Profitability of Food & Beverages Industry Sector in IDX: The Impact of Working Capital Turnover

Ghazali Syamni[1*], Ichsan[1], Rasyimah[1], Aiyub[1], Husaini[1]
[1*]*Faculty of Economics and Business, Universitas Malikussaleh, Banda Aceh, Indonesia*

Keywords: The working capital, profitability, turnover, IDX

Abstract: The purpose of this study is to examine effect of working capital on profitability of food and beverage companies in Indonesia Stock Exchange. The data used in this study is secondary data from the documentation of financial statements of food and beverages and the like companies during the period 2012-2016. This study differs from previous research since it applies all the variables of profitability ratios generally applied. The results of the study find that independent variables of cash turnover, receivable turnover and inventory turnoverall have their significant effect on the profitability ratios of the company including ratios of return on asset, return on equity, net profit margin and gross profit margin. The model chosen in this research is Random Effect Model. Statistically this study finds that the working capital turnover negatively affect the return on equity partially or completely. However, working capital turnover significantly affects overall ROA, NPM and GPM. Partially, turnover circulation affects return on assets and receivable turnover affects gross profit margin. Both turnovers affect net profit margin. Lastly, no cash turnover affects the profitability of food companies and beverages in the Indonesia Stock Exchange.

SCITEPRESS
SCIENCE AND TECHNOLOGY PUBLICATIONS

1 INTRODUCTION

Companies are commonly established with a goal of achieving profitability. Any company will strive to achieve optimum level of profit and maintain the level of profit it has achieved. One of the ways in which managers of the company perform in order to keep the level of profit steady is to manage the company's working capital. Hanafi (2004) claimed nearly 60 per cent of managers prepare time in managing working capital in a company despite their work in cash planning, receivable and supplies. Thus, it was necessary for a company to plan a rational and efficient working capital management, not vice versa, Zeidan and Shapir (2017).

Working capital policy is an important policy needed to be done by company managers in addition to funding decisions, investment and dividend pay-out (Masri and Abdulla (2017). Mun and Jang (2015)
Mentioned that working capital as one of the factors that influence Food Company's value.

Several previous studies on relations of working capital with profitability in industrial and enterprise sectors have been conducted providing various results. Baños-Caballero et al. (2014)study on non-financial firms in the UK stated that the optimal working capital level for finite-financed firms was to have lower working capital. In Finland, Enqvist et al. (2014)disclosed working capital management was problematic if not efficiently done in corporate financial planning in accordance with environmental conditions. In Norway,Hakim and Terje (2016) mentioned that there was a relationship between working capital of SMEs with profitability particularly when cash cycles were accelerated.Mun and Jang (2015). In American restaurant companies and Anna-Maria *et al*. (2016) in Helsinki disclosed working capital related to profitability but highly dependent on the use and various strategies in improving the company's profitability by managers on the company.

Various researches in Asia and Africa (Egypt, Kenya, Nigeria and South Africa) on working capital have also been done with different results. In India, Bhatia and Srivastava (2016) research in 179 companies, including the Bombay 500, displayed a negative relationship between working capital and profitability.

Altaf and Shah (2017) proved a relationship between working capital and profitability even though U is inverted. Companies with limited

Syamni, G., Ichsan, ., Rasyimah, ., Aiyub, . and Husaini, .
Profitability of Food Beverages Industry Sector in IDX: The Impact of Working Capital Turnover.
DOI: 10.5220/0009899400002480
In *Proceedings of the International Conference on Natural Resources and Sustainable Development (ICNRSD 2018)*, pages 153-157
ISBN: 978-989-758-543-2
Copyright © 2022 by SCITEPRESS – Science and Technology Publications, Lda. All rights reserved

financial capital employed lower working capital as optimal as possible. Madhou *et al.* (2015)claimed that working capital affect the profitability of the company but highly dependent on the company's characteristic's, sometimes adjustment for more or less capital needed to be made. Öztürk and Vergili (2018) said that sales growths as well as collection period affect return on assets while company size has negative effect. Meanwhile, debt, cash cycle, receivable period places no effect on profitability of mining companies in Turkey.

Research in Pakistan by Tahir and Anuar (2016) on textile companies found that working capital had the most effect on the profitability of the company, but in its implementation effectiveness was required in order to achieve profitability. Research in Africa; Ukaegbu (2014) showed working capital was negatively related to profitability due to industrial typology where cash cycle cash conversion cycle increases hence lower the profitability. While in Egypt, Eldomiaty *et al.* (2016) focusing on nonfinancial firms explained that cash conversion as the most important working capital variable to improve profitability.

In Iran, Jamalinesari and Soheili (2015) claimed that in planning an efficient working capital, the role of good corporate governance was important in order to achieve profitability. In Malaysia, Kasiran *et al.* (2016) said that SMEs in Malaysia were still less efficient in managing working capital. Wasiuzzaman (2015) supported that the value of limited capital companies would increase by managing working capital efficiently, however, this was not the case for larger financial capital companies. And, Zariyawati *et al.* (2016) proposed a need for corporate managers to take a smart decision in managing the company by considering the condition of the company. But Shaista (2015) working capital was negative impact to profitability.

In Indonesia, Adam and Shauki (2014) research in food and beverage companies stated that working capital affected the value of investment. Sari (2018) mentioned that working capital had not effectively affected the return on investment in plantation companies.Ramadhan et al. (2018) claimed that working capital affected return on assets in mining companies. While Dewi and Prasetyo (2017) working capital inventory affected return on assets in e textile and sharia garment companies. In the fertilizer company by Mulyono *et al*. (2018) stated that all working capital components affect the fertilizer company's return asset. WhileWijaya and Tjun (2018) showed not all components of working capital, i.e., cash and inventory turnover affecting return on assets in food and beverage companies. The same is true for pharmaceutical companies, Wau (2017) that cash turnover and receivable did not affect return on assets. Inventory turnover influenced return on assets.

Having discussed several researches, it could be stated that inefficiency in managing working capital affects profitability in certain industrial sectors. In fact, there were also results of research that found no effect of working capital variables on profitability. Therefore, this study was conducted with the purpose of testing the effect of working capital turnover on the profitability of food, beverage and other similar companies. However, this study differs by using four dependent variables as proxy of profitability, i.e. return on asset, and return on equity, net profit margin and gross profit margin. The use of the four proxies of profitability ratios was applied as a form to complement the previous research deficiencies which use only one or two dependent variables as profitability variables. In addition, variable net profit margin and gross profit margin were included since food and beverages companies generally prioritize sales.

2 METHOD

The data used in this study is the documentation data from the financial statements of Food & Beverages industry in Indonesian Stock Exchange in the period 2012-2016. In that period, there were 11 Food & Beverages industry companies that provided data qualified to be used in this research. From the data, fifty five observations were made consisting of 5 years and 11 companies. Thus, the model in this study is a panel regression model. Thus, the research model is:

$ROA_{it} = \beta 0 + \beta 1 Cash_{it} + B2\ Receivable_{it} + \beta 3 Inventory_{it} + \varepsilon_{it}$

$ROE_{it} = \beta 0 + \beta 1 Cashit + B2\ Receivable_{it} + \beta 3 Inventory_{it} + \varepsilon it$

$GPM_{it} = \beta 0 + \beta 1 Cash_{it} + B2\ Receivable_{it} + \beta 3 Inventory_{it} + \varepsilon i$

$NPM_{it} = \beta 0 + \beta 1 Cash_{it} + B2\ Receivable_{it} + \beta 3 Inventory_{it} + \varepsilon it$

Where, ROA, ROE, NPM and GPM are return on assets, return on equity, net profit margin and gross profit margin. β is the coefficient, Cash, Receivable and Inventory are (cash turnover, receivable turnover, inventory turnover), i is the company name and t is the period of time. Furthermore, having used panel regression, this study selected model of Common Effect Model

(CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). The best model selection is determined by doing Chow test, Hausman test. Chow test is performed to select CEM with FEM. The best model is determined by the probability significance of chi square, if the significance value is <0.05 then the best model is FEM, otherwise if the significance value is> 0.05 then the best model is CEM and no need to proceed with Hausman test. Hausman test is performed with the aim of selecting FEM with REM. If the value of chi square is significant <0.05, then the best model is FEM, otherwise if not significant 0.05 then the best model is REM, Baltagi et al. (2003) and Zariyawati *et al.* (2016).

3 RESULT

Prior to the discussion of panel regression results, the selection of models used in this study would be explained, CEM, FEM and REM. The testing result of the influence of working capital turnover on profitability in food and Beverages Company in Indonesia Stock Exchange can be seen in Table 1a and 1b below.

Table 1a: Influence of working capital turnover to profitability (Cont'd)

Coefficient	NPM			GPM		
	CEM	FEM	REM	CEM	FEM	REM
C	16.347 ***	10.215 ***	12.387 ***	40.508 ***	37.492 ***	37.487 ***
Cash Turnover	-0.065 ***	0.195	00.31	-0.154 ***	-0.023	-0.039
Receivable Turnover	-0.623 **	-0.704 ***	-0.690 ***	-1.427 ***	-1.155 ***	-1.154 ***
Inventory Turn over	-0.018	0.5177 **	0.315 *	0.548 *	1.441	1.809
R2	1.897	5.973	1.239	2.088	6.525	1.726
F-Statistic	63.966	19.405 ***	3.694 **	7.313 ***	49.161 ***	5.626 ***
Chow test	0.000 ***			0.000 ***		
Hausman test	0.872			4.572		

Note: *** as significant 1 %, ** as significant 5% and * significant 10%.

As mentioned earlier in the research method, Chow Test and Hausman Test were conducted in choosing the research model is done whether in equation 1.2.3 and 4. In the Chow Test stage, in all models of panel regression, whether equations 1, 2, 3 and 4, showed that probability value significant chi square <0.05 i.e. 0.000. It can be explained that all models 1, 2, 3 and 4 selected the model of fixed effect model equation. Since Chow test value is significantly below 0.05 or 0.000, a further testing step is necessary Hausman test. The Hausman test is performed aiming to select fixed effect and random effect model in each 1, 2, 3 and 4 model. Based on Hausman test it is found that in the first model the chi square probability value is not significant at the 5% level i. e. 0.0799. From equation models 2, 3 and 4 significance probability values were found of 0.7419, 0.1257 and 0.7419 or all at a significance level of 10% meaning not significant 5%. Thus, the best model of this research is random effects model Baltagi *et al*. (2003).

Table 1b: Influence of working capital turnover to profitability

Coefficient	NPM			GPM		
	CEM	FEM	REM	CEM	FEM	REM
C	16.347 ***	10.215 ***	12.387 ***	40.508 ***	37.492 ***	37.487 ***
Cash Turnover	-0.065 ***	0.195	0.31	-0.154 ***	-0.023	-0.039
Receiveble Turnover	-0.623 **	-0.704 ***	-0.690 ***	-1.427 ***	-1.155 ***	-1.154 ***
Inventory Turn over	-0.018	0.517 **	0.315 *	0.548 *	1.441	1.809
R^2	1.897	5.973	1.239	2.088	6.525	1.726
F_Statistic	63.966	19.405 ***	3.694 **	7.313 ***	49.161 ***	5.626 ***
Chow test	0.000***			0.000***		
Hausman test	0.872			4.572		

Note: *** as significant 1 %, ** as significant 5% and * significant 10%.

Having selected the models, it is decided to apply REM which result the equations as follows:
ROA= 5.676*- 0.011Cash–0.119 Receivable+ 0.612 Inventory***
ROE=11.885**-0.010Cash+0.195Receivable+ 0.223 Inventory
NPM=12.387***+0.003Cash-0.690 Receivable***+0.315Inventory*
GPM=37.487***-0.039Cash–1.154Receivable***+ 0.260 Inventory

Based on Tables 1a and 1b it can be explained, except for ROE, other dependent variables, ROA, NPM and GPM can be explained by other independent variables such as cash turnover, receivable turnover and inventory turnover which is strikingly low. This is reflected in the value of coefficient of determination, each at 18.44 per cent, 17,85 per cent and 24,86 per cent. However, the ability of variable cash turnover, receivable turnover and inventory turnover in explaining their effects on return on equity is also at the low level i.e. 22.35 per cent.

The results of panel regression equation in table 1a and 1b explain how the profitability of food

companies and beverages in Indonesia Stock Exchange is more determined by the turnover of working capital, especially receivable turnover and inventory turnover in raising profitability. It can be concluded from variables that have significance to return on asset is inventory turnover. The variables affecting net profit margin are receivable turnover and inventory turnover while gross profit margin is more determined by receivable turnover.

The first variable affecting ROA is inventory turnover with coefficient value of 0.6127. This means that if the inventory turnover is accelerated 10 points it will raise the profit advantage amounted to 6.127 points. This finding is consistent with Mulyono *et al.* (2018) who stated a need to accelerate inventory and accelerate payments. All acceleration of working capital management should lead to improved profitability (Tahir and Anuar, 2016). The two variables affecting NPM are the receivable turnover and inventory turnover respectively with coefficient values -0.6902 and 0.3156, while the variables affecting GPM are receivable turnover with coefficient - 1.1541. This figure can be interpreted that if the turnover of accounts receivable is conducted by 10 points faster than corporate profits will be decreased by 6,902 points. Meanwhile, if the company can increase its inventory turnover by 10 points, the company's profit will rise by 3,156 points.

The same thing happened to GPM in which if the receivable turnover increase by 10 points then it can lower the profit rate by 11,541 points. This finding is consistent with that of Baños-Caballero *et al*. (2014) which mentioned that it was advisable that the company manager avoid sales loss and discounted policies if early repayments were made to maintain corporate performance. Enqvist *et al*. (2014) explained a need for efficient inventory and inventory management to improve the profitability of the company. In addition, the results of this study are in accordance with Wasiuzzaman (2015) who claimed existence of negative effects of all components of working capital on profitability.

Nevertheless, the above equation models explain that among the components of working capital turnover, only cash turnover that have no effect on profitability in food companies and beverages in the Indonesia Stock Exchange. According toHakim and Terje (2016), this proved that the cash conversion cycle was not in a good condition which causes no impact on profitability. These findings indicate that cash turnover is still inefficiently managed by the management of food and beverages companies in the Indonesia Stock Exchange. However, *Eldomiaty et al.* (2016) proposed different result. The cash turnover was claimed as most important in working capital management in improving profitability. Another finding in this research is that the working capital turnover component is not related to return on equity in food companies and beverages in Indonesia Stock Exchange. This is clearly seen in the results of panel regression where the two components displayed insignificant value both partially and simultaneously. These findings indicate that investors are negligent on the management of their working capital and handing over the management of working capital entirely to the management of the company.

4 CONCLUSIONS

The findings of this study indicate that corporate governance mechanisms play an essential role in improving working capital efficiency in companies including food companies and beverages. This is in line with what is revealed by Jamalinesari and Soheili (2015) that good corporate governance provides efficiency for the company which will contribute better returns. On the contrary, the results of this study explain that all variables of working capital turnover both cash turnover, receivable turnover and inventory turnover used in this study place no significant effect on the dependent variable return on asset.

These findings indicate that investors acknowledge that working capital turnover is inseparable from food and beverages industry. Working capital turnover is performed with the aim of avoiding occurrences of food or drink accumulation thus resulting in profits loss. Hence, the investors are not anticipating a profit from this working capital turnover despite, theoretically, working capital turns profit at other ratios. In general, not all working capital turnover variables affect other profitability variables whether return on asset, net profit margin and gross profit margin.

ACKNOWLEDGEMENTS

Thanks to the post-graduate program faculty of economics and business Malikussaleh University on the registration fee for proceedings in ICNSRD

REFERENCES

Adam, A.A., Shauki, E.R., 2014. Socially responsible investment in Malaysia: behavioral framework in evaluating investors' decision making process. *Journal of Cleaner Production* 80: 224-240.

Altaf, N., Shah, F., 2017. Working capital management, firm performance and financial constraints: Empirical evidence from India. *Asia-Pacific Journal of Business Administration* 9: 206-219.

Anna-Maria, T., Timo, K., Miia, P., Sari, M., 2016. Defined strategies for financial working capital management. *International Journal of Managerial Finance* 12: 277-294.

Baltagi, B.H., Bresson, G., Pirotte, A., 2003. Fixed effects, random effects or Hausman–Taylor?: A pretest estimator. *Economics letters* 79: 361-369.

Baños-Caballero, S., García-Teruel, P.J., Martínez-Solano, P. 2014. Working capital management, corporate performance, and financial constraints. *Journal of Business Research* 67: 332-338.

Bhatia, S., Srivastava, A., 2016. Working Capital Management and Firm Performance in Emerging Economies: Evidence from India. *Management and Labour Studies* 41: 71-87.

Dewi, R. A. K., Prasetyo, A., 2017. DAR dan perputaran persediaan serta pengaruhnya terhadap profitabilitas perusahaan tekstil dan garmen yang terdaftar di Indeks Saham Syariah Indonesia. *Jurnal Ekonomi Syariah Teori dan Terapan,* 3**,** 520.

Eldomiaty, T.I., Rashwan, M.H., Bahaa el Din, M., Tayel, W., 2016. Firm, industry and economic determinants of working capital at risk. *International Journal of Financial Engineering* 03, 1650031.

Enqvist, J., Graham, M., Nikkinen, J., 2014. The impact of working capital management on firm profitability in different business cycles: Evidence from Finland. *Research in International Business and Finance* 32: 36-49.

Hakim, L., Terje, B., 2016. Working capital management: evidence from Norway. *International Journal of Managerial Finance,* 12: 295-313.

Hanafi, M.M., 2004. Manajemen keuangan, BPFE. Yogyakarta.

Jamalinesari, S., Soheili, H., 2015. The Relationship between the Efficiency of Working Capital Management Companies and Corporate Rule in Tehran Stock Exchange. *Procedia - Social and Behavioral Sciences* 205: 499-504.

Kasiran, F.W., Mohamad, N.A., Chin, O., 2016. Working Capital Management Efficiency: A Study on the Small Medium Enterprise in Malaysia. *Procedia Economics and Finance,* 35: 297-303.

Madhou, A., Moosa, I., Ramiah, V., 2015. Working Capital as a Determinant of Corporate Profitability. *Review of Pacific Basin Financial Markets and Policies* 18, 1550024.

Masri, H., Abdulla, Y., 2017. A multiple objective stochastic programming model for working capital management. *Technological Forecasting and Social Change*.

Mulyono, S., Djumahir, D., Ratnawati, K., 2018. The effect of capital working management on the profitability. *Jurnal Keuangan dan Perbankan* 22: 94-102.

Mun, S.G., Jang, S.C., 2015. Working capital, cash holding, and profitability of restaurant firms. *International Journal of Hospitality Management* 48: 1-11.

Öztürk, M. B., Vergili, G., 2018. The Effects of Working Capital Management on Mining Firm's Profitability: Empirical Evidence from an Emerging Market. *In:*Kucukkocaoglu, G. & Gokten, S. (eds.) *Financial Management from an Emerging Market Perspective.* Rijeka: InTech.

Ramadhan, R.R., Hasan, A., Efni, Y., 2018. Pengaruh working capital management terhadap profitabilitas pada perusahaan dengan firm size, operating leverage, dan current ratio sebagai variabel kontrol (studi pada perusahaan sektor pertambangan di Bursa Efek Indonesia). *Jurnal Tepak Manajemen Bisnis* 9: 122-137.

Sari, R.A. 2018. Analisis manajemen modal kerja dalam meningkatkan profitabilitas pada PT. Perkebunan nusantara III (Persero). *Jurnal Riset Akuntansi dan Bisnis* 17: 33-45.

Shaista, W., 2015. Working capital and firm value in an emerging market. *International Journal of Managerial Finance* 11: 60-79.

Tahir, M., Anuar, M.B.A., 2016. The determinants of working capital management and firms performance of textile sector in pakistan. *Quality & Quantity* 50: 605-618.

Ukaegbu, B., 2014. The significance of working capital management in determining firm profitability: Evidence from developing economies in Africa. *Research in International Business and Finance* 31: 1-16.

Wasiuzzaman, S., 2015. Working Capital and Profitability in Manufacturing Firms in Malaysia: An Empirical Study. *Global Business Review* 16: 545-556.

Wau, R., 2017. Analisis efektifitas modal kerj a dan pengaruhnya terhadap profitabilitas. *Journal of Business Studies* 2: 61-74.

Wijaya, L.V., Tjun, L.T., 2018. Pengaruh cash turnover, receivable turnover, dan inventory turnover terhadap return on asset perusahaan sektor makanan dan minuman yang terdaftar di Bursa Efek Indonesia Periode 2013–20155. *Jurnal Akuntansi Maranatha* 9: 74-82.

Zariyawati, M., Annuar, M., Pui-San, N., 2016. Working capital management determinants of small and large firms in Malaysia. *International Journal of Economics & Management* 10: 365-377.

Zeidan, R., Shapir, O.M., 2017. Cash conversion cycle and value-enhancing operations: Theory and evidence for a free lunch. *Journal of Corporate Finance* 45: 203-219.