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Three Essays on Innovation and Precautionary Cash Holdings

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This thesis consists of three papers that investigate firms' management of innovation and precautionary cash holdings.

Paper I:
Firm innovation: a lifecycle perspective

The first paper examines innovation efforts and abilities of firms at different stages in the lifecycle. The study exploits unique firm data on investments and sales related to innovation from six waves of the Swiss Innovation Survey between 1996 and 2011. Using firm age to identify established firms, I find that established firms, compared to young firms, invest less in innovation and are less efficient in producing innovation output within the firm. By contrast, established firms are more efficient in using knowledge from outside the firm (e.g., from suppliers, competitors, universities) to produce innovation output. These results largely do not depend on whether the innovation output is incremental or radical in nature. These findings suggest that young and established firms differ in the allocation and productivity of innovation resources.

Paper II:
Precautionary cash holdings

The second paper examines the importance of the precautionary motive relative to other motives as a determinant of corporate cash holdings. According to the precautionary motive, firms facing future financing constraints hold cash to ensure that they can make investments or meet obligations. I develop an index that includes the precautionary information of six popular firm-level measures: cash flows, cash flow volatility, R&D intensity, market-to-book, net working capital and product market competition. The index explains 32% of the variation in corporate cash holdings and increases to 41% when using the debt and equity constraint indices of Hoberg and Maksimovic (2015) as additional precautionary measures. As the predominant cash determinant, the precautionary motive is particularly strong for firms that face greater opportunity costs of disclosing proprietary information. This finding is consistent with the notion that these firms are more reliant on precautionary cash to protect proprietary information that they otherwise have to disclose to investors to reduce equity constraints.

Paper III:
Costly equity and the use of precautionary cash holdings: Evidence from the financial crisis

The third paper investigates whether the debt or equity capital supply shock of the recent financial crisis (2007-2009) caused firms to use precautionary cash holdings to mitigate underinvestment. I find that precautionary cash was used to substitute for the decline in net equity issuance but not net debt issuance. I also find that precautionary cash was used by equity- but not debt-constrained firms to mitigate underinvestment during the crisis. Consistently, precautionary cash was not used in the absence of the equity supply shock, i.e., during placebo crises or during the economy-wide demand shock following the financial crisis. This paper provides new evidence on the importance of corporate liquidity management for equity-constrained firms and identifies the crisis' equity capital supply shock as a dominant first-order effect on corporate financial policies.