D I S S E R T A T I O N D E F E N S E

Essays on Corporate Investment

Yongjin Kim

Monday, April 20, 2015
1:30 pm
324 GSIA (West Wing)

In the first essay (joint work with Bryan Routledge), we calculate the value implications of sub-optimal capital budgeting decisions in an asset-pricing model calibrated to match the standard asset pricing empirical properties -- in particular, the time-variation in the equity premium. Specifically, we calculate that an investment policy that ignores the time variation in the equity premium, such as would occur with a cost of capital following the CAPM, incurs a 14.8% value loss. We also document the implications for a firm's asset returns in this context.

The second essay revisits the relation between firms' choices of debt maturity and their investment in a dynamic world. Prior research, including Myers (1977), suggests that financing with short-term debt resolves the underinvestment problem caused by debt financing. In contrast, I establish that short-term debt can reduce the incentive to invest due to larger exposure to default risk from more frequent debt rollovers. Long-term debt, however, is more subject to illiquidity costs, so firms find optimal maturity by balancing these opposing forces. For the firm with average investment and financing, the agency cost arising from the underinvestment is 0.77% of firm value. This suggests that previous studies overestimate the cost by ignoring firms' flexibility in choosing maturity. I also measure firm-specific agency costs using likelihood-based structural estimation. The measured agency costs show significant cross-sectional variation due to heterogeneity in firm characteristics and convexity of the agency costs. The economy-wide average of the costs is 7.28%, which is considerably higher than the cost for the average firm.

In the third essay, I empirically test whether firms' investment decisions take time-varying risk into account. I construct the firm-specific risk premium implicit in option prices. Specifically, individual equity options and historical equity returns are used to infer the joint distribution of the stochastic discount factor and equity return, and the joint distribution determines the risk premium of the equity. The result is that firms' actual investments do not correctly respond to the time-varying risk. Only 4 out of 42 large-cap manufacturing companies adapt appropriately to the risk as theory predicts. This finding demonstrates that there is a significant room for improvement in capital budgeting practice.