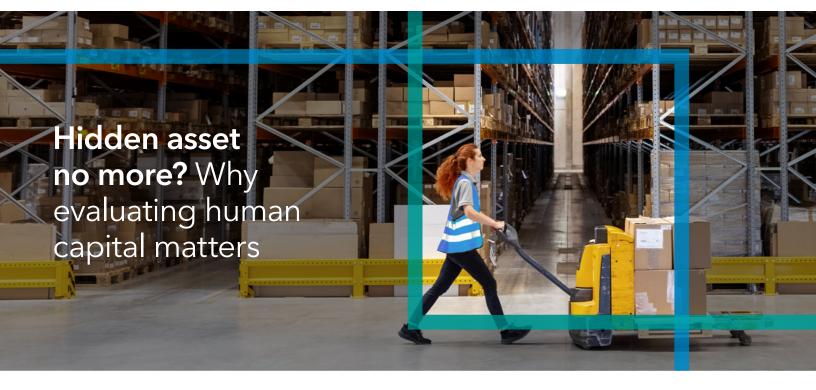
ESG Thematic Research November 2023







Emma Doner ESG Senior Manager

Key takeaways

- Our research suggests human capital is potentially one of the most impactful and underappreciated drivers of business value.
- Tight labor markets, shifting demographics and new regulations suggest that human capital is becoming an even more crucial consideration for active investors.
- We have identified five indicators that, in our view, can help investors discern how human capital management is affecting investment value.

Here are some examples of areas where we see great potential for companies to benefit from human capital management:

- Attracting, developing and retaining talent
- Maintaining positive labor relations and preventing strikes and stoppages
- Supplying sufficient training for workers to take on new skills and technologies
- Building diverse, innovative, purposedriven cultures

A hidden asset of high importance and low transparency

How does a company attract, develop and retain the right people? Does healthy corporate culture support higher innovation? What are relations like between employees and management?

At first glance, trying to answer questions like these might seem like a grey area for investors and perhaps not as consequential as more traditional areas of focus.

At Capital Group, however, we believe that considerations such as workforce skills, working conditions and labor relations can be very important in understanding a firm's long-term risks and opportunities. While impact may vary over time and across industries, history shows that human capital has the potential to prompt meaningful value creation and destruction.

Human capital has its Hollywood moment

Labor relations have been making headlines, as disputes and negotiations sweep across industries and countries. From Hollywood A-listers to Australian energy-industry workers, and Japanese department store staff to French air traffic controllers, unrest has spread far and wide. Labor relations are just one of the many aspects of human capital management that are having an impact on companies and issuers today.

Although it's difficult to draw a definitive causal link, some academic research¹ suggests stronger human capital management may, over time, be associated with higher return on invested capital (ROIC), sales growth and lower employee turnover. A March 2023 study conducted by FCLTGlobal in collaboration with CPP Investments and the Wharton School, found that employers² that committed to investing in their employees over a one-year and three-year period demonstrated a 1.2% and 4% higher ROIC, respectively, on an absolute basis compared with those employers that did not.

Similarly, a study³ conducted by Alex Edmans on the relationship between employee satisfaction and stock returns shows that employee satisfaction is positively correlated with shareholder returns. The results from the study show that a value-weighted portfolio of the "100 Best Companies to Work for in America" earned a four-factor⁴ alpha of 3.5% from 1984 to 2009 and outperformed industry benchmarks by over 2%.

¹"The People Factor: How Investing in Employees Pays Off," March 2023. FCLTGlobal in collaboration with the CPP Investments Insights Institute and the ESG Initiative at the Wharton School of the University of Pennsylvania.

²Based on analysis of annual year-end data for companies in the MSCI All Country World Index, or "ACWI" (approximately 2,900 active constituents across 23 developed and 27 emerging markets). MSCI All Country World Index is a free float-adjusted market capitalization weighted index that is designed to measure equity market results in the global developed and emerging markets, consisting of more than 40 developed and emerging market country indexes.

³Edmans, Alex. "Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices" (January 20, 2010). *Journal of Financial Economics* 101(3), 621-640, September 2011.

⁴Monthly regression on the portfolio returns are calculated based on the four Carhart factors: returns on the market, value, size and momentum. A four-factor alpha is calculated as the portfolio returns in excess of the risk-free rate of return.

Why human capital is becoming even more crucial

Labor productivity continued its trend lower in the first quarter of 2023 - a recordbreaking fifth consecutive quarterly decline, according to analysis as reported by EY-Parthenon. The ability to acquire, train, engage and retain talent is proving increasingly challenging among employers - and manifesting downstream. We see a number of secular drivers that are making human capital management an increasingly relevant consideration among corporate leaders.

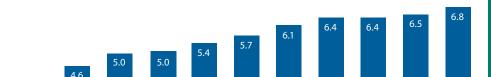
Greater investor recognition of intangible assets

The value of intangible assets – including human capital – has mostly trended higher in the last decade. In general, company market values are increasingly driven by intangible assets. Despite the increasing significance, Alex Edmans' academic study,⁵ based on 25 years of stock market returns from 1984 to 2009, concluded that the stock market, in general, does not fully incorporate the value of intangible assets. An evolution in underlying market values is one of the key drivers of proposed legislation in the U.S. and Europe to require increased disclosure of human capital management indicators.

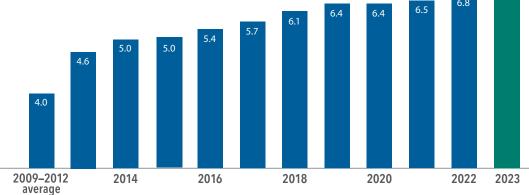
Labor disputes move center stage

Recent high-profile labor disputes have underscored just how consequential labor relations can be for corporate operations and financial results. In Japan, employees at the Tokyo flagship of Seibu department stores staged the first employee walkout the country has seen in six decades. In the U.S., more than 150,000 actors and performers and 11,500 screenwriters were on strike in July alone. So did thousands of hotel workers. Then, in September, United Auto Workers organized a coordinated walkout at General Motors, Ford and Stellantis – resulting in close to 12,700 workers going on strike across the three auto plants. In addition to higher wages, workers were seeking shorter working weeks, the restoration of defined benefit retirement plans and more assurances of job security in the next contract.

The value of intangible assets among larger listed companies has climbed to nearly \$7T



Disclosed intangible assets (excluding goodwill) in trillions of U.S. dollars



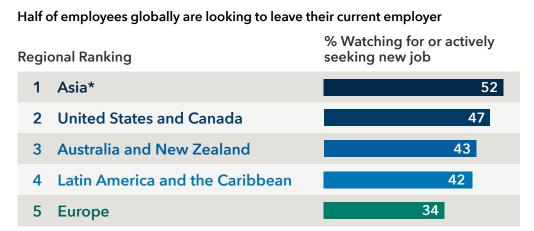
Firms from the technology, health care and energy sectors reported the highest intangible asset values in 2022.

 $Source: \\ @Brand \ Finance \ Plc\ 2023. \ The \ Brand \ Finance \ Global \ Intangible \ Finance \ Tracker (GIFT^{TM}) report \ tracks \ the \ value \ of \ the \ world's \ largest$ companies by intangible asset value. Brand Finance looks at 60,000+ publicly listed companies globally, 42,000 of which have sufficient data, qualified and were used for this analysis.

⁵ Edmans. "Does the Stock Market Fully Value Intangibles?"

Talent recruitment and retention hit prime time

Tight labor markets and wage inflation have underscored the need for effective corporate talent strategies. More than a quarter of workers would consider leaving their jobs in the next 12 months, according to a June 2023 global survey by PwC. Professional development opportunities, flexible working and other non-compensation benefits are a few of the ways that firms are seeking to buttress their talent recruitment and retention.



Source: State of the Global Workplace 2023 Report, Gallup World Poll. Gallup, Inc. Data obtained from April 2022 to March 2023.

New workforce, new priorities

Demographic and societal changes are requiring companies to develop new skills and professional development strategies for younger hires. Following years of remote learning, students are performing more poorly on assessment exams and young talent is entering the workforce with less hands-on experience.⁶

Generation Z, born between the late 1990s and early 2000s, will make up more than a quarter of the global workforce by 2025. This generation's priorities are quite distinctive. In particular, compensation ranks lowest, in contrast to Gen X and Baby Boomers, who ranked it highest. Flexibility and career development are top of the priority list, according to a recent survey by McKinsey & Company.

Show me the money? For Gen Z, not so much

What matters most to workers? (ranking: 1-6)	Workplace flexibility	Career development & advancement potential	® ® Meaningful work	Supportive colleagues	Safe workplace	Adequate total compensation
Gen Z (18-24)	1	2	3	4	5	6
Younger millennials (25-34)	1	3	4	5	6	2
Older millennials (35-44)	1	6	3	4	5	2
Gen X (45–54) & Younger baby boomers (55–64)	3	6	2	5	4	1

Source: McKinsey & Company, "Gen what? Debunking age-based myths about worker preferences," April 2023.

^{*} Asia percentage is the average of all three subregions surveyed in the report - East Asia (56%), Southeast Asia (51%) and South Asia (50%).

⁶ Wall Street Journal, "'How Do I Do That?' The New Hires of 2023 Are Unprepared for Work." Douglas Belkin, Ben Chapman and Ben Kesling. Published on August 2, 2023.

Official focus on disclosure is intensifying

Regulators and government are moving toward mandating corporate disclosure on human capital management. The U.S. Securities and Exchange Commission (SEC) adopted a rule in 2020 requiring companies to report on human capital disclosures where material. The rule is principles-based instead of prescriptive, meaning the company can decide how it reports on human capital without being required to report on a set of specified indicators.

A group of industry experts and academics have petitioned the SEC to re-open the rulemaking petition in 2023 to be prescriptive on indicators such as voluntary turnover and compensation. The SEC added this topic to its shortlist of priorities, although it is unclear if the rule will change in the near term. If implemented, a prescriptive rule would require companies to disclose further detail on workforce composition, costs and investments. These measures would likely help investors to more accurately value human capital assets.

Elsewhere, the Corporate Sustainability Reporting Directive (CSRD) will require large⁷ companies operating in the European Union to disclose, from 2024 onward, how they operate and manage environmental and social risks. This will include information related to workforce policies.

How we measure human capital: Five illuminating indicators

Which indicators specifically enable companies to effectively measure and report on human capital management? In our view, there are five indicators that are both among the most impactful on value and most reasonable for companies across all industries and countries to report across.

Indicator	Description		
Total cost of the workforce	Salaries, wages, bonuses and pension benefits of all employees		
Employee turnover	Voluntary/involuntary exiting and incoming employee data points		
Demographic data	Gender, racial, ethnic and other measures of diverse representation across various levels within the firm		
Skills and training	Total training days, type and costs		
Culture and engagement	Surveys exploring employees' attitudes to work for their firms, e.g., purpose, well-being and empowerment		

At Capital Group, we are rigorous in our research and analysis of the issues we believe to be material to the ability of a company to generate long-term value. Our approach to analyzing human capital management is no different. Our deep, fundamental research on key human capital indicators helps our investment analysts differentiate company leaders from laggards.

Our first step in our research process is to analyze the quantitative data associated with each indicator. In our experience, this data help our investment professionals better understand the risks and opportunities for a company or issuer.

We look at this process through the lens of one of our technology research and investment frameworks. Our investment professionals may analyze employee rating scores from Glassdoor, alongside employee turnover rates from Bloomberg – as well as data on the average training spend per employee. Importantly, this quantitative data can help inform evidence-based questions we ask management teams in future engagements.

Qualitative data, either disclosed in company reporting or shared through dialogue with management, are complementary and can offer additional context to inform our company research and engagement.

From people to profits: Two recent examples of human capital risks

Human capital management is identified as a material issue for many of our sector investment frameworks.

Here are two case studies, from the health care and semiconductor sectors, respectively, illustrating different aspects of material risks related to human capital.

1. Tackling employee sentiment and board diversity at a medical device company

Our health care environmental, social and governance (ESG) analyst identified potential human capital issues at this company in February 2023. Employee sentiment at the firm was below average for the sector – a potential risk for attracting and retaining talent. In addition, the analyst thought that limited gender diversity on the firm's board of directors could compromise its effectiveness because varied perspectives were not reflected.

"A survey of customers suggested employee discontent with leadership at the company and some poor sales practices. This coincided with data pulled from Glassdoor on weak employee retention rates. We decided to meet with the firm's leadership to better understand what was going on," says equity portfolio manager Richmond Wolf.

The ensuing discussion between Wolf, our ESG analysts and board members was instructive. Declining employee sentiment was mostly related to a recent restructuring of the sales force and leadership roles, and the impact of a lower stock price on employee ownership. Our investment professionals also learned that, in response, the firm was trying to mitigate turnover by enhancing career development opportunities and share grants, reviewing salaries and conducting surveys to track employee sentiment. In addition, as of March 2023, gender diversity on the board of directors increased to 30% female representation. The firm was also receptive to our investment analysts' feedback that increased disclosure on these topics would be helpful for all investors.

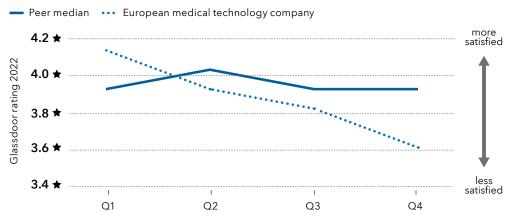


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Richmond Wolf
Equity Portfolio Manager

Declining employee sentiment can impact ability to retain talent



The exhibit above shows the overall Glassdoor rating for a European medical technology company compared to the average rating for a medical technology peer group (10 U.S. medical technology companies between \$2 billion and \$30 billion in market capitalization). This company's rating steadily declined since Q1 2022 and was below the peer average as of Q4 2022. The Glassdoor rating is a five-point scale: 1.51–2.50 employees are "Dissatisfied," 2.51–3.50 employees say it's "OK," 3.51–4.00 employees are "Satisfied," and 4.01–5.00 employees are "Very Satisfied."

Source: Glassdoor, Capital Group. Data for Q1 through Q4 2022 obtained from Glassdoor in June 2023.



This company's decadelong journey to develop a rich ecosystem, which spans from extensive libraries of software to compilers and tools, allowed them to organically attract a worldclass developer community that has made their chips the lingua franca of Al training currently."



 Drew Macklis Equity Investment Analyst

2. Attracting and retaining top talent at a semiconductor company

Artificial intelligence (AI) is at an inflection point thanks to the public release of advanced large language models (LLMs) in late 2022. Demand from companies to adopt and capitalize on this new technology has skyrocketed. Al has the potential to impact nearly every industry, and therefore demand is broad and growing at a rapid pace. Al-generated tools can drastically help improve areas such as informative search, speed of research on topics such as drug discovery, materials science and medical diagnostics, employee productivity, as well as broader efficiencies in complex tasks such as fraud detection.

Advanced semiconductors are crucial inputs to support the enormous computing needs of AI models. One company in particular leads peers on providing the chips to support an Al workload, in addition to providing software that can make sophisticated AI applications for certain customers. In August 2023, an ESG analyst and one of our investment analysts engaged with members of senior management at the company to better understand how they maintain their competitive advantage.

"This company's decade-long journey to develop a rich ecosystem, which spans from extensive libraries of software to compilers and tools, allowed them to organically attract a world-class developer community that has made their chips the lingua franca of AI training currently," says equity investment analyst Drew Macklis.

In our ESG analyst's view, part of this company's competitive advantage is fueled by having access to some of the best talent in the engineering industry. This company has its Al software and hardware team in place, at the same time its competitors are looking to hire tens of thousands of engineers. The company has long been exceptional at attracting and retaining top talent.

Employee turnover is 5%, the lowest in the industry and well below the peer average of 11%.8 In addition, the company has the most engaged workforce, according to external ratings, and is among Glassdoor's top five best places to work across all large, U.S.-based companies.

Innovative benefits the company has adopted include equal time off for new parents, eight recharge days for mental wellness, extended family care leave and mentoring programs, among others.

As demand for AI continues to rise, this company, in our ESG and investment analyst's view, has one strategic asset that others do not: talented, experienced people. This asset has helped the company place itself potentially years ahead of competition and drive total shareholder return of more than 200% this year alone.

Innovative employee benefits are a strong competitive advantage for this company



This exhibit shows the Glassdoor ratings across several metrics for this semiconductor compared to its peers. Glassdoor calculates company ratings using a proprietary ratings algorithm, with an emphasis on recency of reviews. Score 1 (worst) to 5 (best). Data as of 1Q 2023.

Source: Glassdoor, Ethos.

8Ethos, Bloomberg. As of 2022. Data measures the number of employees that left the company within the past year expressed as a percentage of the average total number of employees. Based on peer group of 54 global all-cap semiconductor companies.

⁹Based on a total return from January 1, 2023, until October 1, 2023.

Disclosure: What you don't see is what you get

Levels of disclosure vary widely across the globe. Despite its importance, few U.S. companies disclose extensive information on human capital. This is in contrast with more European companies disclosing human capital information, and a growing share of Japanese companies. Revisiting an analysis we first conducted in March 2021, we found overall disclosure rates changed little, with one notable exception: We are seeing more disclosure on gender diversity and investments in training in Japan.

Because of inconsistent disclosures, analyzing and comparing labor costs, investments, productivity, turnover and diversity for a company or issuer remains challenging and requires an active approach. Access to this data is critical for investors to be able to differentiate companies and understand potentially material risks and opportunities.

Regulators in particular are looking closely at the future of human capital disclosures. As noted above, an investor advisory group has petitioned the SEC to re-open the rulemaking petition in 2023 to be prescriptive on human capital indicators such as voluntary turnover and compensation. As investor demands increase and regulations continue to evolve, consistency in reporting should improve over time. In the meantime, the value of human capital could continue to be undervalued by the market.

Sparse, inconsistent reporting persists

Percentage companies reporting

Category	Description	MSCI World Index	U.S. & Canada	Europe	Japan
Total workforce composition	# Full-time workers	94%	96%	96%	97%
Compensation	Cost of workforce	55%	17%	87%	89% (+2%)
Collective bargaining	Unionization rate	40%	37% (-10%)	45% (+5%)	41% (+3%)
Diversity, equity, inclusion	Gender diversity: Workforce	57%	44% (-10%)	82% (-8%)	39% (+15%)
	Gender diversity: Management	34%	21% (-2%)	61% (+4%)	8% (+4%)
	Ethnic diversity: Workforce	13%	21% (+3%)	7% (+5%)	1% (+1%)
	Ethnic diversity: Management	5%	8% (-1%)	4% (+2%)	0%
Turnover	Employee turnover rate	29%	13% (-3%)	59% (+2%)	14% (+9%)
Skills & training	Cost of training per employee	11%	4% (-1%)	21%	15% (+12%)
	Training hours per employee	40%	11% (-8%)	52% (-4%)	16% (+13%)

Percentage increases (green) and decreases (magenta) represent the change relative to 2021.

Source: Capital Group, Bloomberg, MSCI. Analysis based on constituents of MSCI World Index, as of May 2023. MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure equity market results of developed markets. The index consists of more than 20 developed market country indexes, including the United States.

Final thoughts

At Capital Group, we believe human capital can be one of the largest drivers of value creation and growth among the companies and issuers in which we invest. Labor shortages, demographic shifts and workforce discontent are making human capital management an increasingly important consideration for senior leaders across companies and issuers.

Our investment professionals have identified five human capital indicators that they believe provide an effective way to measure and report on this area. The assessment of a company's cost of workforce, employee turnover, demographic data, investment in skills and training, as well as culture and engagement can help us understand material risks and opportunities to the investment case.

Ultimately, we believe a better understanding of human capital management can enable shareholders to assess how companies are managing people, differentiate leaders and laggards and identify those that are able to create and sustain a competitive advantage.

Our process for measuring human capital management will continue to evolve as regulations and company disclosures advance. We will continue to engage in dialogue with companies and issuers to better understand their human capital management practices as we seek to provide superior long-term outcomes for our investors.

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