# Incorporating an ESG lens in business valuations

## Introduction

In the year 2015, German car manufacturers came under fire for admitting that defective devices were installed in their manufactured vehicles and they misguided the emissions tests authorities. This 'Diesel gate' also raised a number of questions about the management practices of these companies. The companies encountered recalls of a majority of their vehicles, leading to exorbitant levels of additional costs[1]. Consequently, these car manufacturers also experienced significant decline in their market capitalisation[2].

The scandal also highlighted the failure of valuation models of investors and analysts to capture the full range of risks posed by environmental, social and governance (ESG) factors. Valuation models are typically based on the most commonly used valuation method – the discounted cash flow (DCF) method. Under this method the free cash flows (FCF) of a company are often forecasted until perpetuity. These cash flows are discounted with a rate equivalent to the expected cost of capital (reflective of the risk related to these cash flows) consisting of both a cost of equity and cost of debt taking into account a target capital structure.

Cash flow drivers analysed to perform business valuations typically are expected sales growth, development of profitability and capital investments. Historically, these cash flow drivers were often determined only from a direct financial/economic point of view. For example, sales growth was assessed in relation to expected industry growth, development of product/services line, market penetration, market share, etc. Profitability margins were also considered based on various factors such as forecasts based on expected development of cost of production, supply chain relations and exchange rate fluctuations. Investment levels were also determined based on the required levels of asset base to grow and sustain sales growth in the future, etc. Based on these assessments, management of companies prepared the budgets and long-term forecasts.

**Off late, management of companies are expanding their view on the periphery of risks and opportunities. Particularly those associated with ESG factors.** These are considered relatively new and were historically not explicitly analysed. For example, due to the recent visible impact of climate change, we observe that management of companies are keen to incorporate the impact of climate change in their budgeting process. Furthermore, the Task Force on Climate-related Financial Disclosures (TCFD) has provided recommendations for companies to conduct and include climate change related scenario analyses in their financial disclosures, among other recommendations. These measures have been recommended by TCFD in an effort to ensure that management of companies consider risks and opportunities associated with not just market and industry forces but also in relation to climate change and its impact on market and industry forces. Based on our interactions with corporate management, there seems to be a lot of ambiguity in relation to how to capture the risks and opportunities related to not just climate change but also social and governance-related factors (ESG factors).

**In this article KPMG sets out the ways in which the outside-in impact of ESG factors on the prospects of businesses could be taken into account in the cash flows and discount rate calculations to perform business valuations, as it is imperative for investors and management of businesses to assess the value drivers of businesses with not just a financial lens but also with an ESG lens.**

Traditional Way

Business valuations based on market and industry forces with a financial lens only

New Way

Business valuations based on market and industry forces with a financial and ESG lens

[1] https://www.msci.com/volkswagen-scandal
[2] https://www.bloomberg.com/news/articles/2015-09-21/volkswagen-drops-15-after-admitting-u-s-diesel-emissions-cheat

## ESG factors in cash flows or discount rate?

Often investors and management attempt to include ESG-related risks in the discount rate by including premia (in case of high ESG risks). Although this approach is considered to be more practical, we recommend including cash flow adjustments related to ESG risks in an explicit manner. This approach would create visibility related to the impact of an ESG factor that is considered material.

## How to incorporate ESG in cash flows?

Below we present some examples of how cash flow drivers could be determined by incorporating an ESG perspective:

— With regard to the E of the ESG lens, one of the recommendations of the TCFD is to incorporate the '2 degree' scenario[3] analysis. This would be one way of reflecting additional risk associated with climate change or severe weather events in the future. For example, beverage companies could assess the impact of the '2 degree' scenario on the costs and investments related to water utilisation. Another such example that could be applicable for many companies is the introduction of carbon pricing.

— With regard to the S of the ESG lens, the impact on revenues and cost-related cash flows due to employee unrest in industries such as the garment industry[4] known for poor labour conditions and health and safety issues, is an example of capturing the impact of poor social measures. In such circumstances, additional costs could be incurred to satisfy the compensation or safety-related concerns of the workforce or product sales of companies could plummet due to the damaging impact of these kinds of news.

— With regard to the G of the ESG lens, the impact on cash flows in the form of fines/increased taxation imposed by regulatory authorities due to weak governance policies of companies, could be an example of internalising the likelihood of governance-related factors. For example, in case of Google, higher taxes were imposed by the European Commission due to their perceived unethical business practices[5]. Thus, while valuing tech companies, the imposition of fines or higher taxes could be considered as a negative cash flow impact in case it is concluded that not enough measures have been taken by tech companies to mitigate the concerns of regulatory authorities.

**The materiality of the individual ESG factors would be industry-specific and company-specific and would have to be assessed on a case-by-case basis.**

Based on our interactions with corporate management, a matter of concern often associated with performing ESG-related adjustments is the ambiguity in the determination of future cash flows. Showing explicit ESG adjustments associated with the individual value drivers would avoid the ambiguity of cash flow determination. The table below provides a simplified example, purely for illustrative purposes, on how the above-mentioned ESG factors could be translated to cash flow adjustments:

| | Cash flow items | Values | ESG adjustments | ESG factors |
|---|---|---|---|---|
| | **Operational revenues** | **1,000** | | |
| Less: | Decrease in operational revenues | (200) | Reduced sales due to social backlash associated with bad reputation because of poor treatment of employees | S – Social |
| | **ESG revenues** | **800** | | |
| Less: | Operational costs | (300) | | |
| | **Operational EBIT** | **500** | | |
| Less: | Operational taxes | (100) | | |
| | **Operational NOPLAT** | **400** | | |
| Less: | Additional taxes | (40) | Additional tax payments due to fines imposed by regulatory authorities | G – Governance |
| | **ESG NOPLAT** | **360** | | |
| Add: | Depreciation and amortisation | 100 | | |
| Less: | Regular Capex and NWC | (150) | | |
| Less: | Additional Capex | (50) | Additional investments to mitigate the impact of the '2 degree' scenario | E – Environmental |
| | **ESG free cash flow** | **260** | | |

EBIT = Earnings before interest and taxes, NOPLAT = Net operating profit less adjusted taxes, Capex = Capital expenditures, NWC = Net working capital

By presenting the adjustments in the above manner, management and investors would avoid ambiguity surrounding the positive/negative impact of ESG-related issues on the future cash flows of the company which would also facilitate focusing on the relevant material ESG issues concerning the company.

[3] A scenario under which the Earth's temperature has risen more than 2 degrees Celsius above pre-industrial levels. See related article: https://home.kpmg/xx/en/home/services/advisory/risk-consulting/internal-audit-risk/sustainability-services/disclosing-climate-related-financial-risk.html
[4] https://www.sustainalytics.com/esg-blog/fair-living-wages-in-the-garment-sector-the-case-of-bangladesh/
[5] https://www.bloomberg.com/opinion/articles/2018-07-19/google-5-billion-dollar-fine-is-a-european-union-misfire

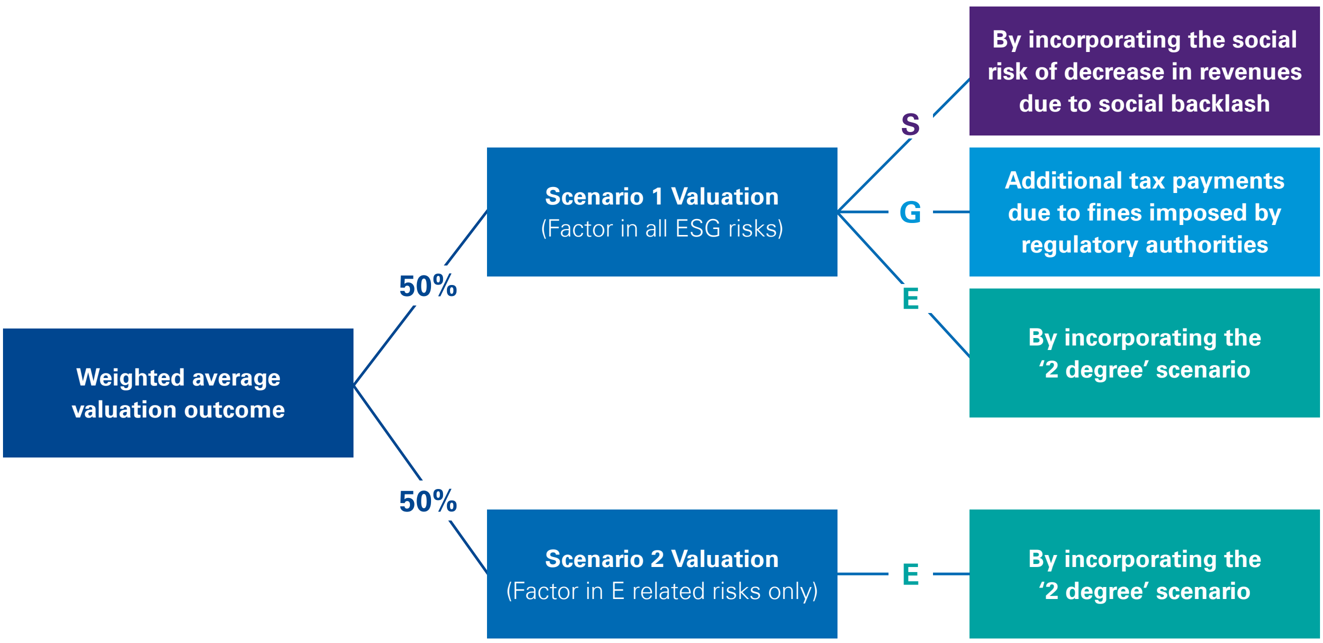
## How to incorporate ESG in discount rate?

While applying ESG adjustments to cash flows, care should also be taken that there is no double-counting of the risks (and opportunities) in the discount rate. For example, if a company belongs to an industry which in general is impacted by ESG factors such as the automotive industry (due to the influx of hybrid and electric vehicle competitors), it could be argued that the industry beta (a measure of risk) partly includes this (E)SG risk. In this case, one would need to be careful while applying additional downward adjustments to the cash flows due to the negative E impact as it could be partly captured in the industry beta. Accordingly, incorporating additional premia or discounts in the discount rate should be carefully considered in conjunction with industry- and company-specific characteristics and the ESG adjustments in the cash flows.

## How to attempt to circumvent the subjectivity of ESG?

Given the potential subjective nature of the assessment of the materiality and application of ESG-related adjustments on the cash flows and the discount rate, these adjustments could also be applied in varying degrees under different scenarios, wherein each scenario would reflect the impact of a particular material ESG factor on the business. The final valuation outcome could be a weighted-scenario outcome wherein probabilities and weightings (based on materiality) are attached to the various ESG scenarios based on materiality. Materiality of ESG factors can be determined not only based on internal assessments of companies, but also based on looking into the social media feeds of companies, to understand the market sentiment of ESG risks and opportunities associated with companies. Many standard guidelines are typically considered in relation to the assessment of the materiality of ESG factors in relation to a company in a specific industry. The assessment of the weighted average valuation outcomes could be enhanced by the usage of new technological tools such as big data, artificial intelligence and predictive forecasting tools using smart algorithms.

The below overview provides how a weighted average outcome could be derived:




For simplified illustrative purposes. In reality multiple scenarios could be constructed with varying degrees of probability. Probabilities will be subjective in nature based on materiality assessment of the various ESG factors.

**In the end, business valuation outcomes are a reflection of the story line of the financial figures that serve as input for these valuations. Given the new and expanding view on risks and opportunities associated with businesses, viewing the development of industry and market forces not just with a financial lens but also with an ESG-lens, and incorporating them in the cash flows and discount-rate analysis, is a need of the hour.**

## How can KPMG assist you?

KPMG Corporate Finance can help you assess the ESG impact on cash flows and the discount rate (while making sure there is no double-counting), assigning probabilities to different ESG impact scenarios to arrive at a weighted-scenario outcome. Our services are provided in conjunction with the services provided by KPMG Sustainability.

Together, we can support you with complex valuation issues in order to facilitate strategic decision-making. We will work closely with you but at the same time will be objective and independent in our approach. Our valuation experts have deep sector knowledge, with some colleagues fully dedicated to a number of specific sectors, namely Energy & Natural Resources, Real Estate and Financial Services.

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