EASTERN CONNECTICUT STATE UNIVERSITY
FALL 2021 / SPRING 2022
APPLICATION FOR REASSIGNED TIME FOR RESEARCH

Name: _Meng Guo_____ Date: _1/28/2021_____

Rank: _Assistant Professor_____ Department: Accounting & BIS____

Title of Project: Liquidity Crisis and Cash-Based Real Activity Management_____

Indicate the number and distribution of credits requested for reassigned time for research. Reassigned time may be up to six (6) faculty load credits in one semester.

Semester: Fall _____ Year: _2021_____ Credit Hours: _3_____

Semester: Spring_____ Year: _2022_____ Credit Hours: _3_____

Have you received reassigned time for research in Fall 2013 or after? No

If yes, you must include a copy of any final reports from the reassigned time as an appendix to this application.

Is the current project directly related to your previous work during reassigned time for research, sabbatical leave, or other paid leave? If yes, please elaborate. N/A

Do you expect any external support or resources for this project? If yes, please elaborate
Yes. I would expect to obtain some data from external resources (databases), such as Compustat, CRSP, IBES, and Execucomp.

Submit the following (please submit as a single electronic document):

1. Completed application form
2. Narrative that provides the following (no more than five double- spaced pages)
    a. Project Objective: A clear statement of the research question or premise of the creative work as well as the methodology used to complete the project
    b. Project Significance: A clear statement of how the project will contribute to the applicant's academic field, to Eastern, and/or to some other community group
    c. Project Feasibility: A clear statement demonstrating that the applicant possesses the resources (knowledge, skills, facilities, etc.) to complete the project successfully. This should include evidence of previous research or creative work, where appropriate, and documentation that resources required to complete the proposed project successfully are available to the applicant.
    d. Expected Outcomes: A clear description of the activities that will be completed with the reassigned time as well as the expected outcome of the project (publication, performance, exhibition, literature review, data collection, data analysis, etc.)
3. Final reports from any research reassigned time received Fall 2013 or later (if applicable)
4. Curriculum vitae (3 page maximum)

If granted reassigned time, I agree to allow my proposal to be viewed as a model by future applicants:

Yes

(Submitted CV removed for public posting)

Project Objectives

The project focuses on firms with cash shortages and the subsequent activities that firms or managers take to mitigate the problem. Specifically, the purpose of this study is to find the actions that firms take in response to liquidity crisis and investigate the association between liquidity crisis and cash-based real activity management. I further Investigate the impact of the actions firms take on the stock returns.

For the empirical design, I use a main sample and a subsample. The main sample contains all the firms during the sample period. Then, I partition the main sample into two groups. Since retail companies may be more likely to suffer a liquidity crisis (e.g., Bhargava et al. 1998), I separate the sample into retail and non-retail firms. Give the characteristics of retail firms, the positive association between liquidity crisis and cash-base real activity management would be more pronounced.

For the empirical tests, I obtain data from COMPUSTAT, I/B/E/S, CRSP and Execucomp and use various measures to proxy for a liquidity crisis. Although the literature provides some insights on measuring liquidity, it does not provide a universal measure of liquidity crisis. I consider a firm to be facing a liquidity crisis if one of the following situations is met: the sum of working capital over three prior years is negative, or the average of quick or cash-to-sales or interest coverage ratios or working capital over the prior three-year period is below its industry medians for the current year, or the sum of free cash flow over the previous three years is negative. Using the indicators that are based on the financial condition over the previous three years is intended to capture long-term liquidity problems. I define liquidity crisis as a situation in which a firm experiences consecutive cash shortages in the prior three years. This definition ensures that the measures of a liquidity crisis capture a non-random decline in a firm's liquidity condition. For the measures (indicators) of real activity management, I use sale of investments (asset sales), dividend cuts or omissions, and plant

closings. Furthermore, I follow Roychowdhury (2006) and use other popular proxies of real activities, including abnormal discretionary expenses and abnormal production costs.

Project Significance

Notably, the importance of liquidity to investors is highlighted by the U.S. Securities and Exchange Commission (SEC). In particular, the SEC requires companies to discuss their liquidity positions in the Management's Discussion and Analysis section of their annual reports and to disclose the steps or plans they take to remedy any material deficiencies in their short- or long-term liquidity. Several anecdotes and the SEC's focus on the liquidity disclosures suggest that firms would manage their liquidity positions as part of their corporate strategies. In this study, I propose and test that firms with deteriorating liquidity have an incentive to re-optimize their liquidity positions not only to ease the operational or financing constraints but also to shore up investor confidence.

Although the prior literature on financial distress has been extensive, the concept as applied to this study differs from financial distress. The solutions to financial distress involve contract re-negotiations or intervention by external stakeholders or legal reorganization under the Bankruptcy Code. Unlike contractual actions and obligations that accompany financial distress (e.g.,Wruck 1990), solutions to, or efforts to resolve liquidity crises do not require actions by external stakeholders or contract changes. Rather, management has full discretion and control over any actions pertaining to the firm's liquidity crises. The literature mainly focuses on the consequences of financial distress, but ignores that cash shortages could trigger some firm activities that could help firms generate cash internally.

The literature suggests that liquidity plays a critical role in corporate decision-making and operations. For example, Graham and Harvey (2001) survey chief financial officers about the cost of capital, capital budgeting, and structure. They document that CFOs believe corporate

liquidity is the most important decision they make. Importantly, liquidity provides insights into corporate financial flexibility. The researchers indicate that firms care about their financial flexibility because it affects corporate capital structure and financing decisions. Byoun (2011) develops the financial flexibility hypothesis (FFH) and argues that firms have demand for financial flexibility because firms in the development stage do not have enough liquidity to fund the initial development. This gives rise to the continuing need for external capital. However, firms face financial constraints of accessing capital markets when they are experiencing a limited level of liquidity. Hence, the need for financial flexibility or liquidity could lead firms to exploit future opportunities. Moreover, Byoun (2011) notes that for the firms with a shortage of liquidity, a little debt could result in financial distress, since firms incur fixed payments for debt financing. This implies that firms with sufficient liquidity could fund their development and may subsequently avoid costs of borrowing from the capital market. The results of Duchin et al. (2010) further reinforce the role of liquidity in mitigating subsequent investment declines in the period of post-financial crisis.

This study makes the following contributions: first, this study considers both financially healthy and financially weak firms. In this sense, it is important to note that, distinct from an analysis of going concern problems or insolvency, this study deals with corporate liquidity crises that can afflict healthy as well as financially weak firms. The context describes deterioration in corporate cash position that can result from competitive pressures or changes in the product market (e.g., declining sales), rising maintenance and/or replacement costs, or a tight credit market. The analysis sheds light on whether, and the extent that, the two firm types differ or follow similar strategies in responding to a liquidity crisis. The study also contributes to the real activity management literature by providing evidence that liquidity or cash crisis is a driver of

cash-based real activity management. Second, this study is distinct from the earnings management studies because it focuses on liquidity or a cash crisis and its relationship to real activities.

Project Feasibility

Some may argue that firms can use equity financing to solve their liquidity problems. However, equity financing receives much criticism from the literature. Myers and Majluf (1984) note that the issuance of equity may make the market believe that managers have private information and the firms' stocks are overvalued. McDonald and Soderstrom (1986) examine firms' financing behaviors and the results show that consistent with the financing hierarchy equity issuance is the last resort. By taking the costs associated with equity financing into consideration, managers may seek alternative or costless ways to obtain funds. As suggested by Myers and Majluf (1984), managers or firms prefer internal financing over debt and equity. The actions that I identify in this project could help firms generate liquidity internally and avoid external financing.

For the resources, I already obtain the data I need to get the liquidity crisis measures. For the cash-based real activities (the actions firms take to mitigate liquidity problems), I use sale of investments (asset sales), dividend cuts or omissions, and plant closings. Plant closing data is obtained from Forms 8-K and is hand collected by searching a set of keywords. I use Form 8-Ks to obtain information of plant or store closings because firms are required to report any "Disposition of Assets" (Item 2.01) and "Costs Associated with Exit or Disposal Activities" (Item 2.05) under Form 8-K Section 2. The rest of the data is obtained from COMPUSTAT, I/B/E/S, CRSP and Execucomp.

Expected Outcomes

I expect to find that liquidity crises are positively associated with cash-based real activity management. Firms would engage in various real activities to improve their cash positions during liquidity crises. In particular, firms would sell assets, close plants (stores), reduce (omit) dividend distributions, reduce abnormal discretionary expenses and production costs. I further test the impact of these actions on the one-year and three-year ahead stock returns and expect to find that investors would respond to the various cash-based real activities during the one-year and three-year periods following such activities.

References

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