University of Kentucky

Gatton College of Business and Economics

Institute for the Study of Free Enterprise

Understanding Precautionary Cash at Home and Abroad

- **In the presence of market frictions, it is optimal for firms to stockpile cash to fund investment projects which may arise in the future**
- **Prior work has documented that firms' precautionary savings motives predict variation in the size of firms' cash stockpiles**
- **The dramatic run-up in cash stockpiles raises the question of why these precautionary motives have increased**
- **It is shown that although precautionary motives explain variation in the level of cash held domestically, they provide little explanatory power for the level of foreign cash**
- **Multinational firms' foreign cash balances are instead explained by low foreign tax rates and the ability to transfer profits within the firm through related-party sales**
- **The firms with the greatest incentive and ability to transfer income to low-tax jurisdictions do so, and this results in stockpiles of cash trapped in their foreign subsidiaries**

According to recent Flow of Funds estimates, U.S. nonfinancial corporations are sitting on an aggregate cash and marketable securities position of approximately $3 trillion (see figure 1). This staggering amount has led to policy makers and commentators expressing concern as to why firms are building such large stockpiles despite an economy in recovery and a low-interest-rate environment, which should induce greater investment.

The academic literature has largely focused on the precautionary motive for retaining cash. Due to information asymmetries that may exist in the capital markets at the same time that firms are in particular need of funds, incentives exist to build cash stockpiles that reduce firm

dependency on external capital. This need for precautionary cash increases with uncertain investment needs (Martin and Santomero, 1997; Boyle and Guthrie, 2003). As the large run-up in cash is concentrated in arguably the least constrained firms (large, profitable firms with rated debt), prominent papers such as Bates, Kahle, and Stulz (2009) have focused more on the role of increasing investment uncertainty to explain this phenomenon. It is not clear, however, whether all cash is held for precautionary reasons. Where the cash is held can tell us a great deal about its purpose. Many firms' cash holdings are in risky and potentially illiquid securities (Duchin et al., 2015). Investing excess cash in risky and illiquid securities is the obvious way to guarantee the firm has capital for valuable future investment opportunities or to minimize expected distress costs, but it may be unavailable for current investment needs. Further, many firms hold vast sums of cash overseas to defer the taxation of foreign earnings (Foley et al., 2007). Given the tax consequences of repatriating overseas cash, it is not clear that foreign cash is a perfect substitute for domestically held precautionary cash—particularly when invested in illiquid securities.

The challenge in the literature has been to differentiate between the cash held for precautionary reasons versus the cash held for tax reasons. Are firms really stockpiling $3 trillion because they anticipate needing that much for investment purposes but fear rationing? How much is instead being held due to tax incentives? Does the money held for tax purposes also provide precautionary benefits? These are the questions we explore in this paper.

Some have argued that firms do differentiate between cash and marketable securities so that bifurcation could be used to test these different explanations. However, highly liquid riskfree marketable securities are nearly perfect substitutes for cash in fulfilling precautionary motives. Therefore, distinguishing on that dimension is not helpful in illuminating how these two motivations intersect with each other. Instead, our approach is to separate along the dimension of where the cash is held: domestic versus foreign. We argue that domestic cash has no tax benefits arising from deferral of the repatriation tax since corporate taxes (domestic and foreign) have already been paid on these funds. Thus, the benefits of holding cash in the U.S. are to provide operational liquidity and fund precautionary savings.

On the other hand, foreign cash is almost entirely subject to incremental taxation by the U.S. Equity infusions from the U.S. parent into foreign subsidiaries do not generate tax implications if that capital is returned. However, any distribution of foreign earnings is subject to tax at the positive rate differential between the U.S. tax rate and the foreign tax rate. The high U.S. corporate tax rate means that almost all foreign operating income would generate incremental tax upon repatriation to the U.S. (Graham, Hanlon, and Shevlin, 2015)

We do not know whether foreign cash also serves as precautionary savings. On the one hand, this money is available in times of capital rationing. On the other hand, should those funds be needed domestically, the firm would need to pay the incremental tax resulting from the repatriation that would occur in order to invest those funds domestically. Note that while firms can structure a transaction avoiding repatriation tax if the proceeds are located in one non-U.S. subsidiary and needed in another non-U.S. subsidiary, should the funds return to the U.S., they will almost always be subject to tax. Depending upon the location of the funds (some foreign countries have no tax on corporate income, making the repatriation tax rate 35%), firms may find that the incremental tax exceeds the positive NPV of the investment and they optimally forgo the investment if only foreign funds are available. If this is the case, foreign cash serves as an imperfect substitute for domestic cash. They are substitutes for funding foreign investment but not domestic investment. This generates the empirical question of how important precautionary motives are in explaining foreign cash holdings.

This separation between domestic and foreign cash is not historically possible using publicly available data sources. While some firms recently have voluntarily disclosed their foreign cash position (Harford et al., 2015), the selectively released data are limited both in scope and length. Therefore, the literature has not so far separately estimated the determinants of domestic versus foreign cash positions. The Bureau of Economic Analysis (BEA) conducts a mandatory survey of U.S. multinational companies that generates the data that are needed to address this shortcoming.2 From this survey, we are able to measure how much cash and marketable securities firms are holding in each foreign subsidiary. Combining this with the disclosure of their total cash and marketable securities position (from Compustat), we are able to calculate how much cash is held domestically

We proceed by first regressing the total cash position of the firm on variables that have previously been documented to explain some of the observed cross-sectional variation in corporate cash positions (Opler et al., 1999; Bates, Kahle, and Stulz, 2009). After showing that the baseline specifications are similar to what has been found in the prior literature, we replicate these specifications separately for the cash held domestically and the cash held abroad. The results are striking. The aggregate cash position is explained by a variety of firm characteristics associated with precautionary motives, such as growth opportunities and leverage. It also is inversely related to the Faulkender and Smith (2015) effective tax rate (an average of the U.S. and foreign tax rates which firms face given the location of their foreign operations). Firms with higher average tax rates hold less cash.

Breaking out the domestic and foreign cash positions separately provides additional insight. For multinationals, the effective tax rate does not explain domestic cash levels. However, for foreign cash holdings, the estimated coefficient is highly negative, both economically and statistically. This implies that firms with lower effective tax rates hold more foreign cash, consistent with the Foley et al. (2007) argument that if firms are confronting lower tax rates abroad, their repatriation tax is higher, and this incentivizes the stockpiling of foreign cash. A firm's strategic choice to reduce its effective tax rate is something we will discuss below, but this divergence between drivers of foreign and domestic cash is consistent with firms moving cash abroad when there is less need for precautionary cash. Importantly, proxies for precautionary motives are not relevant for explaining foreign cash. Precautionary motives are the main drivers of firms' domestic cash levels. The variables used in the prior literature to measure firms' capital constraints and risk, and which have predicted total cash, also predict domestic cash. A firm's effective marginal tax rate (the foreign tax rate it faces) has little ability to explain the firm's domestic cash holdings. Our results show that the factors that explain domestic and foreign cash holdings are quite distinct.

After isolating the precautionary motives for holding cash, we are able to delve further into the tax motives. Often, overseas cash held by U.S. firms is referred to as trapped. Yet there is broad evidence that intellectual property royalties and transfer payments facilitate the offshoring of income to low-tax jurisdictions (Grubert and Mutti, 1991; Levin and McCain, 2013; Kanter, 2014). Firms with intellectual property, whether it consists of patents, trademarks, or licensing deals, may be able to adjust the ownership and within-firm pricing of the IP to transfer revenues from higher-taxed regions to affiliates in low-tax havens. This transfer pricing is a deliberate relocation of earnings to affiliates and contrasts with the notion that trapped overseas cash is a byproduct of international business activity. Specifically, we calculate how much the revenue of the firm's subsidiaries is generated by sales to other subsidiaries. Under the hypothesis that firms structure the location of their intellectual property to take advantage of low corporate income tax rates in some foreign jurisdictions, we expect firms with subsidiaries in low-tax jurisdictions to do more internal (affiliated) sales. This enables them to move earnings to lower-tax countries, but also results in larger cash and marketable securities portfolios held abroad—now "trapped" in low-tax subsidiaries. That is exactly what we find. Further examination reveals that this result is entirely explained by firms engaged in significant R&D. The result does not hold for firms which are not engaged in R&D. Firms with intellectual property have the greatest ability to control their taxes using within-firm transfers.