# THE IMPACT OF MACROECONOMIC FACTORS ON FIRMS' PROFITABILITY (EVIDENCE FROM FAST MOVING CONSUMER GOOD FIRMS LISTED ON INDONESIAN STOCK EXCHANGE)

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## ABSTRACT

*The performance of a business could not be separated from the influence of macroeconomic factors. Global economic crisis occurred in 1998, 2008, and 2015 had a significant impact on the performance of all business sectors. The main purpose of this study is to determine the influence of macroeconomic factors which are: inflation rate, unemployment level, Gross Domestic Product (GDP), and exchange rate on firm profitability which is reflected by Return on Asset (ROA) ratio. This study uses macroeconomic factors as independent variables, and ROA ratio as dependent variable. Using multiple regression method, the four macro-economic factors and ROA ratio from fast moving consumer good firms listed on Indonesia Stock Exchange (IDX) are tested over the period of 1998-2016 on yearly base. As a result, it is found that all independent variables have influence on ROA ratio (firm profitability) and partial t-test result showed that only Gross Domestic Product (GDP) level has influenced significantly on firm profitability, while other three macroeconomic factors have no significant influence.*

**Keywords:** Exchange Rate, Inflation, Gross Domestic Product, Unemployment Rate, Return on Asset.

## INTRODUCTION

The challenge of competition in globalization era had made many companies realised about the importance of financial performance, which would support sustainability in their following industries. Certainly, the firms' profitability are affected by either internal and external factor; as of the internal factor is more about the firms' capability to achieve productivity and reduce the cost; meanwhile the condition of economy, government's regulation, exchange rate, GDP, unemployment rate, etc. are always considered as crucial components that affect the company from external aspects.

Fast moving goods industry in Indonesia contributes major financial activities in Indonesia. Fast Moving Consumer Goods Industry in Indonesia: Opportunity and Challenge, (www.business.hsbc.co.id, 2017) stated that the FMCG industry in Indonesia was considered as one of the most significant industries that may support the country's economic sustainability. In line with its growing number of middle-class society, the growth it's industry in Indonesia was recorded to achieve 10.8% in 2015; overall it's products were able to give 18.5% portion of share the country's GDP in 2016, and it's expected to achieve around 30% by 2030.

This research was held in order to discover and define which macro-economic factors that affect the FMCG firms' profitability, that are enlisted in Indonesia Stock Exchange, over the period 1998-2016. McDonald (1999) studied to determine of firms' profitability in Australia Manufacturing over the period 1984 to 1993. The results indicated that the profitability of individual firms is significantly affected by both industry and macroeconomic variables. Bhutta and Hasan (2013) examined the impact of firms' specific and macroeconomic factors on profitability of food sector in Pakistan. The empirical results provide evidence that the profitability of food sector is shaped by firms' specific factors and not macroeconomic variables.

What about the macro-economic factors that influence fast moving goods industry in Indonesia? Therefore, this study seeks to determine the macro-economic factors that affect the firms' profitability.

## LITERATURE REVIEW

In this research, the macro-economic factors, such as inflation, GDP, interest rates, unemployment rate, and exchange rates were examined to observe their influence on the firms' profitability, which can be reflected on their ROA (Return on Asset).

Vong and Chan (2009) examined the impact of bank characteristics as well as macroeconomic and financial structure variables on the performance of the Macao banking industry. The result proved that the rate of inflation and banks' performance has a significant correlation. Gul et al. (2011) studied macro-economic characteristics over bank profitability in Pakistan commercial banks over the period 2005-2009. It was found strong evidence that assets, loans, equity, deposits, economic growth, inflation and market capitalization have strong influence on the profitability. Ali et al. (2011) determined the effect of bank-specific and macroeconomic indicators on profitability of public and private commercial banks of Pakistan explored in 2006-2009. They concluded that economic growth has a positive and significant relation with profitability that measured by ROA and ROE.

Bilal et al. (2013) identified the influence of bank specific and macroeconomic factors on profitability of commercial banks in Pakistan over the period of 2007 to 2011. The study pointed out that that inflation has negative significant impact on return on assets while real gross domestic product has positive impact on ROA. Capital ratio has positive significant impact on ROE. Ishfaq and Khan (2015) tested the impact of internal and external factor and macroeconomic variables on profitability on commercial banks of Pakistan. The results showed that inflation has significant impact on the bank profitability in Pakistan. According to Higgins & Robert (2012:41), "*ROA is a basic measure of the efficiency with which company allocates and manages its resources.*" To look at the combined effect of margins and turns, we can calculate the Return on Assets (ROA). Gitman and Zutter (2012) explored profitability as the relationship between revenues and costs generated by using the firm's asset both current and fixed in productive activities.

Kosmidou et al. (2005) did research on 32 commercial banks in UK within the period of 1995 to 2002. The study established that macro-economic factors that are inflation positively influenced the following banks' profitability which was reflected on their ROA and NIM (Net Interest Margin). Chaudry et al. (2013) conducted research of three major sectors (agriculture, manufacturing and services). They concluded that the inflation is negative relation for manufacturing sector but has positive relation with services and agriculture sectors. Zulfiqar & Din (2015) investigated the effects of macroeconomic variables (Inflation and Interest Rate) on the performance of textile industry in Pakistan. They concluded that inflation and interest rate have significant and positive impact on Return on Asset (ROA).

According to Indonesia Centre Organization of Statistic, GDP is considered as one of the most important indicators to define the total number of added values, generated by the whole business units within a certain country. By this point of view, the effect of GDP to the firms' profitability is certainly described.

Economic factor such as financial crises could affect the unemployment rate. Tanveer et al. (2012) proved that financial crisis in 2007-2008 has impact on unemployment rate in different group of country. Increasing unemployment has an impact on the decrease of income per capita. Decreasing in GDP has a negative impact on consumer purchasing power furthermore can diminish the demand products which ultimately can reduce the profitability of the company (Tandelilin, 2010). Conversely, low unemployment rate can indicate that people still have jobs and incomes. This condition considerably influences purchasing power and consumption level of people for certain product and ultimately will increase company's sales value and its profitability.

In business environment, exchange rate plays an important role that affect profitability. The change in exchange rate has significant impact on business cost and profitability. Some previous research showed that exchange rate has an influence on firm profitability. Acaravci & Calim (2012) conducted a study on commercial bank in Turkish for the period of 1998 to 2011. It was found that there is a positive influence between real exchange rate and profitability. The similar research conducted in sharia banking in Indonesia by Hidayati (2014) to measure the effect of exchange rate, inflation, and Bank Indonesia rate (BI rate) on profitability. The result pointed out that exchange rate had positive and significant effect on Return on Asset Ratio (ROA).

The main purpose of this study is to determine the influence of macroeconomic factors on firms' profitability. The hypothesis is:

*$H_1$: Inflation, unemployment rate, GDP growth and exchange rate have significant influence in firms' profitability*.

The hypothesis is tested using statistical tests in the form of simultaneous test (F-test) and partial test (t-test) with 95% level of confidence.

## RESEARCH METHODOLOGY

This research used descriptive and explanatory method. Explanatory method is used to test existing theory by conducting hypothesis testing to explain the influence of independent variable (inflation, GDP growth, unemployment rate and exchange rate) to dependent variable that is Profitability (ROA). ROA ratio was taken from financial statements of fast-moving consumer good firms, while the four macroeconomic factors were taken from central bank of Indonesia and center organization of statistic website. Using multiple regression method, the four macroeconomic factors and ROA ratio from fast moving consumer good firms listed on Indonesia Stock Exchange (IDX) are tested for the period of 1998 up to 2016 on yearly base. Data in this study consists of three industrial subsectors which are food and beverages, pharmaceutical, and consumer good with total 32 firms. But only 22 firms is used as sample, 9 observation each that reflects the observed period, so there are total of 198 observations.

The model of multiple regressions for this study is:

$$ROA=\alpha+\beta_1 (Inflation) + \beta_2 (Unemployment\ rate) +\beta_3 (GDP\ Growth) +\beta_4 (Exchange\ rate) + \varepsilon_t$$

## RESULTS AND DISCUSSION

Tables 1 and 2 explain the results that have been found by applying descriptive statistics and regression analysis. Descriptive statistics of study are given in Table 1. The values of Mean, Median, Maximum, Minimum and standard deviation of dependent and independent variables of sample of 22 firms are calculated from 1998 to 2016. The mean of dependent variables Return on Assets (ROA) is 0.0987. On the other hand, standard deviations ROA is 0.31798 which show that the variability. The wide variability occurs because firms' profitability was negative in 1998 when Indonesia had a big recession, Inflation, unemployment rate; GDP Growth and Exchange rate are four macroeconomic variables which are used in this study. Mean value of exchange rate is 10001 and standard deviation is 1751.6. Mean of inflation in these eighteen years of Indonesia is 10.81%, standard deviation of inflation is 0.16193. The rate of inflation is high, and wide variability occurs because inflation in 1998 was 77.63%. Sarinastiti (2011), Nugraha and Maruto (2012) found that exchange rate influence inflation. In 1998, mean of unemployment rate in Indonesia is 7.69%. Standar deviation of unemployment rate is 0.01728. Mean of GDP is 4.12%. On the other hand, standard deviation of GDP is 0.04257. The slight variability of unemployment rate and GDP happened because although in 1998 they were negative but during 2009 -2016 Indonesia unemployment and GDP are always increasing slightly.

**Table 1**
**DESCRIPTIVE STATISTICS**

| | ROA | Inflation | Unemployment rate | GDP Growth | Exchange rate |
|---|---|---|---|---|---|
| Mean | 0.0987 | 0.1081 | 0.0769 | 0.0412 | 10001.2105 |
| Median | 0.0880 | 0.0660 | 0.0748 | 0.0503 | 9419 |
| Minimum | -1.44 | 0.02 | 0.05 | -0.13 | 7100 |
| Maximum | 4.68 | 0.78 | 0.11 | 0.06 | 13795 |
| Std. Deviation | .31798 | 0.16193 | 0.01728 | 0.04257 | 1751.63713 |

Source: Data processing result.

**Table 2**
**REGRESSION ANALYSIS**

| | | Inflation | Unemployment rate | GDP Growth | Exchange rate |
|---|---|---|---|---|---|
| Coefficient | | -0.045 | -0.011 | 0.105 | 0.003 |
| t-Statistic | | -0.328 | -0.160 | 0.678 | 0.048 |
| Sig. | | 0.743 | 0.873 | 0.003 | 0.961 |
| Adj R. Square | 0.018 | | | | |
| F-Statistic | 8.831 | | | | |
| Observation | 481 | | | | |

Source*:* Data processing result.

Table 2 shows the results of regression analysis. To examine the impact of macroeconomic factors on the profitability of fast-moving consumer goods industry in Indonesia Adjusted R-Square for ROA is 0.18 which means that 18% of of dependent variables could be explained by independend variables. The significant level of inflation, unemployment rate, and exchange rate are upper than 0.05, this means that those variables are no significant in influencing ROA. The significant level of GDP Growth is smaller than 0.05, this means that these variable is significant in influencing ROA. This model has F statistics 8.831. The F test was employed to establish whether the model is significant in simultaneously. The result in Table 2, the significance of p-value compared with the level of significance. With the p-value <0.05 it implies that the model is significant. This result is consistent with Ali et al. (2011), Gul et al. (2011), Bilal et al. (2013), Bhutta and Hasan (2013) but not consistent with McDonald (1999), Vong and Chan (2009), Kosmidou et al. (2012), Chaudry et al. (2013), Acaravci & Calim (2013), Hidayati (2014), Ishfaq and Khan (2015), Zulfiqar & Din (2015) GDP Growth has positive significant impact on the ROA. GDP has positive relation with profitability on fast moving consumer goods in Indonesia, indicates that increasing the profitability of FMCG Industry as GDP going up.

## CONCLUSION

This research found that all independent variables have influence on ROA ratio (firms' profitability) and partial t-test result showed that only Gross Domestic Product (GDP) growth has influenced significantly on firm's profitability, while other three macroeconomic factors have no significant influence. This result finding for inflation and exchange rate is differs from previous study. The depreciation of the rupiah is due to the unfavorable condition of the global economy. In 2009 until 2012, the rupiah exchange rate remained in the range of Rp. 9,000/$1, and then in 2013 the rupiah weakened and continued to weaken until 2016. Furthermore, the inflation rate in Indonesia during the 1998-2016 periods fluctuated. The frequency of inflation rates in the low category (below 10%) occurred 14 times in 1999, 2000, 2003, 2004, 2006, 2007 and 2009 to 2016. The economic crisis that occurred in 1998 is the toughest condition throughout the study period, in which Indonesia experienced severe inflation at 77.6%. While in 2001,2002,2005,2008 and 2013, Indonesia experienced moderate inflation ranging from 10%-17.1%.The slight variability of unemployment rate and GDP happened because although in 1998 they were negative but during 2009-2016 Indonesian unemployment and GDP are always increasing slightly.

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