Multidimensional Index of Financial Flexibility Assessment[1]

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INTRODUCTION

The evidence from previous studies on measuring financial flexibility has primarily relied on Western literature, which may not necessarily be suitable for developing economies such as Iran. Previous research has often employed "single indicators" to measure financial flexibility. For instance, some studies used leverage to indicate debt capacity (Billet, King & Mauer, 2007; Denis & McKeon, 2012; Marchia & Mura, 2009), while others utilized cash holdings (Chen, Harford & Lin, 2017; Hoberg, Phillips & Prabhala, 2014; Riddick & Whited, 2009). Additionally, certain studies employed multiple variables to measure financial flexibility through a composite index (Arslan-Ayaydin, Florackis & Ozkan, 2014; Gamba & Triantis, 2008; Rapp, Schmid & Urban, 2014). Recognizing that financial flexibility signifies a company's ability to effectively respond to unexpected shocks, exploit investment opportunities, and acquire capital at low cost, the study by Chang & Ma (2018) highlights the importance of considering cash retention and potential cash inflow in creating low-cost cash flows. This, in turn, helps in maintaining financial security and addressing financial constraints. Consequently, the current research aims to develop a

multi-dimensional adjusted Financial Flexibility Index (FFI) that accurately reflects the specific characteristics of the Iranian stock exchange.

MATERIALS AND METHODS

Based on the research's purpose of determining the optimal measure of financial flexibility suitable for the financial market of Iran, the study can be classified as developmental-applicative in terms of its objective and descriptive in terms of its implementation method. The data collection methods employed include documentary and library methods. Information required for the research literature and theoretical foundations has been gathered through books, both foreign and domestic magazines.

To extract the modified model of financial flexibility, the researchers utilized a questionnaire to weight the indicators using the Analytic Hierarchy Process (AHP) method. Additionally, the necessary statistical data were extracted from the financial statements of companies listed on the Tehran Stock Exchange. The research focused on a sample of 180 companies over the period from 2007 to 2017.

The overall research methodology encompasses several steps:

1. Conducting an exploratory search in relevant texts to extract the initial framework of the research based on definitions of financial flexibility. The primary framework was developed following the research methodology outlined by Chang and Ma (2018).
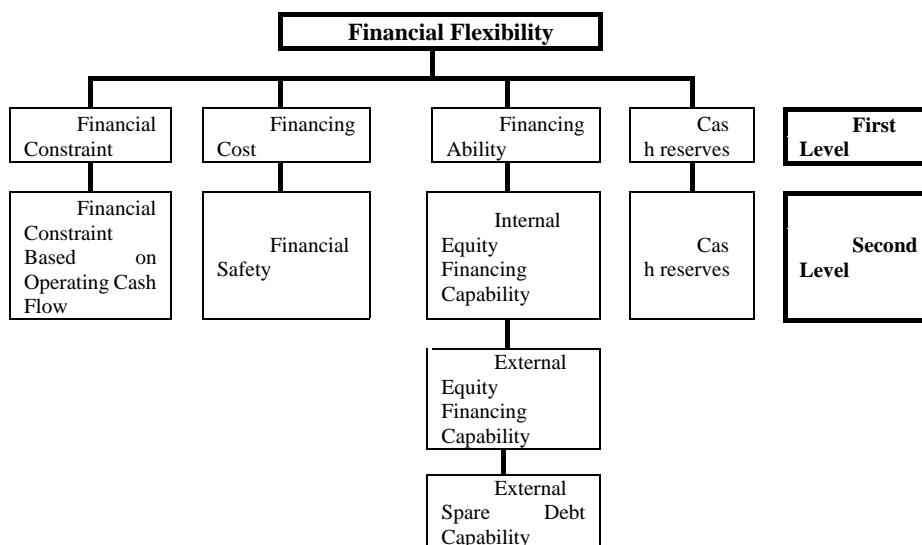

Figure 1. The basic framework of determinants of adjusted financial flexibility index

2. The researchers employed hierarchical analysis to validate and assess factors as indicators of financial flexibility suitable for Iran's financial market, assigning weights to the criteria of the first-level index. At this stage, the opinions of 15 academic and professional experts were gathered and utilized to assign weights to the first-level indicators.

3. In the third stage, the researchers calculated the values of the first-level indicators for each year of the company. This calculation allows for the determination of the amount of financial flexibility based on the weights assigned to the four indicators in the second stage. Essentially, at this stage, the second-level index criteria are applied. These criteria, as illustrated in Figure (1), serve as secondary indicators (second level) used to calculate the main indicators (first level).

3. RESULTS AND DISCUSSION

The results obtained from the consensus of experts regarding the weighting of indicators revealed that, in the multi-dimensional model of financial flexibility extracted, cash retention takes the first priority, followed by financing ability, financing cost, and financial constraints. This indicates that, according to experts, cash reserves play the most significant role, comprising 57.9% of the weight in the flexibility index. Furthermore, among the main indicators weighted by experts, the financing ability index is measured through three sub-indices: Internal Equity Financing Capability, External Equity Financing Capability, and External Spare Debt Capability. The weights assigned to these sub-criteria were determined using the coefficient of variation to measure the financing ability based on them. The results showed that, in Iran's capital market, External Spare Debt Capability carries the highest weight, while External Equity Financing Capability has the least impact on the company's ability to finance. This suggests that companies in Iran's market may find it easier to secure financing through debt.

CONCLUSION

The research results align with the hierarchical theory of capital structure, indicating a preference among companies for debt financing over equity financing, which is perceived as more costly. Given the emphasis on Cash reserves in explaining financial flexibility according to expert opinions, it is recommended to managers and financial policy makers of companies to orient the organization's strategy towards maintaining ample cash reserves. This strategic move enables companies to respond appropriately to unforeseen problems and shocks. Furthermore, it is suggested to the

stock exchange organization to assess the financial flexibility of companies based on such multi-indicator models. Ranking companies according to their financial flexibility could provide valuable information for potential investors and shareholders. This approach allows stakeholders to make more informed decisions, considering the financial flexibility of companies, thus contributing to a more transparent and well-informed investment environment.

Keywords: Academic Experts; Analytic Hierarchy Process (AHP); Financial Flexibility.

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