ISSN: 0976-3104
SUPPLEMENT ISSUE

ARTICLE

THE RELATIONSHIP BETWEEN INTERNAL CHARACTERISTICS OF FIRMS AND MACROECONOMICS ON THE RETAIL AND WHOLE SALE SECTORS IN INDONESIA

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ABSTRACT

The role of this research paper is to explore and highlight how internal aspects of firms and the external environment in economics affect the retail and whole sale sectors in the country. To effectively do this, specific internal economics characteristics have been used including financial performance and risk indicators. On the other hand, the macroeconomic aspect is variables to stock returns; this is in consideration of all the retail and whole sale firms that were listed in the stock exchange between the years 2008 and 2015. The panel regression is used and comprises two models regarding the internal and macroeconomics aspects utilizing the Chow Test and Hausman Test. The application of panel regression leads to the results which imply that there is a significant relationship between the returns in firms and price to sales ratio, debt ratio, return on assets, firm size, beta, and rate of exchange in the stock market. These results are based on tabular comparison of the aspects in terms of their statistical values of coefficients, t-Statistics and probability values in the panel regression. The discussion further asserts the existence of strong relationship identified in the results and further proves a negligible relationship between the internal and macro-economic aspects in the context of their environments. The conclusion finally sums all the findings suggesting that the financial well being of retail and wholesale firms in Indonesia rely heavily on the identified aspects.

KEY WORDS
Financial performance, return on assets, beta, firm size, exchange rate

Received: 14 Jan 2017
Revised: 6 Feb 2017
Published: 1 March 2017

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INTRODUCTION

The economics of retail and wholesale firms is critical in the evaluation of the financial performance; employing the internal and external environments in this evaluation is a sure way to determine where the financial success of the firms depends heavily on. Most of these environments rely on tabular or statistical values which show the exact relationship between the return of assets or stock and the environments. Additionally, the financial statements help in arriving at the statistics by proving the data necessary for the computation of financial rations including debt ratio and price to sales ratio. By arriving at the various findings, stakeholders such as investors have the reliance on the accurate decision as whether or not to invest in the firms as well as knowing which aspects of the internal and external environments to focus more.

Financial performance is the overall health of a firm in terms of the returns gained from sales and investment as well as other financial activities [1]. As such, it is related to the return on assets, the exchange rates for the case of stock market firms, the beta ratio and the price to sales ratio. Return on assets is the revenue that assets give back to the firm for example through leasing a retail building, using private transportation for delivery of products and amassing of shareholder value in the stock market [2]. This element represents the most popular way of determining the profitability of a whole sale or retail firm by comparing the total firm assets and the revenue generated.

Exchange rates determine the value which a retail or wholesale firm get through trading in the stock market for example through the buying and selling of shares. In the Capital Asset Pricing Model (CAPM), the beta ratio represents the systematic risk which retail or wholesale firms are exposed to in the specific market [3]. Systemic risks on a large extent affect the well being and financial performance of a firm; this is because a systemic risk might cause the whole sale or retail firm close and this will completely shut the income generation means for the good performance of the firm. The financial performance is largely dependent on the size of the firm and this means that the beta ratio is varied on both whole sale and retail firms. The size of a firm means that operations are done depending on the financial capacity, the shareholders' equity and capital size of the firm. These elements of internal and external economic aspects in retail and whole sale firms comprise the structure that determines performance [4].

MATERIALS AND METHODS

At the center of this research is to find out returns on an asset in both the internal and macro-economic levels; any performance measures are therefore used to calculate how the specific aspect under investigation affects the return. The following formula is used to compute the return on asset for both the retail and whole sale firms' scenario [5].

$$r_t = \frac{P_t - P_{t-1} + Div_t}{P_{t-1}}$$

Using the prefix t to represent time, the variable r_t represents the returns on an asset while p_t is the market price for an asset. On the other hand, p_{t-1} is the market price of the asset after a period of (t-1) while Div_t is the dividend per one share of the retail or wholesale firm. Time t was normally applied over a period of one year in the research and the same done repeatedly for the value of the years between 2008 and 2015.

The various financial performance data were calculated from the financial statements of the used firms and in particular the balance sheet and income statements. The financial performance categorized under return on assets and debt ratio, market financial performance and the risk of the selected firms. Under the financial market performance, the price to sales ratio was used as the performance measure, while the risk factors was determined using the beta ratio and the firm's size [6].

Calculating the debt ratio was done on the basis that the ratio is given by the formula [7].

Debt ratio = overall debts / over all assets

To calculate the price to sales ratio, the price per share was divided with the sales per share [8].

Price to sales ratio = Price per share / sales per share

From the market value of shareholders' equity, the natural logarithm was applied to arrive at the size of the firm [9]. Lastly, the beta value was obtained by regression of the Jakarta Composite Index (JCI) with the original market price.

The models used in the regression panel were the internal and external environmental aspects including deb t ratio, price to sales ratio, size of the firm, and beta. Additionally, the Chow test was used to compare the similarity between the internal environmental aspects of firms' financial performance and the external or macroeconomic aspect of the exchange rate [10]. On the other hand, the Hausman test was applied to determine the consistency of the statistical data in order to arrive at accurate findings.

RESULTS

The table below represents general results of the debt ratio, return on assets, price to sales ratio, and the firm size for the Indonesian firms between 2008 and 2015.

Table 1: Statistics of internal and external environmental aspects

	RETURN	DR	ROA	LNME	PS	BETA	EXCHRATE	INF	INT
Mean	0.039722	0.214028	0.117917	29.96444	0.629861	0.693832	10494.42	0.060000	0.081667
Median	0.030000	0.230000	0.100000	30.20000	0.475000	0.218857	9915.878	0.055000	0.080000
Maximum	0.200000	0.460000	0.500000	37.23000	2.120000	8.031900	13391.97	0.100000	0.100000
Minimum	-0.080000	0.010000	0.030000	20.37000	0.030000	-3.359332	8779.492	0.040000	0.070000
Std. Dev.	0.052647	0.131670	0.085546	5.329530	0.506878	1.822053	1669.002	0.017442	0.009038
Skewness	0.780870	0.033629	2.867108	-0.472324	0.968789	1.788729	0.649868	1.299038	1.050139
Kurtosis	4.380147	1.873041	12.49547	2.100909	3.208651	9.325409	1.950266	3.833333	3.378121

These results indicate a general positive relationship between the internal and external environmental aspects of the financial performance; the return on assets (ROA) is particularly positive all through as compared with some negative elements in the actual return and the beta value [11]. These results specifically confirm at a general point with the hypothesis that the internal aspects such as the beta ratio and micro-economic aspect of exchange rate a direct and positive effect on the overall financial performance of the whole sale and retail firms in Indonesia.

[Table 2] presents the regression panel where the internal and macro-economic aspects have been demonstrated in two models in consideration of the Chow and Hausman Tests [12].

Table 2: Statistical relationships between the internal and macro-economic aspects on the financial performance

Specifications Test	Model 1 (Firms Characteristics)	Model 2 (Firms Characteristics and Macro Variables)
Chow Test		
Statistic	2,8702	2,7227
Prob	0,0048	0,0075
Selection	Fixed Effect Model	Fixed Effect Model
Hausman Test		
Statistic	11,8756	6,4048
Prob	0,0365	0,6020
Selection	Fixed Effect Model	Random Effect Model

These results are generalized and need to therefore be broken down to the particular aspects in regard with the two models. The internal environmental aspects are represented by the firms' characteristics while the external environment comprises the macro-economic aspect of exchange rate.

Table 3: Specific relationships between the internal and external environmental aspects

Variables	Model 1 Coefficient	t-Statistic	Prob.	Model 2 Coefficient	t-Statistic	Prob.
Constant	0.648854	2.675296	0.0098	0.113077	1.254486	0.2143
Actual Returns	-0.182341	-2.669733	0.0100	-0.033970	-0.501845	0.6175
ROA	0.137413	2.415626	0.0191	0.012366	0.163780	0.8704
Price to Sales Ratio	0.087838	6.641842	0.0000	0.049866	2.893864	0.0052
Beta	-0.003739	-2.799987	0.0070	-0.007054	-1.891758	0.0631
Size (LnME)	-0.021327	-2.663567	0.0101	-0.000144	-0.076587	0.9392
Exchange Rate				-1.40E-05	-4.282088	0.0001

DISCUSSION

This part can be broken down into the two models of internal and external environments. For the first model (internal environment of the firm characteristics), the return on assets has the highest effect on the characteristics of the firms. The highest probability is 0.0191 which is under the ROA. This is followed by the size of the firm (0.0101). Other relationships of the characteristics and the performance of the firm are the beta value (0.0070) and the price to sales ratio. As such, these aspects contribute therefore to the finding that the internal environment or the characteristics of the firm comprising the beta, the return on assets, and the size of the firm have a strong relationship with the overall financial performance of the whole sale or retail firm [13]. In short, the sizes of the firm, the return on assets, beta and price to sale ratios determine to a large extent the internal structure of firms.

The second part has the external environment or the macro-economic aspect; the exchange rate for this model has the highest effect on the original price of assets. This can be interpreted as a proportionality between existing market prices at the stock market and the relationships between one asset and another for example between the Indonesian Rupiah and the United States Dollar. The probability and t-statistics have negatives signs in the macro-economic model which helps to prove the existence of the relationship between the exchange rate and the financial performance of the particular firms [14].

There is however a very minimal relationship between the two environments as compared with between the individual environments and the financial performance [15]. Taking an example of the probabilities for the various aspects, there is a significant difference; the internal environment has very low probabilities with the highest in the ROA (0.0191). On the other hand, the highest probability in the macro-economic environment is exhibited by the size of the firm (0.9392). This difference implies that there is negligible existence of interactions between these two aspects in the context of their broad environments.

CONCLUSION

The results from this research show a direct and strong relationship between the financial performance of the whole sale and retail firms in Indonesia. Different aspects of internal environments (firms 'characteristics) and the external environment (macro-economic) contribute to the overall financial well being of the firm. Internal aspects include the price to sales ratio, the beta ratio, return on assets, and the size of the firm while the macro-economic aspect is the exchange rates and applies to firms which are listed in the stock exchange. There is however little relation between these two environments in a general perspective. This research therefore concludes by confirming that the aspects discussed form the central point in the well being of Indonesian retail and wholes sale firms.

CONFLICT OF INTEREST
Authors declare no conflict of interest with in this research.

ACKNOWLEDGEMENTS
We are thankful to Dr. Hendro Sasongko the Dean at the Faculty of Economics-Universitas Pakuan for his valuable input and support in research planning and final manuscript drafting.

FINANCIAL DISCLOSURE
No financial disclosure needed as it was a solely self funded research.

REFERENCES

[1] Daher, Lâma, Erwan Le Saout.[2015] The Determinants of the Financial Performance of Microfinance Institutions: Impact of the Global Financial Crisis." *Strategic Change*, 24(2): 131-148.

[2] Baxamusa, Mufaddal, et al. [2016]Why do Firms Purchase Used Assets?" *International Review of Finance*, 16(2): 243-264

[3] Upadhyay Arun D. et al. [2016]Inside directors, risk aversion, and firm performance." *Review of Financial Economics*

[4] Akbarpour M.[2011] Reviewing Relationship between Financial Structure and Firms Performance in Firms Traded on the Tehran Stock Exchange." *International Journal of Business Administration*, 2(4).

[5] Mahmud Hasan Mostofa.[2011] Sector-Wise Stock Return Analysis: An Evidence from Dhaka Stock Exchange in Bangladesh. *International Journal of Business and Management*, 6(6)

[6] Rasyid Ardiansyah. [2011]"Corporate Governance, Audit Firm Size and Restated Financial Statement in Indonesia Stock Exchange." *SSRN Electronic Journal*

[7] Nguyen LT, MH Phan.[2015] *Over-Average Debt Ratio and Consequences*. LAP LAMBERT Academic Publishing

[8] Vruwink David R, et al. [2011] A Modified Price-Sales Ratio: A Useful Tool For Investors?" *Journal of Business & Economics Research (JBER)*, 5(12)

[9] Siddhartha S.[2016] Natural Logarithm in Economics." *International journal of economic and political integration:* 5(1-2)

[10] Saha, Jagabandhu. [2016] A Two-way generation of the chow test: The case of three regressions. *International Journal Of Scientific Research And Education*

[11] Reimsbach Daniel. [2011] Weighted Average Return on Assets - WARA." *Controlling*, 23(7): 399-400.

[12] Tvrdon, Michal.[2015]Labour Market Performance in EU Member States: A Panel Regression Approach." *Journal of Economics, Business and Management*, 3(1): 34-37.

[13] Dhatt, Manjeet S. Yong H Kim, Sandip Mukherji.[1999] Relations Between Stock Returns and Fundamental Variables: Evidence from a Segmented Market. Asia Pacific Financial Markets. 6: 221-233.

.

[14] Shergill GS, Sarkaria MS. [2009]Impact of Industry Type and Firm Characteristics on Firm-level Financial Performance-- Evidence from Indian Industry." *Journal of Entrepreneurship*, 8(1): 25-44.

[15] Wen-Ting, Lin, Liu Yunshi. [2011] Successor characteristics, change in the degree of firm internationalization, and firm performance: The moderating role of environmental uncertainty." *Journal of Management & Organization*, 16-35.