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A final word on ESG and stock pricing

12.1 ESG and valuation

Throughout this manual, we have approached valuation from a fundamental perspective. Our main goal was to demonstrate how to value a firm using a holistic framework that considers ESG issues. Our approach is based on traditional valuation methods. These methods assess a firm's ability to generate future cash flows, while simultaneously considering the risk inherent in generating those cash flows.

We have argued that material ESG issues affect a firm's valuation, because they affect both the firm's ability to generate future cash flows (revenues, operating margins, investment efficiency, and firm-specific risk), and the firm's cost of capital (the discount rate at which those cash flows should be discounted in the calculation of their present value).

Our framework can be applied to the valuation of both private and publicly traded firms. The main difference in valuing the two arises when calculating the cost of capital. We have argued that the cost of capital of publicly traded firms can be calculated by using a market model (CAPM) or a factor model (e.g., Fama and French's three-factor model). In such models, stock prices are a primordial input in the calculation of expected returns (and hence the cost of capital). Privately held firms do not have a quoted stock price, making it to some extent harder to calculate the cost of capital. This does not mean, however, that calculating the cost of capital using asset pricing models for listed firms is a trivial task.

The underlying assumption for the use of traditional asset pricing models for the calculation of a firm's cost of capital is that, in an efficient market, stock prices simply reflect a firm's fundamental value. However, in inefficient markets (and there is plenty of evidence that markets are to some extent inefficient, at least in the short run), stock prices may be disconnected from firms' fundamental values. Historically, stock prices have, at times, systematically deviated from fundamental values. The "Dot-com bubble" around the millennium change is probably the most well-known recent example of that. The use of inflated (or deflated) stock prices to calculate the cost of capital may negatively affect the accuracy of a firm's valuation.

Put differently, theoretical asset pricing models are based on the assumption that the market is in equilibrium. However, stock prices can temporarily deviate from equilibrium. Consequently, there will be adjustment or "transition" periods, in which certain type of stocks out-perform others without a fundamental cause. Over the long-run, however, that effect will inevitably be reversed, and prices will return to equilibrium.

Importantly, for the purpose of valuation taking ESG issues into account, the assumption that ESG issues are correctly priced is still debatable. Therefore, caution is needed when using traditional asset pricing models, as described in Section 8.2. A useful discussion of the connections between ESG practices and valuation is found in (Cornell & Damodaran, 2020).

12.2 Pricing ESG issues in the transition period

As mentioned in previous sections, the evidence on how ESG issues affect firm value is still scarce. The fact that Environmental, Social and Governance dimensions may separately and in combination impact expected firm cash flows differently over time, adds to this analytical challenge. Moreover, although in efficient markets the stock prices should reflect firms' fundamental value, there is plenty of evidence that that is not always the case. Therefore, there are two main challenges in determining the impact of ESG issues on firm value. 1) Stock prices may not reflect a firm's fundamental value. 2) ESG issues are hard to measure and forecast.

A large portion of the academic literature on this topic attempts to tackle this question by comparing the stock returns of companies with high ESG

scores to the stock returns of companies with low ESG scores. Besides the measurement issues mentioned earlier in this report (no standardised way of measuring ESG scores, wide dispersion of ESG scores for the same firms among data providers, and different ESG issues weighting differently on a firm's ability to generate cash-flows), differences in stock returns do not necessarily reflect fundamental differences in value, as explained above.

A large number of studies seems to find that firms with higher ESG scores have higher risk adjusted returns (see Section 6.2.2). While higher returns on stocks with high ESG scores could indeed indicate that firms with high ESG are more valuable, they could also purely be the consequence of increased investor demand for stocks with high ESG scores.

The asset management industry has rapidly been increasing capital allocation towards firms with high ESG scores in recent years. Whether or not, at this moment, this allocation has been excessive enough to unjustifiably move prices upwards is a matter of debate. What seems certain, however, is that prices cannot indefinitely increase without a defensible underlying fundamental value. As any other stock bubble, this potential "ESG bubble" would also be bound to burst – with declining stock prices as an immediate consequence.

However, it is important to note that since the market has only relatively recently started paying attention to ESG issues, it is also plausible that prices of stocks with high ESG scores may still insufficiently reflect their fundamental value. In that case, positive returns for firms with high ESG scores may still be expected for years to come. Pricing intangible assets has always been challenging. Compared to tangible assets, intangible assets are more prone to subjectivity in valuation, which is only aggravated by higher levels of information asymmetry. These challenges partly explained the "Dot-com bubble". It was possible to rationally justify increases in prices for a sustained period of time, given the subjectivity involved in the valuation of technological opportunities. At the present moment, the valuation of ESG issues has several similarities with the valuation of technology firms. Just like the "Dot-com bubble", an "ESG-bubble" will probably only be detected in hindsight.

In recent years, there have been attempts to explicitly build ESG into asset pricing models e.g., Zerbib (2020), Pedersen, Fitzgibbons & Pomorski

(2020). This type of work is, however, still in its infancy. The best advice we can provide in this "adjustment" or "transition" period is, as mentioned throughout this manual, to approach these issues with great care. The use of scenario analysis and option-based approaches can go a long way in avoiding being overly pessimistic or optimistic in one's assumptions. A balanced used of all methods included in this manual can give as complete a picture of the issues at hand as possible.