Report Type

End of Award Report

Full Name

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Project Title

Dividend Policy and Capital Structure of a Defaultable Firm

Project Start Date

Apr 01, 2018

Project End Date

Dec 31, 2018

Project Abstract

Default risk significantly affects the corporate policies of a firm. We develop a model in which a limited liability entity subject to Poisson default shock jointly sets its dividend policy and capital structure to maximize the expected lifetime utility from consumption of risk averse equity investors. We give a complete characterization of the solution to the singular stochastic control problem. The optimal policy involves paying dividends to keep the ratio of firm's equity value to investors' wealth below a critical threshold. Dividend payout acts as a precautionary channel to transfer wealth from the firm to investors for mitigation of losses in the event of default. Higher the default risk, more aggressively the firm leverages and pays dividends.

Activities and Achievement

The main achievement is that we give a complete, joint description of the optimal payout and capital structure of a defaultable firm as well as the consumption policy of its shareholders. In contrast to the standard literature, we disentangle the roles of dividends and consumption by incorporating a retail account to allow investors to defer the consumption of dividends by saving. Our paper provides an assessment on how corporate policies of a firm can be influenced by default risk. In particular, a firm facing larger default risk pays dividend more often and adopts higher leverage level.

Dissemination

Publication plan:
The paper is still in a rather early stage but the publication plan is to target for a mathematical finance and theoretical economic journal.

Impacts:
Some of our results are actually surprising. For example, the comparative statics show that a firm with higher (exogeneous) default risk will opt to pay dividend and leverage more aggressively. These could potentially have implications on main stream asset pricing literature as the firm's decisions of capital structure and payout might imply its default likelihood. These results might also be linked to topics on agency problem, moral hazard and corporate governance.

Outputs

Major Difficulties and Any Other Issues

Major difficulties: the mathematical techniques employed in the paper are somewhat sophisticated which could limit readership potentially. It also seems difficult to generalise the model to power utility function and hence the impact of risk aversion of shareholders cannot be examined at this stage.

Another (and more minor) difficulty is more on the logistic side that the time frame is quite tight on my end as I am leaving CERF by the end of August and thus did not have enough time to circulate the paper around for feedback.

Web Links

None, but hopefully the first draft of paper will be made available on arXiv soon.

Additional Information

I will continue to work on this new project when I arrive at my new institution.

Declaration

This award has not yet produced any relevant outputs, but details of any future publications will be submitted to the CERF database as soon as they become available.