



ESG and intangibles: **Driving value creation** across companies



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- Demonstrating the value of robustly integrating environmental, social and governance (ESG) factors into investing is critical to the success and credibility of responsible investment. Supporting this is a growing body of academic research, which highlights the power ESG integration can have on investment outcomes¹.
- In this paper, we use empirical research to show how material ESG factors – as defined by the Sustainability Accounting Standards Board (SASB) – are positively linked to the price-to-book ratio of companies in the global pharmaceutical industry.
- We illustrate that the increase in intangible value on balance sheets is driven in part by positive ESG practices of companies. Our engagement interaction with senior executives and board directors of pharmaceutical companies provides additional insight on the effect and cause.
- We conducted and co-authored this research with the Chief Financial Officer of Japanese pharmaceutical company Eisai, Ryohei Yanagi. He is also visiting professor at Waseda University where he conducts academic research into the financial materiality of ESG².

¹ For more, please refer to AXA Investment Managers' "ESG and financial returns – The academic perspective" July 2019.

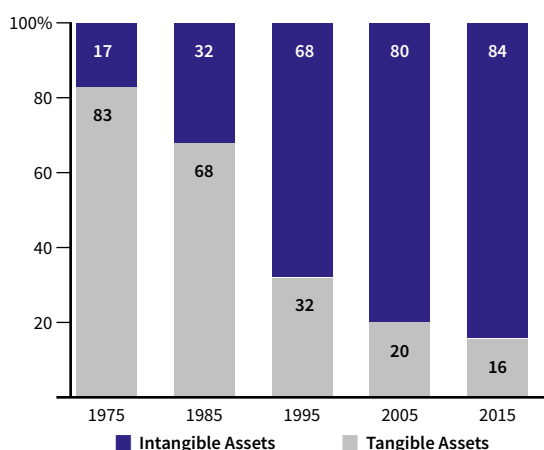
² Alongside Yo Takatsuki and Ryohei Yanagi, Theo Kotula, Danika Matheron and Jules Arnaud of the AXA Investment Managers' Responsible Investment team contributed extensively to the research.

The rise of intangibles

There has been a silent revolution in terms of what drives businesses' valuations, as the foundations of the global economy have gradually shifted away from being predominantly rooted in industry. Today global GDP is more than ever entrenched in services and knowledge, where intangible assets have become ever-increasing components of corporate worth.

Where once tangible assets such as plants, machinery and real estate ruled supreme, they have been surpassed by intellectual capital, brand value and customer loyalty. As the chart below shows, the changing nature of corporate value has been dramatic:

Chart: Components of S&P 500 market value³



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But this trend is not confined to developed world markets – we see the same pattern in emerging markets such as China where the pace of change has been even quicker.

ESG: Unravelling intangibles

Modern accounting standards have not fully kept pace with these changes. In our view, they do not sufficiently account for the full range of intangible assets which companies may have. Therefore, we believe that what is really driving intangible value creation remains poorly understood – even when it is now arguably the most material aspect of a company's valuation.

There is a developing school of academic thought that a portion of this can be explained by the nature of a company's practices around financially material environmental, social and governance (ESG) issues.

We also subscribe to this perspective and it is underpinned by why AXA Investment Managers integrates analysis of ESG factors into our investment research across different asset classes.

In this paper, our area of investigation is the link between a company's ESG performance and its price-to-book ratio (PBR) – the ratio between the market price of a corporation's share and the book value on an accounting basis of tangible assets per share.

Here, what makes up the remainder of the share value, after tangibles are deducted, is considered as the value of intangible assets per share.

Our underlying assumption is that corporate expenditure on improving ESG practices will be recognised by the market, as investors rate those decisions.

Chief Financial Officer of Japanese pharmaceutical company Eisai, Ryohei Yanagi – the co-author of this research – conducted a survey of global investors as a starting point. Notably, 78% of respondents said that they felt the value of ESG should be factored into a firm's PBR via reduction of capital cost or increasing/stabilising financial performance in the future. Therefore, the vast majority of the investors surveyed believes ESG factors are financially material and that PBR could be one way to measure that.

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³ Ocean Tomo, Ocean Tomo's Intangible Asset Market Value Study, September 2017.

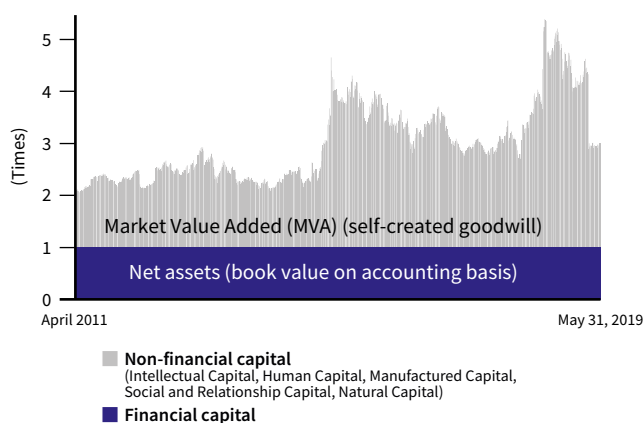
More than book value

The International Integrated Reporting Council (IIRC) has developed a framework to help deconstruct intangible value. IIRC describes five different types of non-financial capital. These are:

- Intellectual capital – the value of research and development, such as patents, intellectual property and other similar intangible assets
- Human capital – the ability and experience of human resources and the desire to innovate
- Manufactured capital – buildings, equipment and infrastructure used to produce products or provide services
- Social and relationship capital – the relationships of trust with society and various stakeholders
- Natural capital – the environmental resources and processes that affect a company through its business activities

We have used this framework to consider trends in PBR for Eisai over a eight-year period. We see that net assets – book value on accounting basis – are related to financial capital. Whereas what accounts for the portion of Eisai’s PBR being higher than one is related to non-financial capital.

Chart: Trends in PBR of Eisai⁴



Various earlier studies involving the co-author⁵ studied the links between the five non-financial types of capital and PBR of Japanese companies. These studies established a relationship between non-financial capital and PBR. By using the IIRC-PBR model, these studies indicated a good probability that the value of ESG practices is reflected in PBR.

Analysing the pharmaceutical industry

In 2019, we conducted a further study into this area by looking at the relationship between PBR and ESG practices within the global pharmaceutical sector, which is the authors’ industry of expertise.

Our first step was to concentrate the study’s remit on material ESG factors. There are a wide range of sustainability and governance issues potentially affecting a company but our position is that only a sub-set of these are of adequate financial significance. To identify such ESG factors, we used the Sustainability Accounting Standards Board’s (SASB) industry-specific materiality map for the biotech and pharmaceutical sector. A study by Grewal et al. of US companies in 2017 showed that ESG key performance indicators (KPIs) conforming to the SASB Materiality Map have stronger stock price increments than other less financially material ESG KPIs⁶.

4 Eisai data

5 Yanagi, R, & Ito, K. (2019). ROESG Model and Evidence of Natural Capital. Gekkan shihon shijo, 2019(9). Yanagi, R., & Yoshino, T. (2017). Relation bet. Human/Intellectual Capitals and Corporate Value (PBR). Gekkan shihon shijo 2017(10). Yanagi (2018) “Value proposition of integrated reporting and the price-book ratio model: Evidence from Japan”. IIRC.

6 Grewal (2017) Material Sustainability Information and Stock Price Informativeness. Harvard Business School Working Paper.

The table below lists the issues SASB considers to be material for companies in the industry.

Table: SASB materiality map for biotechnology and pharmaceutical industry

Environment	<ul style="list-style-type: none"> ✘ GHG Emissions ✘ Air Quality ✘ Energy Management ✘ Water & Wastewater Management ✘ Waste & Hazardous Materials Management ✘ Ecological Impacts
Social Capital	<ul style="list-style-type: none"> ■ Human Rights & Company Relations ✘ Customer Privacy ✘ Data Security ■ Access & Affordability ■ Product Quality & Safety ■ Customer Welfare ■ Selling Practices & Product Labelling
Human Capital	<ul style="list-style-type: none"> ✘ Labour Practices ✘ Employee Health & Safety ■ Employee Engagement, Diversity & Inclusion
Business Model & Innovation	<ul style="list-style-type: none"> ✘ Product Design & Lifecycle Management ✘ Business Model Resilience ■ Supply Chain Management ✘ Materials Sourcing & Efficiency ✘ Physical Impacts of Climate Change
Leadership & Governance	<ul style="list-style-type: none"> ■ Business Ethics ✘ Competitive Behaviour ✘ Management of the Legal & Regulatory Environment ✘ Critical Incident Risk Management ✘ Systemic Risk Management

- Likely a material issue for companies in the industry
- ✘ Not likely a material issue for companies in the industry

Source: Author based on SASB Materiality Map

As the next step, we collected relevant data and assigned it to one of the eight financially material ESG factors identified by SASB. We used ESG data from MSCI ESG, as well as ESG and corporate governance research providers Sustainalytics and Vigeo. Financial and company data was sourced from Bloomberg.

“This research contributes to the growing body evidence on the financial materiality of industry-specific ESG issues identified by SASB. In particular, the research illustrates the utility of the SASB standards to help focus on ESG issues that are most likely relevant to companies within a given industry.” - SASB

The study looked at 59 leading pharmaceutical companies for which we had access to ESG data. These largely corresponded with the 59 largest companies in the sector by market capitalisation. In total we had 34 different ESG data points per company. We applied a two-factor model in the regression analysis looking at the relationship between PBR and an ESG factor. The analysis controlled for Return on Equity (ROE) because ROE is closely linked with PBR.

The table on the following page shows the selected results of the analysis where there is a positive correlation between the ESG factor and PBR. The study identified seven ESG factors with a reasonably strong relationship with PBR.

Table: Positive results of regression analysis⁷

	KPIs for ESG	p value (Extracted <10%)	t value
Vigeo	Promotion of labour relations	9%	1.73
	Promotion of the social and economic development	5%	1.98
	Integration of social factors in the supply chain	10%	1.67
	Transparency and integrity of influence strategies and practices	3%	2.31
MSCI	Access to healthcare score	1%	2.57
	Access to healthcare management score	2%	2.34
Sustainalytics	Value of drug donations-weighted score	7%	1.89

P value helps determine the significance of the results
T value indicates the precision of the test

The most notable result was on the issue of access to healthcare (MSCI ESG as source of data). This measures the quality of the practices of companies in providing drugs in low-income countries.

Cause and effect? A case study

Following on from the analysis, we considered whether there was a cause and effect. Eisai asserts that expenditures into strengthening Access to Medicine practices is clearly with the objective of increasing corporate value in the long term.

“Eisai has, in collaboration with WHO (the World Health Organization) made a joint declaration to supply to patients in emerging countries 2.2 billion tablets (DEC tablets) free of charge by 2020 for the treatment of lymphatic filariasis, a Neglected Tropical Disease,” says Ryohei Yanagi, CFO of Eisai. “This access to medicine social contribution is not a donation or money-losing project, but has an ultra-long term investment that can also be accepted by investors.”



“Initially, it was a negative factor for short-term profits as a money-losing project. However, in the ultra-long term, it was estimated that NPV (Net Present Value) will be positive through brand value from business in emerging countries, improved productivity due to the improved capacity utilisation and enhanced employee skills and motivation at the company’s India plant, and other factors. In fact, this project made a break-even in 2018 as to management accounting profit and loss. This is really access to medicine’s value creation through ESG in line with our IIRC-PBR model.”

⁷ Study conducted using data extracted as of 15 February 2019 Source: AXA IM

The role of engagement

This study supports our conviction on the importance of addressing key ESG issues in our investment analysis. It has also identified the factors merit our attention and effort in our engagement efforts with companies following investments into their equity and bonds.

We have had extensive engagements with the pharmaceutical companies on a range of issues. In 2019 thus far⁸, we have engaged 17 global pharmaceutical companies specifically on material ESG topics such as access to medicine, business conduct, product safety and corporate governance. Many of these topics overlap with SASB's Materiality Map for the sector. This is alongside the many more companies in the healthcare industry which our listed equity, corporate bonds and impact private equity investment teams are meeting on a regular basis where ESG issues are discussed as part of wider dialogue.

In particular, on the issue of access to healthcare, which this study highlighted as one of the drivers of intangible value creation in the sector, we play a leading engagement role. For example, we are the sole representative from the asset management industry on the Access to Medicine Index's Expert Review Committee⁹. The Index is a respected biennial ranking of 20 large global pharmaceutical companies on their practices to further healthcare provision in low-income countries.

The Committee is made up of independent experts, including from the World Health Organization, the pharmaceutical industry, non-governmental organisations, and academia. The members are all active on the access to medicine agenda. The Committee provides strategic guidance to the Index research team as it identifies ambitious but achievable actions that pharmaceutical companies can take to improve access to medicine. We are also one of the lead investors on the collaborative access to medicine engagement initiative with pharmaceutical companies.

We believe these are important ways in which we can contribute to achieving the United Nations Sustainable Development Goal 3 – Good Health and Well Being. Now we also have further evidence from this study that it can contribute to the value of pharmaceutical companies.

Next steps for corporates and investors

This paper has sought to establish further evidence on the relevance of material ESG factors, for corporate decision makers and investors. Using the case of the pharmaceutical industry, we have exhibited a number of ESG practices that can contribute to a company's value creation – or indeed destruction. We openly recognise that there is scope for refinement of the research methodology, which we will consider for any future studies of this nature.

The conclusions are that for pharmaceutical companies, the findings provide them with grounds to allocate corporate expenditures into the identified ESG areas. For investors, the findings provide the evidence to further ESG integration in investment management and stewardship activities.

The study has also shown the effectiveness of SASB's materiality map. SASB is increasingly establishing itself as an ESG reporting benchmark for corporates and is backed by many leading investors. We support SASB's approach and AXA Investment Managers is a member of the SASB Investor Advisory Group. We believe that we can further the adoption of SASB's reporting framework through our participation in the Committee, research activities and engagement with companies.

⁸ AXA IM engagements with pharmaceutical companies between 1 Jan and 31 Oct 2019

⁹ Yo Takatsuki, member of the 2019 Expert Review Committee of the Access to Medicine Index

Appendix

This study applied the following two-factor model in the regression analysis.

$$\frac{P}{B_i} = \alpha + \beta_1 \cdot ROE_i + \beta_2 \cdot ESGfactor_i + \epsilon$$

The dependent variable is the PBR of each company. There are two independent variables: one material ESG factor (of which there are 34 different ones) and the Return on Equity (ROE) of the company. As PBR is greatly influenced by ROE level, the regression analysis is designed to identify which material ESG factor has explanatory ability for PBR even after removing the influence of ROE.



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