But de la thèse : quantifier les risques climatiques dans un portefeuille.

Climate Value at Risk : en gros, comment quantifier les risques physiques et de transition sur la valeur d’un titre

VaR = perte potentielle maximale à un horizon donné pour un certain niveau de confiance.

There are two types of approaches that could be taken to estimating the climate VaR: bottom-up or top-down. A bottom-up approach would be built around a relatively detailed portfolio analysis model, which takes as its input various kinds of macroeconomic variables and goes on to model the returns to different asset classes in different countries or regions. This approach can be described as bottom-up1 because the analysis of climate VaR must be built outwards by situating the portfolio analysis model within a system of other, linked models capable of providing it with the inputs it needs. In particular, this would include the effects of climate change on economic outcomes, as well as, perhaps, the direct effect of climate change on portfolio performance, via its effect on the co-variances between assets (in this way, the interaction between climate risk and other sources of risk is taken into account). A bottom-up approach is model- and data-intensive, and it is unclear whether the uncertainty inherent in providing this high level of detail would provide particularly accurate estimates. One of the principal reasons for this is the famously poor state of knowledge of climate impacts (Pindyck, 2013; Nicholas Stern, 2013). For many of the causal processes in need of estimation as part of the bottom-up approach (for example, the effect of climate change on the covariance between equities and corporate bonds in the United States), there are simply no data, and it is unclear how to obtain convincing data. Given this, and the need, at this point in time, to explore the order of magnitude of climate impacts on AuM rather than the detailed consequences, a simpler, albeit less detailed, top-down approach is valid. A top-down approach uses a simple macro-economic model that has been integrated with emissions and climate modules. A small number of so-called integrated assessment models (IAMs) of climate change exist, which have been built in order to estimate the economic cost of climate change. These link economic growth, greenhouse gas emissions, climatic changes and damages from climate change back to the economy in an integrated, consistent framework.