs and benefits of human capital (see paragraphs 18 to 20).

[3] Key sources included IFRS S1 and supporting materials, as well as educational material including *Sustainability-related risks and opportunities and the disclosure of material information* published in November 2024 and materials previously published by the SASB Standards Board.

10. Numerous studies have demonstrated positive correlations between a sub-set of human capital-related risks and opportunities, earnings resilience and different measures of firm value, including stock market value and profitability ratios. Good management of issues such as training and development, diversity and inclusion, health, safety and wellbeing and working conditions can contribute to a range of positive effects on cash flows including return on assets, return on capital, increased profit margins or revenue. Such benefits to firm value may not be immediately captured by the market, and this value may not be evident in statements of financial position as these costs are typically expensed for financial reporting purposes. However, they can impact future performance and resilience based on the efficacy of such investments (see paragraphs 22 and 27 to 28).

11. Conversely, poor human capital practices can drive considerable direct and indirect costs or otherwise be value depletive. Companies implicated in exploitative working conditions in their direct workforce, supply chain or via subcontractors face a range of potential effects on entity prospects including operational costs, penalties and litigation, barriers to accessing markets or capital, alongside reputational damage. Such practices may have effects on an entity's cash flows, while high profile risk-driven events can also jeopardize access to finance from investors and lenders with potential impacts on cost of capital (see paragraphs 19 and 23 to 24).

12. Many of the findings reflected in this report pertain to workforce at an entity's direct operations based on the stakeholder input received and literature reviewed. Effects on entity prospects associated with impacts and dependencies on alternative workforce[4] and supply chain do not appear to have been systematically analysed to the same degree. It is widely understood that there are significant risks and opportunities related

[4] Alternative workforce (also the contingent workforce) is defined as work performed by outsourced teams, contractors, freelancers, gig workers (paid for tasks), and the crowd (outsourced networks). The world is seeing rapid growth in the number of people working under such arrangements (Deloitte, 2019). The alternative workforce: Now it's mainstream | Deloitte Insights

to working conditions in supply chains, particularly for industries with heavy reliance on suppliers (see paragraphs 53 to 55). Yet incidents of poor working conditions among subcontractors, widely deployed in labour intensive sectors facing worker shortages, represent a blind spot for human capital research, compounded by lack of oversight and disclosure by entities that rely on these workers. A more complete understanding of the value chain would require a deeper dive into how and to what extent human capital-related risks and opportunities affecting alternative workforce and suppliers materialize as effects on an entity's prospects.

13. The analysis shows that human capital as a theme is relevant to an entity's prospects in all sectors despite industry variation for some risks and opportunities, such as health and safety and working conditions in the supply chain. Whereas this phase of the research focuses on cross-cutting human capital-related risks and opportunities with illustrative industry examples, additional bottom-up industry analysis demonstrating pathways through which human capital-related risks and opportunities materialize into effects on entity prospects could be pursued in further research. This would require consideration of the SASB Standards and guidance for a broader set of industries and more engagement with preparers. Doing so would further inform considerations on a thematic versus industry approach to human capital standard-setting.

14. Human capital-related dependencies and impacts and related risks and opportunities are shaped by regional workforce trends and regulations which are not within scope of this phase of research. Yet regional considerations represent a potential area of focus for further analysis, particularly in surfacing distinctions between developed markets and emerging markets and developing economies (EMDEs) in relation to effects on entity prospects. For example, understanding human capital-related regulatory requirements, such as heat stress regulations, could be useful to identify emerging regulatory risks with effects on entity prospects in key jurisdictions.

Questions for the ISSB
1. What questions does the ISSB have regarding whether, how and to what extent human capital-related risks and opportunities affect an entity's prospects or about the evidence analysed? 2. Which aspects of effects on entity prospects raised in this paper does the ISSB believe warrant further investigation in the research project to adequately prepare and support the ISSB in its decision making around standard setting?

Analysis

15. This paper presents an overview of how workforce dependencies and impacts give rise to human capital-related risks and opportunities with effects on an entity's prospects. Based on analysis of findings from stakeholder engagement and the literature review, it explores workforce dependencies in relation to training and development, and recruitment and retention. It then analyses human capital-related risks and opportunities arising from workforce impacts, including diversity and inclusion, health, safety and wellbeing and working conditions and exploitation, in relation to such dependencies, including industry considerations where relevant. This framing and the analysis of industry pathways is subject to further refinement in relation to standard setting.[5]

[5] The framework for assessing effects on an entity's prospects is informed by IFRS S1 and related guidance.

Effects on an entity's prospects

Interconnected impacts and dependencies

16. Due to external drivers, such as evolving regulations and demographics, technological advancements and the transition to a lower carbon economy, workforce dependencies and impacts are undergoing significant transformation. In this context, access to a suitably skilled workforce is critical to business transformation, innovation and market competitiveness (S&P, 2023) (WEF, 2023).[6] This interdependent system in which an entity both depends on and affects its workforce leads to 'internalization of impact' whereby an entity's impact on its workforce affects its profitability. These workforce impacts give rise to sustainability-related risks and opportunities with potential effects on an entity's prospects over the short, medium or long term.

17. Based on stakeholder engagement findings and literature reviewed, key practices and outcomes to manage workforce dependencies with effects on entity prospects include:

    (a) recruitment and retention, and

    (b) training and development

    Key risks and opportunities arising from the impacts an entity has on its workforce, with strongest evidence of effects on entity prospects, relate to:

    (c) diversity and inclusion,

    (d) health, safety and wellbeing, and

    (e) working conditions and exploitation

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[6] In The Future of Jobs Report 2023, the World Economic Forum identifies the top three macrotrends driving business transformation as increased adoption of new and frontier technologies, broadening digital access and application of ESG standards. It identifies the fastest growing roles relative to their size today as those driven by technology, digitalization and sustainability.

Alongside direct effects arising from each of these topics, described in the next section, each contribute to employee satisfaction and engagement, which themselves are found to have a strong correlation to earnings resilience and different measures of firm value.

Cash flows, access to finance and cost of capital

18. **Cash flows:** An entity's ability to generate cash flows is inextricably linked to interactions with its workforce throughout the value chain, driving both positive and negative effects on its prospects. There is considerable evidence of human capital-related effects on an entity's cash flows and the scope and range of such effects is assumed to be more widespread than is apparent due to lack of disclosure on workforce and its hidden costs and benefits. Workforce comprises a significant portion of an entity's operational expenditures yet human capital-related investments, in training and development or wellness programs for example, are typically treated as costs in financial statements rather than investments. This has prompted proposed disclosure reforms in the U.S. by academics and practitioners to disaggregate 'maintenance expenses' from investments in an entity's future profitability (Working Group on Human Capital Accounting Disclosure, 2022).

19. An entity's labour costs are affected by its impacts on workers to a certain extent, while also being shaped by its external environment. For example, high turnover arising from low employee satisfaction can drive increased recruitment costs, which may be compounded by lengthy timelines to fill positions if there is industry-wide competition for talent. Negative workforce impacts can also drive lost revenue from forgone sales, customer loss, or barriers to market entry, alongside unanticipated costs and liabilities, including penalties and settlements. Such hard costs may be accompanied by hidden costs associated with productivity declines, low employee engagement and reputational damage, impacting cash flows (McKinsey, 2023). For example, complicity in modern slavery can present hard costs via import bans of

goods produced with forced labour in certain jurisdictions, alongside hidden costs from consumer boycotts and associated reputational damage.

20. The return on workplace investments, such as wellness programs or supply chain management, tend to be less visible since they are often not systematically tracked or disclosed (Charas, 2024). Yet where effective, the benefits of such investments may include enhanced productivity, innovation and retention, associated with higher risk-adjusted returns, return on assets, return on capital and profitability (McKinsey, 2023) (Human Capital Management Coalition, 2021).

21. Time horizons for effects on cash flows vary depending on the nature of the risk or opportunity. Acute risk-driven events such as strike actions can trigger short term effects on cash flows via operational disruptions and foregone sales. Ensuing reputational damage can lead to customer loss and barriers to recruitment over time with impacts on cash flows that may not be attributed to the event.

22. Various academic studies have found that employee investments and expenses can contribute to positive future performance if the efficacy of such investments is realized, despite incurring short-term costs (Regier & Rouen, 2020). According to such studies, high employee satisfaction, and equity and inclusion for example, positively correlate to future operating expenses, profitability, and earnings surprises in countries with labour market flexibility (Edmans, Pu, Zhang, & Li, 2023) (Edmans, Flamer & Glossner, 2024).

23. **Access to finance and cost of capital:** Risk-driven events triggering reputational damage, such as human capital-related human rights litigation, may negatively affect an entity's access to finance and cost of capital (Baglayan, Landau, McVey & Wodajo, 2018). As various case studies have shown, an immediate decline in share

price driven by market sentiment may follow news of an egregious workforce incident or trend, exacerbated by social media.[7]

24. Serious risk-driven incidents and reputational damage can also prompt divestment from investors choosing to distance themselves from related exposure or trigger investor lawsuits from associated market value loss.[8] Lenders and creditors may also opt to avoid reputational risk from lending to the entity, jeopardizing its ability to secure funding. Such capital constraints may drive the need to secure financing on less favourable terms, impacting the entity's cost of capital. In the case of extreme workforce violations, such as modern slavery and child labour, an entity's access to finance can be further jeopardized via denial of an IPO in key jurisdictions (Baglayan, Landau, McVey & Wodajo, 2018).

Key topics and industry relevance

25. A notable takeaway from stakeholder engagement and the literature reviewed is that human capital-related risks and opportunities broadly affect entity prospects across all sectors; yet such effects are shaped to varying degrees by industry trends and characteristics. Human capital-related risks and opportunities and associated practices and outcomes with the strongest evidence of effects on entity prospects are identified below, accompanied by relevant industry considerations. Such analysis should be considered illustrative rather than exhaustive, highlighting examples of how effects on entity prospects can materialize.

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[7] A UK-based fast fashion retailer experienced a decline in share price by 23 per cent within one day of exposure to allegations of labour rights violations at local supplier factories (Davies & Kelly, 2020).

[8] This retailer is currently facing a lawsuit by 49 institutional investors that suffered losses from the fall in share price noted above, citing failure to disclose material information (Fox Williams Securities Litigation, 2024).

26. Employee satisfaction and engagement broadly defined reflect the overarching impact of an entity's promotion or depletion of key aspects of human capital. While challenging to measure or ascertain, there is consensus that high employee satisfaction and engagement lead to higher intrinsic motivation, productivity, and retention with positive effects on operational and financial performance.

27. Studies have found that companies with high employee satisfaction deliver long-term stock market value in flexible labour markets. A recent study found that U.S. and U.K.-based companies recognized for their strong workplace culture tend to outperform their peers by a factor of four, experiencing recruitment advantages and retention double the national average, driving labour cost savings (Great Place to Work and Alex Edmans, 2024). Another study found that a portfolio including the top scoring 100 U.S. public companies based on employee wellbeing has outperformed the S&P 500 by 11 per cent since 2021 (De Neve, Kaats, & Ward, 2024) (Cookson, & Borrett, 2024).

28. A 2024 meta-analysis by Gallup found that employee engagement, defined as enthusiasm, involvement and inclusion, is positively correlated with various business performance outcomes including productivity and customer loyalty, with top quartile business units scored for employee engagement achieving 23 per cent higher profit than business units in the bottom quartiles. Negative correlations included turnover, safety incidents, lost time and quality issues (Gallup, 2024).

Managing workforce dependencies

29. In today's dynamic labour market, businesses view talent as strategically enabling or value depletive to the same extent as availability of capital, according to the 2023 Future of Jobs Report by the World Economic Forum. Effective training and development, recruitment and retention are key to managing dependencies on a stable, productive and skilled workforce. While more elevated in certain industries, these

activities and their related outcomes otherwise have fewer industry specific variations in terms of effects on prospects.

Training and development:

30. Amidst workforce transformations and technological developments, skills gaps pose barriers to market competitiveness in many industries and regions, with 60 per cent of companies surveyed for the 2023 Future of Jobs Report highlighting difficulty in bridging skills gaps locally (WEF, 2023).[9] With employers estimating that 44 per cent of workers' skills will be disrupted in the next five years, strategically upskilling employees will be critical for achieving business goals and driving transformation (WEF, 2023, pp. 6-7).

31. Investment in employee training and development is believed to foster engagement and retention among workers and may enhance talent recruitment efforts where the efficacy of such initiatives is high (McKinsey, 2019). While there is limited evidence to date linking employee training to effects on entity prospects, if strategically tailored towards designated skills gaps in the workplace and market, upskilling has the potential to drive innovation and profitability in industries undergoing transformation and struggling to recruit top talent at the required pace and scale. In this context, two-thirds of companies surveyed by the World Economic Forum anticipate a return on investment for skills training to meet business goals within one year via internal mobility, satisfaction, and productivity (WEF, 2023).

32. Whereas training and development can drive value across most industries, its potential effects on entity prospects are highest in those undergoing transformation. AI and big data represent skill sets in high demand, which 42 per cent of companies surveyed

[9] The Future of Jobs Report 2023 draws on survey-based data from 803 companies, collectively employing more than 11.3 million workers across 27 industry clusters and 45 economies from all world regions.

across a range of industries plan to include in upskilling initiatives in the next five years (WEF, 2023, p. 7).

33. A large infusion of “green skills” is needed in sectors such as **energy, utilities** and **transportation** where demand is outpacing supply (LinkedIn, 2023). As companies in these sectors seek to align with new regulations to transition to a lower carbon economy, many jobs will become obsolete as new jobs gain momentum. Given recruitment challenges related to green skills, reskilling and training on new technologies, related to renewable energy or electric vehicles for example, are likely to be critical to business transformation, market competitiveness and profitability for these industries.

Recruitment and retention:

34. Alongside training and upskilling, the ability to attract and recruit skilled employees in a timely manner is critical to business performance and different measures of firm value. Fifty-three per cent of companies surveyed by the World Economic Forum identified inability to attract talent as a key barrier to business transformation (WEF, 2023, p. 49). Competition for talent is higher in sectors requiring specialized skills linked to technology, digitalization and sustainability, where demand often outpaces supply (WEF, 2023, p. 6). The inability to attract talent was ranked as the most significant barrier to business transformation for the **electronics**, **automotive** and **aerospace** sectors, based on companies surveyed (WEF, 2023, p. 49).

35. There is widespread consensus from stakeholder engagement and the literature reviewed on the significant effects of employee retention and turnover on an entity’s prospects. Many investors cited turnover as having the strongest correlation to effects on entity prospects, while also serving as a key proxy for gauging workplace culture. A positive correlation is observed between employee satisfaction and engagement,

low voluntary turnover, market value and cash flow.[10] Yet a healthy level of attrition is believed to play a role in reducing stagnation and attracting new experience and skills (Li, Lourie, Nekrasov, & Shevlin, 2021, p. 7).

36. Conversely, there is evidence that high turnover negatively impacts future financial performance and stock returns, driving operational uncertainty (Li, Lourie, Nekrasov, & Shevlin, 2021). Despite its lack of disclosure, turnover data uniquely informs investors' workforce risk assessments as highlighted in a 2024 CFA study on human capital disclosures (Jennings, LaViers, Rouen & Sandvick, 2024). Employee turnover can generate hard costs related to recruitment and training alongside potential hidden costs tied to low morale and productivity among remaining colleagues (McKinsey, 2023).

37. While turnover is a significant consideration across all industries, the extent of effects on entity prospects varies per industry and function. Industries requiring specialized skills are more heavily exposed given the challenge of replacing these skills and the risk of transferring them to industry competitors. Technical skills and intellectual assets are critical for driving research and development (R&D), product innovation and brand value for industries such as: **pharmaceuticals and biotechnology**, **software and services**, **healthcare equipment and services** and **commercial and professional services** (S&P Global, 2023a).

38. Commercial and client facing roles are also exposed to costly impacts of turnover given lost sales during recruitment and onboarding, alongside impacts on valued customer relationships and risk of losing prospects and clients to competitors. Yet

[10] A U.S.-based retailer attributes its low turnover to the success of its employee satisfaction strategy, with a 2023 employee retention rate of 90% compared to a 60% retail industry average. Its investment in human capital management may also be partially linked to its long-term profitability, with a 10-12 per cent cash flow growth rate year-over -year over a 3-year period up to 2023 (Costco, 2023).

turnover rates are higher in sales roles than in many other functions, compounding the business risks and return on investment for promoting retention (Harvard Business Review, 2017).

39. The research analysed shows that turnover rates vary across industries, with voluntary turnover more pronounced in the industries most exposed to competition for talent, where employees can exercise their labour market power by seeking advancement in different firms. Job mobility is particularly common among millennial workers who switch employers at a higher rate of frequency than previous cohorts to advance their careers and earnings, while pursuing work-life balance (Castrillon, 2023).

Risks and opportunities arising from workforce impacts

40. An entity's success or failure in managing its workforce dependencies is underpinned by its workforce impacts, namely its ability to develop and preserve an engaged workforce, relative to external drivers shaping workforce transitions. For a broad range of industries, diversity and inclusion, health, safety and wellbeing, and working conditions and exploitation present key human capital-related risks and opportunities with evidence of effects on entity prospects. Yet the manner and extent to which these risks and opportunities materialize as effects on entity prospects varies per industry.

Diversity and inclusion:

41. The link between diversity and inclusion and effects on entity prospects has received significant attention by investors and academics over the past decade.[11] Studies leveraging publicly disclosed demographic diversity data, such as percentage of women on boards, have yielded mixed results in correlating gender and racial on

[11] Research on diversity-related effects on entity prospects appears to have focussed more on gender than racial diversity and on North America and Europe compared to other regions, including emerging markets and developing economies.

diversity to financial performance. Yet recent studies and input from some stakeholders engaged highlight the limitations of a narrow focus on demographic diversity. They cite the importance of cognitive diversity as an innovation and value driver, as well as measures that contribute to a "culture of equity and inclusion." For example, a recent academic study applied a novel measure that, according to the authors, captures this broader definition, finding positive association with future profitability, including return on assets and return on sales (Edmans, Flamer & Glossner, 2024, p. 6).[12]

42. Some studies have assessed the financial effects of gender pay gaps, citing a negative association between pay inequities and financial performance and market value stemming from lower employee satisfaction and productivity (Liang, Lourie, Nekrasov, & Shevlin, 2022) (Bratek, F., Klein, A., & Shi, Y., 2024). One study found that many employees will not seek work at companies associated with pay gaps, posing risks to recruitment and retention (Glassdoor, 2018).

43. There is also evidence of the detrimental toll that a perceived culture of sexual harassment can have on firm value (Au, Dong & Tremblay, 2022). Companies have faced costly settlements in and outside of courts and increased labour costs linked to retention and recruitment, compounded by reputational damage that can impact brand value over extended horizons.[13]

[12] The authors used data from survey responses for the Best Companies to Work For list to identify a variable that they consider "measures diversity, equity, and inclusion." This variable showed low correlation with traditional measures of demographic diversity, suggesting that their variable captures additional measures missing from traditional metrics on demographic diversity. They find that this measure is associated with higher future accounting performance, higher future earnings surprises, and higher valuation ratios, whereas demographic diversity data is not. They note, however, that this measure does not exhibit a link with future stock returns.

[13] A U.S.-based consumer products/technology company is facing a US$54 million settlement with a State Civil Rights Department to resolve allegations of a culture of sexual harassment, following a 2022 US$18 million settlement with the U.S. Equal Employment Opportunity Commission (EEOC) to resolve a federal lawsuit. The controversy surrounding this nearly drove the company to bankruptcy, mitigated through its acquisition by a leading global technology conglomerate.

Industry relevance:

44. Diversity and inclusion appear to drive value for most, if not all sectors, to varying degrees. In consumer and market-facing industries, such as **retail** and the **services sector** the benefits of a diverse workforce relate to mirroring the customer base being served, which can enhance relations, communication and responsiveness to consumer demands. In recruiting and developing a diverse and inclusive workforce, entities can capture demand from a diverse consumer base and gain competitive advantage, while decreasing potential legal and regulatory risks associated with discrimination.

45. Evidence of gender discrimination triggering effects on entity prospects often arises in occupations such as **science, technology, engineering and math (STEM)**, which typically have lower female representation in the workforce and management. Gender pay gaps are prevalent and discrimination and sexual harassment is more likely to be reported in related sectors (Folke & Rickne, 2022). Companies in these industries, along with **financial services,** may face greater exposure to gender discrimination and sexual harassment incidents and related recruitment and retention challenges. An underrepresentation of women in AI roles may exacerbate gender disparities in these and other industries moving forward given the growing importance of AI skills and expertise across a range of functions. (WEF, 2023a).

Health, safety, and wellbeing:

46. Companies are dependent on their employees' wellbeing, including physical and mental health, to maximize productivity and profitability. Companies can manage this dependency by investing in preventative measures to mitigate risks to employee wellbeing and reduce costs associated with lost time and presenteeism (working while unwell). The Covid-19 pandemic cast a light on companies' ability to protect the health and safety of workers while mitigating negative impacts on productivity, highlighting firm resilience during and after the pandemic.

47. The global decline in mental health, including work-related stress and burnout, represents a growing area of risk to companies across multiple industries and regions, requiring interventions to mitigate effects on entity prospects. The World Health Organization and International Labour Organization estimate that 12 billion working days are lost each year due to depression and anxiety, costing the global economy one trillion U.S. dollars annually (Cookson & Borrett, 2024). In this context, the return on investment for mental health interventions via improved wellbeing and productivity is estimated to far outweigh the costs, by up to four times according to a 2024 UK study (Deloitte, 2024, p. 23).

48. Physical health and safety also pose key risks and opportunities in certain industries and value chains, with evidence of effects on entity prospects. Investments in health and safety can reduce injuries and accidents that hinder productivity and result in lost time. Such investments can potentially lower wage risk premiums in jobs requiring higher wages to perform riskier work (Capitals Coalition, 2022).

49. Preventive measures are critically needed to address emerging exposure to heat stress, which led to approximately 470 billion lost labour hours in 2021 according to the World Bank (2023).[14] As "heat at work" gains recognition as an occupational disease, companies will become subject to emerging regulations to safeguard workers from excessive heat in jurisdictions in Africa, the Middle East, the Asia-Oceania region, Latin America, and Europe, imposing maximum temperature limits and adaptive measures in the workplace (ILO, 2024). These repercussions will extend beyond the direct workforce, impacting suppliers in regions most exposed to heat stress.

[14] According to the ILO, every year, an estimated 22.85 million occupational injuries, 18,970 deaths and 2.09 million disability-adjusted life years are attributable to excessive heat alone. Many countries have implemented new laws to specifically address excessive heat in the working environment.

50. Operational costs related to health and safety breaches include lost workdays, reduced productivity, workers' compensation and medical costs, alongside hidden costs stemming from low morale and engagement. High profile allegations of a poor workplace safety culture including major settlements can also jeopardize access to finance and an entity's social license to operate (Capitals Coalition, 2022).

Industry relevance:

51. While mental health challenges in the workplace broadly impact workers throughout different industries, evidence of job-related stress and burnout is more prevalent in the **financial services** sector. A 2024 survey of UK employees found that 17 per cent of **finance** and **insurance** employees suffered burnout compared to an average of 12 per cent across all sectors.[15] The average annual cost of poor mental health per employee in these industries was double that in all other sectors, while interventions were more highly prioritised (Cookson & Borrett, 2024) (Deloitte, 2024).[16] Incidents of suicide among investment bankers have triggered heightened scrutiny from companies and investors regarding burnout in this industry (Kelly, 2024).

52. Heavy industries including **agriculture, construction, transportation, oil and gas** and **mining** have consistently faced higher exposure to physical health and safety risks and violations with effects on entity prospects than many other sectors. In addition to acute injuries and fatalities stemming from hazardous conditions, workers may develop chronic health conditions, including respiratory and circulatory diseases. Amidst rising heat stress, industries such as **agriculture,** involving heavy outdoor

[15] The findings in this report on "Mental health and employers" are based on a survey of 3,156 working adults across the UK, conducted in October 2023 by YouGov on behalf of Deloitte.

[16] A UK-based financial services company that has proactively invested in employee mental health, including coaching and mental health first-aid, attributes this investment to 40-60 per cent higher productivity than peers and lower turnover and absenteeism (Cookson & Borrett, 2024).

labour in hot climates experience heightened risks of occupational injuries and fatalities, alongside hidden impacts to productivity.

Working conditions and exploitation:[17]

53. Good working conditions and respect for human rights are foundational to a strong workforce culture and employee satisfaction. Yet there appears to be more evidence demonstrating the extent to which poor working conditions and labour-related human rights violations negatively affect an entity's prospects than how related investments positively impact different measures of firm value. Whereas risks and opportunities related to working conditions apply throughout the value chain, an entity's exposure to such risks and potential effects on its prospects are more challenging to identify and address for suppliers and subcontractors than for workers in direct operations.

54. Many jurisdictions have introduced modern slavery legislation and mandatory due diligence regulations in recent years requiring entities to report on working conditions for their direct operations and supply chain. The EU Corporate Supply Chain Due Diligence Directive (CSDDD) includes fines of up to five per cent of an entity's net worldwide turnover for noncompliance.[18] Companies are also subject to procurement and trade barriers in various jurisdictions, banning imports of products identified as being at elevated risk of being manufactured by forced labour (S&P, 2024).

55. Despite these developments, poor working conditions in the supply chain linked to low wages, excessive overtime work, health and safety breaches, and child and forced labour remain widespread. Complicity in related supply-chain incidents can trigger ripple effects on entity prospects, including disruptions, fines, penalties, decline in

[17] Working conditions and exploitation is defined as including information on modern slavery, child labour, prison labour, and other labour-related human rights not covered by other categories.

[18] Adopted in 2024 to come into force in 2027, the CSDDD is currently subject to the EU Omnibus Simplification Package as a proposal to reduce the reporting burden on businesses.

share price, barriers to market entry and customer loss. High profile labour-related human rights incidents, including use of child and forced labour, can also jeopardize access to finance and cost of capital (Baglayan, Landau, McVey & Wodajo, 2018).[19] Compounded by social media attention, such incidents can cause significant reputational damage and consumer backlash, which may jeopardize an entity's social license to operate.

Industry relevance:

Industries dependent on lengthy supply chains for manufacturing, such as **apparel** and **technology hardware**, rely on the flexibility of suppliers for the production and quick turnaround of high-volume goods. Low wages, excessive overtime hours and poor working conditions are often found in this high- pressure context, exposing entities to operational and regulatory risks. Since the Rana Plaza factory collapse in Bangladesh in 2013, the role of the fast-fashion industry in enabling exploitative working conditions in garment manufacturing has faced major scrutiny. Despite industry progress in strengthening supply chain management amidst regulatory developments, high profile supply-chain incidents related to poor working conditions continue to surface globally in these industries, driving reputational damage and consumer backlash.[20]

[19] A Malaysian manufacturer was subject to a one-year import ban in the U.S. due to its use of forced migrant labour in 2020. Listed in Singapore, its share price subsequently declined by approximately 40 per cent and production decreased. Its billion-dollar IPO in Hong Kong was also delayed and has since lapsed. This supply chain disruption also drove its largest U.S. customer to face lower earnings for the first half of the year by as much as 35 per cent and this was accompanied by a share price drop for the customer of almost 15 per cent (Latiff & Ananthalakshmi, 2021) (Butler, 2022).

[20] A private Singapore-based company exposed for excessive overtime in its supplier garment factories and allegedly sourcing cotton produced using forced labour is facing backlash from NGOs and a government monitoring body, prompting heightened regulatory scrutiny on a pending IPO in the UK after already being denied an IPO listing in the U.S. (Reid, 2024).

Appendix A: Description of research methodology

Stakeholder engagement

Extensive stakeholder engagement was conducted from June 2024 to January 2025, including over 300 individuals from 158 investor organisations and other stakeholders in the investment value chain using bilateral discussions and roundtables. A diverse set of stakeholders was engaged: institutional investors, third-party data providers, ESG rating organisations, sell-side research analysts, investor associations, investor-oriented NGOs, academics and preparers, including respondents from the ISSB's 2023 consultation on agenda priorities. These organisations were headquartered in Europe, North America, the Asia-Oceania region, Latin America, and Africa.

A1. A virtual academic roundtable was hosted in November 2024 in which leading global academics were invited to provide input into this research area. Participants were selected based on their credible expertise on human capital and whose studies informed the literature review for this paper. Staff also obtained input from a roundtable with preparers from the metals and mining sector at an industry event in October 2024.

A2. Much of the stakeholder engagement that informed this research took place in conjunction with the "investor interest" research area – highlighted in AP4A *Research Project – Human Capital, Approach to research on evidence of investor interest in human capital-related risks and opportunities*. On each stakeholder call targeted questions were asked on correlations between human capital-related risks and opportunities and effects on an entity's prospects to narrow in on topics for this research area as outlined below.

A3. **Types of questions asked:** The staff intentionally posed broad and open-ended questions in Phase 1 of the research to obtain a broad range of views.

Each engagement included the overarching question: Whether, how and to what extent do human capital-related risks and opportunities affect an entity's cash flows, its access to finance or cost of capital over the short, medium, or long term?

Sample follow-up questions included:

What correlations have you observed between indicators relating to the workforce (such as, labour relations, diversity, or supply chain working conditions) and an entity's financial performance? Have they involved specific industries, geographies, or specific aspects of financial performance?

a) Please provide specific examples in which:

    a. favourable workforce investments (such as, training, health and safety, diversity initiatives, supplier capacity building) have driven positive financial performance (revenue growth, reduced cost of capital, higher asset valuation, reduced operational costs); or

    b. poor workforce management and mitigation (prompting high turnover, low employee engagement, instances of modern slavery) has negatively affected financial performance (increased costs or liabilities) for companies.

b) What are the key drivers or sources of financial implications from human capital-related risks and opportunities, such as regulations, shifting consumer demand, litigation, input prices/volatility.

c) How do you identify forward-looking downside risks and upside opportunities related to workforce issues, such as evaluating future human capital-related risks/shocks that may affect a debtor's ability to repay or forward views of potential equity price and volatility implications?

d) How do you weigh human capital-related financial risks and opportunities against other traditional financial risks in your investment decisions?

Literature Review

A4. A literature review represented another key component of this research area, seeking evidence of how human capital-related risks and opportunities affect an entity's prospects. Staff analysed over 50 research publications including academic papers and publications, industry reports, investor and sell-side research, reports from multilateral institutions and media. Staff assessed the credibility of this literature based on a combination of factors such as sample size, study design, credibility of author(s), relevancy and recency of the report. The review used a variety of tools to identify relevant literature including desk research on reputable publications and investor, academic and ISSB member recommendations.

A5. There is a considerable amount of academic research on the correlation of specific human capital topics to effects on entity prospects. Much of this research comes from academics and investors in North America and Europe, skewing some of the findings towards these regions. Most of the industry reports included are global in scope, accompanied by publications from multilateral institutions such as the ILO, World Bank, and World Economic Forum.

A6. Staff also reviewed preexisting standards and guidance from the ISSB and the SASB Standards Board to inform the development of an initial analytical framework for assessing human capital-related effects on an entity's prospects. Key sources included IFRS S1 and supporting guidance materials, as well as educational material including the November 2024 report on *Sustainability-related risks and opportunities and the disclosure of material information.* Analysis of materials released by the SASB Standards Board related to a 2020 research project on human capital prior to the consolidation with the ISSB also informed this research, including the December 2020 preliminary framework on human capital and the SASB standards, alongside select SASB Research Briefs for a subset of industries.

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