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Cash holdings estimation model for non-financial companies in Indonesia

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ABSTRACT: The study constructs cash holdings estimaton model for non-financial companies listed on the Indonesia Stock Exchange, using a dynamic regression model. This model recognizes that the process of adjusting towards standard cash holding involves adjustments to changes. The results from the dynamic panel data model show the higher propensity for companies with high growth, large size, high return volatility, cash flow, and cash substitutes, as well as those that pay dividends also hold more cash holdings. Conversely, the characteristics of issuing high capital expenditure, leverage, and tangible assets tend to promote fewer cash holdings. The results support the motives of these companies as the transactional and precautionary motive.

1 INTRODUCTION

1.1 *Background*

Previous studies in several countries have shown a relatively large proportion of cash holding to assets, with an average ratio of 23.2% for companies in the United States in 2006 (Bates, 2009). This was 14.08% in European countries that were members of the Economy and Monetary Union in 1987-2000 (Ferreira, 2004); 16.9% in China, within the period of 1998-2009 (Alles, 2012); 12% in Singapore and Malaysia in 1999-2000 (Kusnadi, 2011). This was 12% on average in five ASEAN countries (Malaysia, the Philippines, Indonesia, Singapore, and Thailand) in 2001-2005 (Lee, 2009). In summary, the cash holding companies in many countries from these observations become a substantive part of the assets, and the numbers are continuously increasing, hence the study interests. Aspects relating to investing cash holdings under the framework of the trade-off theory model are transaction costs, information asymmetry, and debt agency costs (Opler, 1999) and (Shah, 2011).

1.2 *Research issue*

Companies in imperfect capital markets are faced with high external funding costs; hence investment in cash holding is a normal response to fund the company's future funding needs. Furthermore, the standard estimation uses variables that serve as a proxy for logical reasons that are centered on holding. In addition, the cash holding determinant model of (Opler, 1999), (Ferreira, 2004), (Bates, 2009), (Frésard, 2010) was derived from rational reasons that emphasize on the transaction and precautionary motives for futuristic investment opportunities. This uses variables related to external funding costs, cash flow uncertainty, and investment opportunities. This regression specification is widely followed by researchers who intend to determine standard company cash in Nigeria (Ogundipe, 2012); manufacturing in Bangladesh (Islam, 2012); Pakistan (Shah, 2011); Australia (Lee, 2011); and China (Alles, 2012), etc.) Furthermore, business conditions have significant links with cash decisions companies (Ferreira, 2005);

(Baum, 2006). The results of Ferreira, show the constraint felt by companies in the United States by means of funding and retaining more cash during the recession. Therefore, the reason for the increase in liquidity during the periods of tight credit conditions is to be precautionary, and this relationship is due to the elevated difficulty in accessing external funding. This study explains the company's cash holding model in Indonesia's non-financial public companies.

2 LITERATURE REVIEW

According to the trade-off theory, a company chooses the average cash level by comparing the (1) benefits of cash holdings, specifically related to savings in transaction costs to obtain funds and the need to liquidate assets. Furthermore, other benefits include the propensity of using liquidity to fund activities and investments in the unavailability of other sources, or when they are expensive, (2) the cost of cash holdings is the opportunity budget of capital investments in the form of liquid assets, and also the increase in agency problems above substandard assets. In addition, meeting these costs demand that companies maintain cash holdings in order to attain business transaction needs. Furthermore, companies maintain excessive liquidity in an attempt to sustain the precautionary and speculative motives., while cash holdings maintenance allows the anticipation of unexpected events in the future and the minimization of the cost required to obtain external funding (Keynes, 1936).

The regular model of estimating and forecasting cash holdings demand is generated from variables that conceptually and rationally determine the company's average level of cash holdings. These variables are conceptually and rationally developed from the research by (Opler 1999) and (Shah, 2011).

3 RESEARCH METHODOLOGY

3.1 *Population and sample*

This study evaluates the characteristics of 269 listed companies over a 12 year period or 1516 observations. Therefore, the panel data was used in the formation of estimates of cash holding.

3.2 *Model regression method estimated GLS*

The statistical model of regression EGLS to estimate cash holdings is:

$$\overline{(CASHHOLDINGS)}_{i,t} = \sum_{i=1}^{n} \beta_i \overline{X}_{i,t} + \overline{u}_{i,t}$$

Description:

Symbols αi and αt are firm-specific effects and effects time. (period-effects) (Levy). X is a vector containing independent variables, namely investment opportunities (GROWTH), company size (SIZE_RIIL), financial difficulties (DDISTRESS), cash flow risk (RV) or (VCF), the amount of cash flow ((CFLOW), investment (CAPEX), convertibility (CONVERT), leverage (LEV), dividends (DDIV_DPS), cash conversion cycles (CCC), debt maturity (MATURITY), asset tangibility (TANGIBLE)

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