The Determinant Of The Indonesia Composite Stock Price Index And Its Implication To Indonesia Foreign Direct Investment For Manufactur Sector

Rafiqoh, Syarifah Hudayah, Ardi Parminto, Sugeng Haryadi

ABSTRACT: The research objectives are to build a structural model the determinant of the Indonesia composite stock price index and its implication to Indonesia foreign direct investment specificly manufactor sector. There are 6 variables need to be built such as exchange rate, financial risk, minimum wage, Dow Jones stock price index, the Indonesia composite stock price index and the Indonesia foreign direct investment for manufactur sector and supported by 16 time series data from 1999 to 2016. The method of this research is path analysis which implemented 6 steps of Partial Least Square software instrument. The result proved that exchange rate, Dow Jones price index and minimum wage have influence significantly to the Indonesia composite stock price index, and only financial risk hasn.t a significant influence to the Indonesia composite stock price index. It is proved that exchange rate, financial risk, Dow Jones price index have a significant influence to sector manufactur of Indonesia foreign direct investment, while the Indonesia composite stock price index has no a significant influence to influence to sector manufactur of Indonesia foreign direct investment

Keyword: exchange rate, financial risk, minimum wage, Dow Jones stock price index, the Indonesia composite stock price index, and foreign direct investment.

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1. INTRODUCTION

For achieving government's aims in term of increasing the direct investment to Indonesia is to mitigate the investor to invest their fund in Indonesia by eliminating the investment risk such as economic stability, certainty of investment regulation, and building the investment of insfrastructures and facilities, and tax incentives. In term of investment value in Indonesia, Since 2010 the foreign investment is indicated increase signficantly until 2013 such as 18,6 percent, 26,1 percent and 22,4 percent respectively. The first quarter of 2012, it is indicated that the total of Indonesia's investment especially for domestic investment increases at about 29,6 percent while foreign investment is noted at about 70,4 percent . Suprisingly at the same quarter of 2013 it is noted that the domestic investment increases 34,6 percent and foreign investment increases at about 67,5 percent. There are many factors that can influence the investment in Indonesia such as Rupiah exchange rate, interest rate, the financial risk, Dow Jones price market index, export and Indonesia Stock Index etc. All of these factors need to be maintained as good as possible and in order to lead the investment atmosfeer be better and Indonesia's income can be increased. All of business transaction should face some level of risks and it will impact to political risk, economic and financial risk which lead the level of country risk.
Risk country which is reflected by financial risk is other

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factors which has relationship to the multinational corporate's financial proportion. Since the rate of financial risk is low or the score of financial risk higher indicates this country is save for foreign direct investment relatively. The financial risk is the highest risk among all type of risks which is faced by global financial manager because it is related with the exchange rate and the devaluation of exchange rate. The Indonesia *Financial Risk* during the last 5 is fluctuated but in *low risk* category for 2011, 2014 and 2015 while in 2011, 2014 and 2015 in *very low risk* category. The minimum labour wage is one of the most important factor in determining the foreign direct investment decision because this matter contributed directly to the company cost directly. Since the minimum labour wage is lower should pull the foreign direct investment to Indonesia, beside other factors such as stock price, and Indonesia Composite Stock Indonesia. Stock price index, for instant Dow Jones Price index is indicated to influence the world price index including Indonesia Composite Price Index and can influence to the foreign direct investment indirectly. Since the Dow Jones price tends to increase will affect to the Indonesia Composite Price Indext decrease, so it leads the Indonesia foreign direct investment in the real sector lower. On the one hand the Indonesia Composite The financial management is grand theory for research Price Index tends increase for the last 5 year eventhought it is not significantly, the total of the Indonesia foreign direct investment deacreses significantly. On the other hand, the Indonesia foreign direct investment in manufactur sector increases significantly. It is proved that there is something need to be investigated such as is there any influence signficantly between exchange rate, financial risk, the average labour cost, and the average of Dow Jones price index to the Indonesia Composite Price Index and exchange rate, financial risk, the average labour cost, and the average of Dow Jones price index to the Indonesia stComposite Price Index partially.

2. LITERATURE REVIEWS

There are some theories could be used analysing this research such financial management, investment management, the determinant of investment, investment

aspect and foreig direct investment, stock price index, composite stock price index, financial risk, and minimum wage

2,1 Investment Management

Keown *et al.,* (2011:4) argued that financal management is the way to create and to maintain the company's economic scale, while Fabozzi (2000:2) stated that investment management is the process in financial management, while Smith *and* Skousen (2005:101) argued that the activities of investment are the transaction and events the purchase and sale of securities (excluding cash equivalents), building, and equipment, and other asset not generally held for sale, and the making, and collecting of loans. They or not classified as operating activities since the relate only indirectly to the central, on going operations ofentity. Other ideas argued by Reilly *and* Brown (2003:109) that the Investment is the current commitmen of dollar for a period of time to derive future payment that will compensate the investor for (1) the time the founds are commited, (2) the expected rate of inflation, (3) the uncertainty of the future payment. Sukirno (2011:122) stated that there the main factors to decide the rate of investment such as: the profit forcasting, interest rate, the economy forcasting, technology, national income, and the company profit, while Noor (2009:7) argued that there are several aspect why someone to invest such as: sacrafice, hope, risk, time, type aspect.

2.2 Foreign Direct Investment

Related to the foreign direct investment there are several theories could be mentioned. Hill (2007:238) stated that the foreign direct investment occurs when a firm invest directly in facilities to produce and or market a product in a foreign country, while Ball et. All (2014:19) argued that the foreign direct investment could be decided by its investment on investment facilities, organization structure in foreign ountry. Other idea is argued by Madura (2006:106) that there are several investment motives such as: finding a new income, entering a new market for a possibilities huge profit, finding a monopolostic profit, reaction of trading barriers, international diversification products or services, creating fully economic scale, using the foreign;s production factors, using the foreign's raw material, using the foreign's technology, and reaction because of e exhange rate flexibelity.

2.3 Stock Price Index

In case of stock price index there several ideas need to be explained. Fabozzi (1999,51) mentioned that stock price consist of several function for answering the question of "how is the market today?, while Tandelilin (2010:89) stated that market value weighted average index. Moreover Tandelilin (2010:86) expalined that the composite price index is the whole components of stock price index counting, while Robert Ang (1997:146) argued that the composite price index is the value for measuring the performance stock price index which is recorded in the stock market. Other important factor is exchange rate in influencing the foreign direct investment. Ball *et al.,* (2014: 90) and Case *and* Fair (2002:398) explained that exchange rate is price of an exchange in other foreign exchange.

2.4 Investment and Risk

Investment and risk have relationship each other. Day (2009: 59) stated that Risk can be defined as the chance of making a loss; this could be making a loss on an asset sale or the possibility of machine failure. Bouchaud and Marc Potters (2003:171) explained that the financial risk obviously associated to losses and not to profits. A definition of risk where both events play symmetrical roles is thus not in conformity with the intuitive notion of risk, as perceived by professionals.

2.5 Minimum Wage

Another literature needs to be mentioned is a minimum wage. Nurachmad (2009:33) stated that the minimum wage is the minimum monthly wage which consist of a basic salary and allowances.

3. RESEARCH METHODOLOGY

This research to analyze the influences between the independent variables to the dependent variables, so the formulation to build as follow:

Tjt $Y_1 = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \text{\euro}_1$
....(1b)
$Y_1 = \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \text{\euro}_1$ ......(1)
$Y_2 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu_1$ ......(2)

Whereas:
$\text{\euro}_1$ = *error term* of Y_1
$\mu_1 = \beta_4 \text{\euro}_1 + \text{\euro}_2$ = *error term* of Y_2
X_1 = Indonesia exhange rate
X_2 = Indonesia financial risk
X_3 = Indonesia minimum wage
X_4 = Dow Jone price index
Y_1 = Indonesia composite stock price index
Y_2 = Indonesia foreign direct investment
in a manufactur sector.

The above formulation could be solved by path analising or by using a software of Partial Least Square (PLS) with the steps as follow:
1. Designing structural model
   (inner model)
2. Designing the measurement model
   (outer model)
3. Constructing path diagram
4. Converting path diagram to regresions
5. Hypothesis parameter
6. Examining the hypothesis

Designing Structural Model
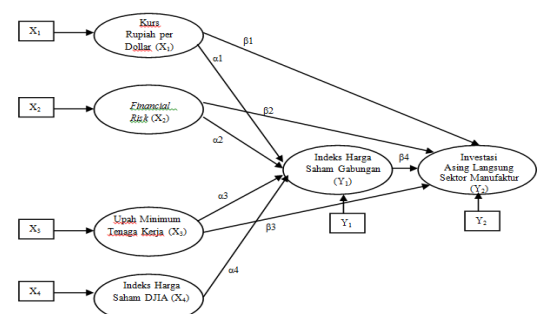
whereas:
α_1 = direct influencing X_1 to Y_1
α_2 = direct influencing X_2 to Y_1
α_3 = direct influencing X_3 to Y_1
α_4 = direct influencing X_4 to Y_1
β_1 = direct influencing X_1 to Y_2
β_2 = direct influencing X_2 to Y_2
β_3 = direct influencing X_3 to Y_2
β_4 = direct influencing Y_1 to Y_2

Designing the measurement model (outer model)

This is a pure quantitative research, so there is no designing the measurement model or outer model.

Constructing Path Diagram

For contructing the path diagram, its need to be estimated the regresion by using PLS with the data as follow

Table 1.1 *The progress of exchange rate, financial risk and minimum wage*

Year	Exchange Rate (IDR/USD)	Financial Risk (%)	Minimum Wage (IDR)
1999	7.808,92	31,80	175.400,00
2000	8.534,42	33,10	216.500,00
2001	10.265,67	31,30	290.500,00
2002	9.261,17	34,00	362.700,00
2003	8.571,17	34,90	414.700,00
2004	8.985,42	35,50	458.500,00
2005	9.750,58	37,40	507.697,00
2006	9.141,25	38,80	602.702,00
2007	9.163,67	40,10	672.480,00
2008	9.756,75	40,00	745.709,00
2009	10.386,17	37,50	841.530,00
2010	9.078,25	39,00	908.824,00
2011	8.773,25	39,70	988.829,00
2012	9.418,58	40,10	1.088.903,00
2013	10.562,67	40,80	1.296.908,00
2014	11.884,50	39,30	1.584.391,00
2015	13.457,58	39,10	1.790.342,00
2016	13.329,83	40,70	1.997.819,00

Source : Indonesian Statistic Bureau 2017

Table 1.1 shown that exchange rate and minimum wage increase slightly for the last 5 years, while the financial risk fluctuated for the last 5 years.

Table 1.2 *The progress of Dow Jones price, Indonesia Composite Price index and sector manufactur Indonesia composite price index.*

Table 1.2 shown that Dow Jones stock price index and Indonesia composite stock price index increase reguraly for the last 5 years, while manufactur sector of Indonesia foreign direct investmen slightly decrease for the last 5 years.

The estimating result using Partal Least Square software as follow:

Year	Dow Jones Price Index (USD)	The Indonesia Composite Price Index (Rp)	Manufactur sector of Indonesia foreign direct investment (in milionUSD)
1999	10.477,83	547,32	6.929,30
2000	10.729,37	507,37	10.702,70
2001	10.208,86	404,43	5.144,40
2002	9.213,73	452,90	3.208,20
2003	9.000,87	508,60	6.457,40
2004	10.281,98	794,66	834,00
2005	10.556,83	1.089,60	5.264,37
2006	11.409,78	1.421,18	1.691,36
2007	13.178,60	2.167,26	2.412,00
2008	11.244,05	2.102,47	2.323,05
2009	8.885,66	1.872,82	1.573,69
2010	10.657,69	3.057,05	4.971,00
2011	11.960,04	3.727,25	8.176,65
2012	12.965,85	3.084,85	8.945,00
2013	15.009,52	4.118,17	8.521,00
2014	16.777,69	4.906,92	7.513,00
2015	17.587,03	4.862,01	3.714,00
2016	17.927,11	4.200,60	7.507,00

Source : Indonesian Statistic Bureau 2017
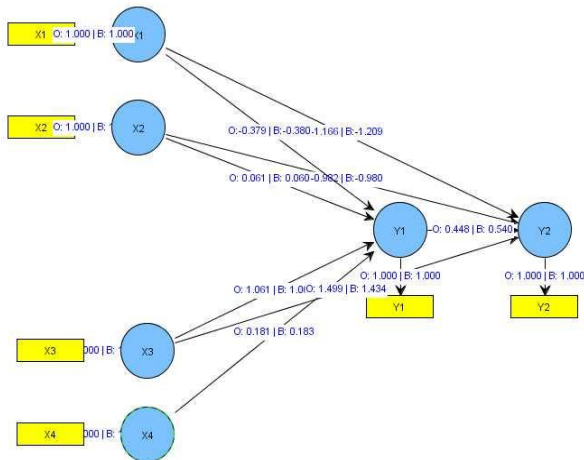
4. RESULT AND DISCUSSION

Table 1.3 *The Estimating Result*

	original sample estimate	T-Statistic
$X_1 \to Y_1$	-0.379	5.816
$X_2 \to Y_1$	0.061	1.131
$X_3 \to Y_1$	1.061	11.731
$X_4 \to Y_1$	0.181	3.581
$X_1 \to Y_2$	-1.166	3.157
$X_2 \to Y_2$	-0.982	6.364
$X_3 \to Y_2$	1.499	2.308

$Y_1 \rightarrow Y_2$	0.448	1.120

Source :data processed

From the estimating result, the the path diagram could be built as below:

Converting path diagram to regresions
Based on the estimating result, the path diagram can be converted to the regression as follow:

$$Y_1 = -0,379X_1 + 0,061X_2 + 1,061X_3 + 0,181X_4$$
$$Y_2 = -1,166X_1 - 0,982X_2 + 1,499X_3 + 0,448Y_1$$

Hypothesis parameter
Parameter of hypothesis (α and β) is using T Test with one tail test, whereas:
Level of confidence is 95% or α = 0,05
Rule of thumb = 1,960.
When T test > T table, so Ho rejected and Hi accepted

Examining the hypothesis
Hence, it could be decided hypothesis1 (α1), hypothesis3 (α3), hypothesis4 (α4) are accepted or exchange rate, Dow Jones price index and minimum wage have influence significantly to the Indonesia composite stock price index, and only hypothesis2 (α2) is rejected or financial risk hasn.t a significant influence to the Indonesia composite stock price index. It is also could be mentioned that hypothesis5 (β1), hypothesis6 (β2), hypothesis7 (β3) are accepted or exchange rate, financial risk, Dow Jones price index have a significant influence to sector manufactur of Indonesia foreign direct investment, and only hypothesis8 (β4) is rejected or the Indonesia composite stock price index has no a significant influence to sector manufactur of Indonesia foreign direct investment,
α1 = -0,379 means that exchnge rate has a negative significant influence to the Indonesia composite stock price index. It is reasonable when the exchange rate has depreciated means Indonesia real sector is in unstable condition and the investment will avoid to invest their fund to the real sector and stock price is one of other fields as an option to invest. It is supported by Keown et al (2011:4) that financial management is the way to create and maintain the company's economic scale.
α2 = 0,061 means that the financial risk has a positive influence to the Indonesia composite stock price index but not significant. It indicates that the iinvestor assumes that Indonesia financial risk is not very important factor, so the

investor ignores this factor. It is also because the financial risk in Indonesia for the last 5 years in low and very low category, so the investor didn't considere it in investment deciding including stock price index investment decision. It is supported by . Bouchaud and Marc Potters (2003:171) explained that the financial risk obviously associated to losses and not to profits. In fact the financial risk in Indonesia always low and very low and it lead the investors ignore it.
α3 = 1,061 means that the minimum wage has a significant positive influence to the Indonesia composite stock price index because a minimum wage contributed directly to company profit or since the company has higher profit they can increase the rate of their employees' minimum wage. When the company's profit increase, so it indicates that the price of stock price increase as well.
α4 = 0,181 means that the Dow Jones stock price index has a significant positive influence to the Indonesia composite stock price index. It indicates that since the Dow Jones stock price index index increase, the Indonesia composite stock price index will increase as well. It is reasonable because Dow Jones stock price market is one of the biggest stock market in the world and it will affect to other stock price market, including the Indonesia composite stock price index. Since the Dow Jones stock price index increase indicates that stock price market in the world in a good condition including the Indonesia composite stock price index. It is supported Fabozzi (1999,51) mentioned that stock price consist of several function for answering the question of "how is the market today?", when the big stock market in stable condition so other stock market condition will be in a same condition.
β1 = -1,166 means that the exchange rate has a negative influence significantly to the Indonesia foreign direct investment for manufactur sector. It indicates when rupiah depreciates will the foreign direct investement for manufactur sector decreases. It is reasonable because the exchange rate depreciation mean economic condition in host country is not support to all types of business including manufactur sector, because one of investment motive is to find a new income (Madura:2006:106)
β2 = -0,982 means that financial risk has a negative significant influence to the Indonesia foreign direct investment for manufactur sector. It indicates that when the financial risk increase will stimulate the investors to invest their fund in host country because something has higher risk will get a higher return, while the one of the investment motive is to increase economic scale. (Madura:2006:106)
β3 = 1,499 means that Dow Jones stock price index has a positive significant influence to Indonesia foreign direct investment for manufactur sector. It indicates that since the Dow Jones stock price index increase, so it impacts to foreign direct investment for manufactur sector increase. It is reasonable because Dow Jones stock price index is one of the biggest stock market in the world and this market is the world economic indicator, while the one of the investment motive is to increase their profit. (Madura:2006:106)
β4 = 0,448 means that the Indonesia composite stock price index has a positive influence but not significant to Indonesia foreign direct investment for manufactur sector because there are two types of investment such for real sector in production facilities called foreign direct

investment and for a derivative investment. It means since the condition investment is in a good condition, so both of investment have a same condition. It is reasonable that investor motive is to increase the profit and to avoid the loss and it supported by Day (2009: 59) stated that risk can be defined as the chance of making a loss; this could be making a loss on an asset sale or the possibility of machine failure.Spreading the investment to a real sector or a derivative investment is one way to avoid company's loss.

D. CONCLUSION AND SUGGESTION

1. Conclusion
It could be concluded that exchange rate, Dow Jones price index and minimum wage have influence significantly to the Indonesia composite stock price index, and only financial risk hasn.t a significant influence to the Indonesia composite stock price index. It is also could be concluded that exchange rate, financial risk, Dow Jones price index have a significant influence to sector manufactur of Indonesia foreign direct investment, while the Indonesia composite stock price index has no a significant influence to sector manufactur of Indonesia foreign direct investment.

2. Suggestion
Based on all of the conclusions, it could be recommended for the investor more focus on minimum wage and they have make investment priority to the host country which has a higher minimum wage.

5. REFERENCES

[1] Ball., Geringer., Minor., McNett, 2014, Bisnis Internasional, Buku I, Edisi 12, Jakarta: Penerbit Salemba Empat

[2] Bouchaud, Jean-Philippe., dan Potters, Marc., 2003, Theory of Financial Risk and Derivative Pricing, From Statistical Physics to Risk Management second edition, United Kingdom: Cambridge University Press

[3] Case, Karl E dan Fair, Ray C., 2002, Prinsip-prinsip Ekonomi Makro, Jakarta: Penerbit PT Prenhalindo

[4] Day, Alastair L., 2009, Mastering Risk Modeling, A practical guide to modelling uncertainty with Microsoft® Excel, Second edition, Great Britain : Financial Times Prentice Hall

[5] Fabozzi, Frank J., 2000, Manajemen Investasi, Buku Dua, Jakarta: Salemba Empat

[6] Fahmi, Irham., 2014, Manajemen Risiko. Teori, Kasus dan Solusi, Cetakan Keempat, Penerbit Alfabbeta, Bandung

[7] Hill, Charles W.L., 2007, International Business, Competing in the Global Marketplace, New York: Published by Mc Graw-Hill/Irwin

[8] Keown, Arthur J., Martin, John D., Petty, J. William., Scott JR, David F., 2011, Prinsip dan Penerapan Manajemen Keuangan, Jilid 1, Edisi Kesepuluh, Jakarta: PT Indeks

[9] Madura, Jeff., 2015, International Financial Management, 12th Edition, USA : Cengage Learning

[10] Noor, Henry Faizal., 2009, Investasi, Pengelolaan Keuangan Bisnis dan Pengembangan Ekonomi Masyarakat, Jakarta: PT. Malta Pritindo

[11] Nurachmad, Much, 2009, Cara menghitung upah pokok, uang lembur, pesangon, & dana pensiun untuk pegawai dan perusahaan, Jakarta:Visimedia

[12] Reilly, Frank K. dan Brown, Keith C. 2003, Investment Analysis & Portofolio Management, Seventh Edition, USA: South Western a division of Thomson Learning Ohio

[13] Smith, Jay M., dan Skousen, K. Fred., 2005, Akuntansi Intermediate, Cetakan Kelima, Jilid 1, Edisi ke Sembilan, Jakarta: Penerbit Erlangga

[14] Sukirno, Sadono., 2011, Makroekonomi Teori Pengantar, Edisi Ketiga, Jakarta: PT RajaGrafindo Persada.

[15] Tandelilin, Eduardus., 2010, Teori dan Investasi Portofolio dan Investasi, Edisi Pertama, Yogyakarta: Kanisius

Methodologi : menjelaskan langkah-langkah
Tidak boleh ada definisi, yang penting 5W+1 H
Lokasi dan waktu penelitian tidak usah
Porsi terbesar ada di Result and discussion