A structural approach to climate credit risk,

Antoine Mandel*, Stefano Battiston¹, Irene Monasterolo², and Alan Roncorini¹

¹UZH – Switzerland
²EDHEC – École des hautes études commerciales du Nord (EDHEC) – France

Abstract

In this paper, we provide a micro-founded model of the evolution of a firm’s financial structure and of the emergence of stranded assets in the context of a climate policy scenario. On this basis, we build a structural credit risk model for transition risk. We analyze the sensitivity of equity and debt valuation to the characteristics of the climate scenario, the level of asset stranding and the financial policy of the firm.