

Could firm value be explained by thermal comfort? Evidence from Listed Companies in Portugal

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Abstract

This paper proposes a previously unexplored model to the valuation of a corporation using financial reporting and accounting numbers. In our view, this model promotes dissemination and exchange of ideas about the new perspectives of the value analysis and it claims that traditional valuation models does recognised the investors' behaviour in satisfactory approach at the same time of the corporate value. This research has been validating on a panel data of listed firms on the *Euronext Lisbon* as the Portuguese stock market. The population identifies 291 firms with officially quoted shares in the stock market, but after a process of depuration, the sample is 1.079 observations related with 114 firms, from December 31, 1991 until December 31, 2001. Further, by being able to identify corporate value, our model provides opportunities to gain a better understanding of the link between quality of the information produced and corporate strategies. Also, the quality of the economic decisions can also be inferred from publicly available data, our model generates new opportunities for empirical research.

The first answer to the question of this research argues that this paper contributes to the econophysics literature by examining the robustness of the relation between accounting (valuation) and physics (thermal comfort). In this perspective, the objective of valuation is to provide information about the firm and the objective of thermal comfort is to provide information about the person. The research promotes, more and more, that nature began to be governed by physical laws and we started to wonder whether such laws are able to apply to Human or firms sphere was well. Also prone to this problem, is valuation governed by accounting principles. The second answer to the question of this research explains firm value as an application of the Fanger's model. In other words, by testing the firm value with different variables, we can move towards understanding not only of the emergent behavioural rules for firms and investors, but also to learn from these rules. This illustrates the innovation that it develops the widely-used International Organization for Standardization (ISO) standard 7730: 2005(E) and it permits to incorporate the company-specific valuation approach which use computing results obtained from large simulation. In addition, this standard is precisely, unequivocally defines and contributes to the literature by analyzing the standard implementation to which the valuation model is applied. The third answer to the question of this research shows the development of a theoretical model of the corporate value that links characteristics from the financial reporting such as operational, investment, financial, dividends, tax and market policy derived from corporate strategies adopted of the firm that provides a case study that it has been validated and understandable.

Keywords: Econophysics; thermal comfort; value analysis; accounting, Portuguese firms.

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