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How does integration of ESG require an adjusted valuation perspective?

The core scope of financial valuation of a company or a contract is to estimate the value today to the owner of receiving the cash-flows produced, typically a shareholder in a limited liability company. A valuation aims to replicate what this asset would have been priced at if traded by willing, able and fully informed parties in an efficient market. As such, the estimate is a function of not only the estimated future cash-flows, but also the investor's alternative cost of capital over the same period, usually captured by the required return. Optionalities, subsidies and other side-effects have to be considered in addition. All these elements require significant analysis to estimate reasonable input parameters. Whether one does a discounted cash-flow analysis, uses valuation multiples from comparable companies or some other related method, these are the fundamental valuation principles. These principles are equally relevant in a setting where we integrate ESG perspectives and specific information, as covered in the first section of this guide.

We start with the standard assumption underlying the Miller-Modigliani theorem of a world with perfectly efficient capital markets, no information asymmetries and no conflicts between investors and agents (agency conflicts). If we add the assumption that all assets are priced correctly, for example in an environmental context in the form of a CO_2 tax that includes all costs to society of CO_2 emissions ('externalities'), then the firm will take into account its full environmental impact, and no further adjustments to our standard valuation model are needed.

In order to understand this line of reasoning, let's look at what an externality is: the costs or benefits our actions impose on others. These can be positive, like volunteering or fundamental research, but can also be negative: e.g., smokers harm non-smokers. In the smoking example, one way to deal with such an obvious negative externality is through taxes. Similarly, taxes on CO_2 emissions may change firm behaviour directly and indirectly.

One direct effect could be the substitution of CO_2 emitting fuel sources by replacing them with renewable energy sources. An indirect effect could be increased demand for renewable energy and the resulting price changes for renewable energy.[10]

When these external effects are priced incorrectly, as CO_2 emissions currently are, then firms and consumers take sub-optimal decisions that affect long-term firm value. This behaviour also has a wider effect on nature and society, which over time also will revert back and impact firms and consumers.

In what follows we will discuss how we can take these ESG issues into account. The starting point is a conventional valuation model based on standard assumptions, methods and input data. The next steps include:

1 Updating the input data and parameters to include expected effects from recognising the ESG dimensions, i.e., those that now or later will change (owners' private) cash-flows or risk. These may change costs of investments, represent new opportunities, recognise additional sources of risk, or modify the cost-of-capital. One may also need to select different comparable companies for a relevant multiples valuation.
2 Additional analyses of significant case-specific ESG issues that a standard model may not capture sufficiently well, such as:

[10] Renewable energy prices could go up because of the increase in demand but could also fall if the increased demand finances R&D into increased efficiency and leads to utilisation of large-scale economies, say through falling prices for solar panels or offshore wind.

- Suboptimal incentive contracts that reward management for short-term results at the expense of long-term results.
- Major possible future governmental policy decisions that may represent large costs or opportunities for the company.
- Other possible significant shocks of environmental character from customers, consumers, NGOs or nature.

3 Additional analyses of any modified shareholder preferences for taking more additional responsibilities, typically by recognising externalities inflicted on stakeholders (employees, customers, partners) or society at large in the analysis. These analyses need to include an assessment of their impact on market valuation, in addition to fundamental values, as well as expected development and distribution of these preferences over time.

Each of these analyses require not only standard financial valuation capabilities, but also the ability to expand and complement the analyses to include the ESG dimensions. The latter analyses require understanding of the key issues surrounding ESG as well as a qualified assessment of both government policies, as well as preferences amongst shareholders and stakeholders, and how these may develop. Finally, in these times of transition into increased ESG awareness, one needs to consider to what extent any parameter based on market inputs may already reflect the market's updated assessment of the impact from ESG.