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Introduction

The inspiration for this guide arose out of the authors' failure to find a valuation textbook that adequately addressed the challenge of integrating Environmental Social and Governance (ESG) issues from a company-level perspective. The small but growing academic finance literature on ESG has not yet filtered into practical guides for students attempting to learn valuation techniques. At the same time, we see an explosion of interest in learning how to integrate ESG into fundamental valuation models, driven both by exponential growth in assets under management in ESG-labelled funds, as well as the recent multiple expansion for companies with a "green" business model.

The purpose of this guide is to provide the analyst with practical tools for integrating ESG into equity valuation, with a focus on the Nordic market. In our view, the techniques are already available. What is missing are examples of how to apply those techniques to incorporate material ESG information systematically into valuation models. In other words, we hope to demonstrate that fundamental ESG integration involves new information sources and new types of risk, but the same valuation frameworks apply. With this text we intend to supplement, rather than replace, existing valuation resources.

Since we are focusing only on ESG information that is relevant for valuation purposes, this guide emphasises the importance of determining which types of ESG information are likely to be material. This is therefore not a guide to maximizing sustainability impact or to values-based investing independent from financial considerations. Not everything that is important will be financially material. In addition, while we include questions suggested for analysts to use in gathering financially relevant ESG information, this is not a guide to engagement *per se*. Instead, we have the narrower aim of describing a process for ESG analysis in order to inform valuation models.

This guide is a collaboration between the Norsif working group on ESG integration in valuation and the Norwegian School of Economics (NHH).[1] In the first half, the Norsif authors, Bersagel, Storaker and Juillard Thompsen, describe a process for ESG analysis as a basis for valuation, drawing upon practical experience from buy-side ESG investing. In the second half, NHH researchers Albuquerque de Sousa, Bienz and Mjøs present methods for integrating ESG considerations into pro forma financial statements, before weighing the benefits and drawbacks of various valuation techniques for the type of ESG issue encountered.

Section 2 proposes a generic framework for conducting an ESG analysis, including suggested questions for companies and a discussion on the importance of materiality. *Section 3* provides examples of relevant ESG considerations in selected industries represented on the Nordic stock exchanges. *Section 4* introduces various sources of ESG information for conducting the analysis. *Sections 5* and *6* discuss the background and literature on including ESG into valuations. *Section 7* addresses the valuation implications of the information guidelines in Sections 3 and 4. *Sections 8* and *9* introduce the main models for financial valuation and how to adapt them to address the impact of ESG-considerations. *Section 10* covers liabilities for past "sins" (stranded assets) and *Section 11* discusses when the investors have a modified objective function. *Section 12* comments on recent market pricing of "ESG-stocks". We have two appendices: *Section 13* contains a pratical guide on pro-forma forecasting, whereas *Section 14* includes some illustrative cases.

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