The Value Of The State-Owned Enterprises In Indonesia: A Case Study Of Privatization

Sri Hasnawati, Lampung University of Indonesia and Atma Jaya Catholic University of Indonesia

ABSTRACT

This research aims to test the impact of the ownership structure toward the performance of the State-Owned Enterprises (SOEs). It examines the relationship between the performance of the SOEs and the market value. The study involves 13 SOEs listed at the Jakarta Stock Exchange. Of the 13 SOEs, 9 were selected as samples. The performance of the SOEs is measured by means of the EVA (Economic Value Added) indicator and the market value by the MVA (Market Value Added) indicator. The result of the study reveals that the ownership structure does not have an impact on the performance of the SOEs, either partially or simultaneously. To a smaller degree, the study also indicates that there is a relationship between the EVA and the MVA. The implication of this study is that the privatization of the SOEs should not fully be used to help with the state budget deficit. That is, the majority of the funds should be allocated for the purpose of developing or expanding the SOEs themselves so that they can perform optimally for the sake of society. Furthermore, the SOEs should be well-managed if they would like to obtain good responses from the market.

Keywords: ownership stucture, performance of SOEs, market value, EVA, MVA.

INTRODUCTION

he State Owned Enterprise (SOE) is one of the institutions managed by the state to achieve and improve the prosperity for the public. This article will examine the impact of the privatization on the performance of the SOEs in Indonesia. The act of privatization is normally taken to change the ownership structure of the SOEs in order to improve their performance. According to Jensen and Meckling (1976), in addition to being determined by equity and debt, the performance of a company is determined by the percentage in ownership since the ownership structure might be related with the control of the company.

The goal of privatization, as described earlier, is to improve the value of the company (value creation) which means improving the leverage of the assets, as well as by inviting the private sector to own SOEs. The privatization strategy can be conducted through Initial Public Offering (IPO), private placement by strategic investors and/or private placement by financial institutions. The ideal privatization is through IPO. If conditions are not favorable, for example because the situation of the capital market is bearish and or the company is not ready to go public, another choice should be considered. By involving strategic investors, it is hoped that fresh funds (especially foreign currency) can be generated, which is very much required by the government to provide much needed capital for the SOEs, transfer of technology and expertise can be improved, the global market can be accessed, and the efficiency and value of the company value as a whole can be increased.

Some empirical literatures on the privatization phenomena in developing countries were generally conducted pursuant to experience in developed countries with certain restrictions (Megginson, Nash & Randenborgh, 1994). The research by the World bank estimates advantages and disadvantages of privatization in 12 companies in the noncompetitive market in 4 countries, Chile, Malaysia, Mexico, and The United Kingdom. The conclusion of the research showed that there was increasing prosperity in 11 of 12 cases. No single case of losses was found (Galat et al, 1994).

In relation to the monitoring activity on the management policy, the ownership structure of the shares is divided by Brailsford, Moon, Rao (1996) into stockholders of institution, individuals, and managerial. According to Cook and Kirkpatrick (1995), with regard to property rights and corporate control, the ownership structure can be grouped into two models, that is, outsider model and insider model. The insider model is very widely used in Western Europe and Japan, whereas the outsider model is popular in the United States. For the ousider model, ownership is spread and control is separated for every owner. Stockholders (commercial banks) are not active in the policy of the management. For the insider model, ownership is concentrated and the control by ownership association is stronger. The core investors of the insider model actively participate in the company management. Such investors are actively protecting the value of the company.

According to D'Souza & Magginson (1999), privatized companies are more efficient. The conclusions were based on annual reports, and other secondary data resources in the capital market. It was found that operating and financial performance of the company have improved after privatization has been implemented.

However, we may ask whether the privatization program has really improved the performance of the SOEs. The privatization of the SOEs normally results in change of ownership of public asset to the private investor. Hence, the change of the ownership structure correlates with the improvement of the company performance (Megginson, Nash and Randenborgh, 1994; D'Souza and Megginson, 1999; Boubakri and Cosset, 1994; Su, Tong, and Barrel, 2002; Sun & Barrel, 2002).

In contrast to the studies of Sun & Barrel (2002) and Sun, Tong, and Barrel (2002), the government ownership has shown a positive impact on the performance of the SOEs in China and Malaysia. However, Sun, Tong, and Barrel (2002), also concluded in their research that 100% government ownership of the SOEs in China is bad, but lack of government ownership is not good either. This result is consistent with the studies by Morck, Shleifer and Vishny (1988), Mcconnell & Servaes (1990), Holderness, Kroszner, and Sheehan (1999), which show that the companies in the United States have an inverted U-shape pattern with respect to the relationship between the managerial ownership and the performance of the company.

STATEMENT OF THE PROBLEM

Improving the performance of the SOEs can be implemented through privatization. One of the methods is by selling the shares at the stock exchange or by going public. However, we should first ask whether privatization improves the performance of the SOEs. Furthermore, we may also ask how the diminishing ownership role of the government affects the performance of the SOEs. Based on these questions, we therefore can formulate the research questions as follows. First, will the ownership structure affect the performance of the SOEs? Second, what is the relationship between the the EVA and the MVA of SOEs in Indonesia?

THE RESEARCH OBJECTIVES

The objectives of the research can be formulated as follows:

- a. To determine to what extent the ownership structure of the SOEs affects their performance;
- b. To understand the relationship between the EVA and the MVA of SOEs in Indonesia.

RESEARCH CONTRIBUTIONS

This study is expected to provide contributions in the following areas:

- a. The developments of science, especially in the field of financial management. It is hoped that this study will support and strengthen the study of the financial management theory in general and the study of privatization, especially those that have been previously implemented in different conditions.
- b. The results of the study can serve as input for the government and other institutions, especially when making a decision on whether privatization will be implemented through the capital market by IPO or by other means.

c. Another benefit of this study is that the results can be used as a reference for decision making in determining the financial strategy related to the ownership structure.

RESEARCH METHODOLOGY AND DATA

The object in this research is the performance of SOEs and the ownership structure of the SOEs that have gone public in the Indonesian capital market.

This research is in the field of finance management, especially the performance evaluation of the SOEs listed at the Jakarta Stock Exchange (JSX) and the ownership structure of the SOEs in their efforts to reach the specified goals. This research, an event study research, seeks to determine the performance of the SOEs before and after their listing at the Jakarta Stock Exchange. Furthermore this research aims to test the impact of the ownership structure on the performance of the SOEs at the JSX. Hence, this research can also be conceived as a hypothesis testing research or explanatory research. The ownership structure in this research is the independent variable, while the performance of the SOEs constitutes the dependent variable.

The research samples consist of all SOEs which have been privatized through IPO (initial public offering) in the Indonesia capital market at the Jakarta stock exchange. The research population target is all SOEs which have gone public at the Jakarta Stock Exchange, except banks and financial institutions (credit insurance agency and investment firms). This choice is supported by Jensen and Meckling (1976), who stated that "highly regulated industries such as public utulities or banks, will have higher debt equity ratios for equivalent level of risk than the average non- regulated firms".

The data in this research is quantitative secondary data, in the form of the financial reports from the companies published periodically, in addition to other information related to the capital market published by the Jakarta stock exchange, especially the data on the financial statements of the companies and the stocks market data three years after going public.

The research models used in finance management, such as EVA, MVA, WACC, are used to measure the performance of the SOEs. In addition, the statistical model used to determine the impact of the ownership structure toward the financial performance of the SOEs is conducted through multiple regression.

The performance of the SOEs will be measured by using the EVA (Economic Value Added) and the MVA (Market Value Added).

The operational variable and the research model can be stated as follows:

A. EVA = EBIT (1-tax) - (total capital) (cost of capital)

| EBIT | = Earning Before interest and tax |
|-------------------|--|
| Tax | = company tax rate |
| Total capital | = include the long term liabilities, preferent stocks, and common stocks |
| Cost of capital = | Weighted cost of capital (WACC) |

B. MVA = value of equity – invested capital by the investor = (outstanding share) (market price) - (total equity)

To determine the impact of the ownership structure towards the performance, the multiple regression model is used. Operationally, the model can be stated as follows:

EVA = a + b1 (% ownership of the public) + b2 (% ownership of the government) + b3 (% ownership of the institution) + et

| EVA = remominance of SOE | EVA | = Performance of SOE |
|--------------------------|-----|----------------------|
|--------------------------|-----|----------------------|

- X1 = Percentage ownership of the public
- X2 = Percentage ownership of the government
- X3 = Percentage ownership of the institution

To determine the relation between the EVA and the MVA, y the correlation analysis is used with equation of statistics as follows:

MVA = a + b EVA + e

RESULT DISCUSSION

As stated earlier, the goal of this research is to determine whether the ownership structure affects the performance of the SOEs with respect to their economic added value. In addition, we will also see whether there is a relationship between the performances of the SOEs and the market value of the company in the Indonesian capital market.

Up to 2007, the SOEs were privatized through IPO (Initial Public Offering), 13 of which were chosen as research samples. Three of the SOEs are banks and the other 10 SOEs are non-banks. These 13 SOEs have gone public from 1990 up to 2007.

In 1990, the government began to exploit the capital market in the effort to seek fresh funds for the financing of SOEs. Through IPO at the capital market, the ownership structure of the SOEs has changed. Initialy 100% of the SOEs shares were owned by Republic of Indonesia (the government). After IPO, however, the ownership of the shares was spread. On average, the ownership structure of the SOEs is split into three big groups, namely ownership by government, ownership by public, and ownership by others. Figure 1 below summarizes the percentages of the three groups.





From the 13 SOEs that have gone public, we have selected 10 non-banks as the target population. For analysis purposes and by using the chosen model from the population target, the 3 year data of 10 SOEs from 2004 up to 2006 was collected. The three years was chosen because some of SOEs launched IPO in the year 2003, hence the complete data for the period avalable was selected from 2004 to 2006.

Calculating phases begin from the calculation the Cost of Equity, Cost of Debt, and Cost of Capital. For the he cost of equity calculation, the author used the CAPM (capital asset pricing model). The risk free interest rate is

the governmental fixed income interest rate with 5 to 6 year maturity. The fixed income interest rate is the risk free rate, not the Central Bank of Indonesia rate (SBI). Considering that the policy of financing is long term one, the author is of the opinion that it is more justified to use the government fixed income rate rather than the Central Bank of Indonesia rate, which will be mature at the latest in 3 months (Kester et al, 2005). The cost of capital is one of the data used to calculate the EVA, in which the capital expense is used to curtail the profit of the company multiplied by the invested capital.

The results of the EVA and the MVA calculation and their growth during the research period can be seen in Figure 2. On average, during the last 3 years, the performance of the SOEs in the Jakarta Stock Exchange (JSX) has increased, and so has the MVA of the SOEs. The MVA increased quite amazingly in 2006. This improvement was in line with the increasing of the performance of the JSX during that year (i.e., the Jakarta Composit Index was the highest during that period).

In general, the SOEs which have gone public have the positive EVA. This means that the investments have yielded an economic added value which can increase the value of the company. If seen from its growth during the research period, however, there was a decreasing tendency.

The calculation result of the MVA (market value added) of the SOEs reveals that 50% experienced a decrease in the year 2005 and 50% experienced an increase. This show that there is an increase of the market value for 50% of the SOEs, while the rest suffered a decrease. The Increase and decrease are determined by the change of the price of shares as well as by the performance of the SOEs. In 2006, all of the SOEs showed a better performance compared to the previous year, i.e., in this year there was a rise of 90 % of the market value of the company. This increase is in general triggered by the external factors supporting the booming of the capital market both in Indonesia and in other countries. This increase can be seen through the increase of the composite capital index by the end of 2006 which reached its highest point in that year. On the other hand, the internal factors of the SOEs (EVA) did not support the increase of the market value (MVA) significantly.

For the purposes of analysis and to fulfill the statistical requirements, the author had to omit some the data, namely the data of Kimia Farma tbk, and the one-year data of PT Gas Negara tbk. The overall data collected consists of 3 types of ownership structure, i.e., ownership by the government, ownership by the public, and ownership by others. The ownership of others comprises the ownership by the employees and by the corporations. However, not all of the SOEs have the ownership by others. In general, the ownership of SOEs is still dominated by the government of Indonesia (appr. 90%). Because the data on ownership by others is not even, it is not possible to fulfill the statistical model. Therefore, the author decided that only two types of ownership structure, namely the ownership by the government and ownership by the public, were selected. With these two independent variables, a better statistical model can be attained.

The model testing was conducted using multicollinierity and autocorelation test. The multicollinierity test of the regression model used to show VIF 1.602< 3.33 reveals that there is no multicollinierity. Autocorelation test showing DW 1.798 > DL=1.22 reveals that there is no autocorelation (see exhibit 1). Therefore, the multiple linier regression model in the research is considered fit.

The first research hypothesis test was conducted by using F test to test the impact of the ownership structure on the performance of all SOEs with the level of significant value that reached 95%. The result obtained was a probability score of 0.086 (Exhibit 1). Since 0.086 is greater than 0,05, it can statistically be concluded that the result of the hypothesis test is not significant. Therefore, the null hypothesis should be accepted. Based on this statistical test, it can be assumed that the ownership structure of the SOEs in Indonesia does not affect their financial performance.

Figure 2: The Average EVA and MVA during 3 Years in 10 of the SOE's



CALCULATION OF AVERAGE EVA

CALCULATION OF AVERAGE MVA



If the R-sq (adj) value is equal to 12,2% (Exhibit 1), the model does not fit if used as a prediction model. However, it can be stated that the two independent variables, i.e., ownership by the government and ownership by the public, can still be used to predict the EVA, and they affect the performance of the SOEs. That is, the impact of the ownership structure towards EVA is 12,2%, while the rest (87.8%) came from other factors.

To test the hypothesis on whether or not ownership by the government and ownership by the public affect the performance of the SOEs partially, the t test was used with a level of significant value of 95%. The result obtained from the statistical calculation is that the p value is equal 0,202 (exhibit 1) for the public ownership and 0,475 (Exhibit 1) for the government ownership. Both values are greater than 0,05, the null hypothesis should be accepted. This means that partially both types of ownership do not affect the performance of the SOEs.

The second hypothesis test seeks to determine whether there is a relationship between the MVA and the EVA. The null hypothesis states that there is no relationship between the MVA and the EVA, the calculation result

is the pearson correlation with value of 0.447 (Exhibit 2) with a p value of 0,02. Because 0,02 is smaller than 0,05, hence statistically there is a significant correlation and, therefore, the null hypothesis should be rejected. This means that there is a positive relation between the EVA and the MVA of the SOEs. There is a tendency that an Increase of the EVA correlates with an increase of the MVA although this relation is not overwhelming.

The results of the fist hypóthesis shows that the ownership structure of the SOEs in Indonesia does not affect the performance of theSOEs. Regarding the ability to predict, it can be said that both independent variables, that is, ownership by government and ownership by the public, can still be used to predict the EVA and it affects the performance of the EVA if the EVA reaches 12,2%. This finding is consistent with that found by Lauterbach & Vaninsky (1999), i.e., ownership structure does not have a significant effect on the performance for the industrial sector sample. This finding is further supported by the research results of Vining and Boardman (1992); Boardman et al (1989), and Megginson, Nash, and Randenborgh (1994). Furthermore, Kusnetsov and Muravyyev (2001) showed that companies owned by the government have lower efficiency compared to those owned by private sector. They also found that the relationship between ownership of shares by government and performance is negative.

In contrast, the study conducted by Lauterbach & Vaninsky (1999) stated that modern companies with a spread ownership of share perform better than traditional ones. Lemon and Lins (2003) examined the relationship between the ownership structure and the company value during the crisis period in 8 Asian Countries. They concluded that only the ownership by the management at the highest level increases the company performance by 20%. The research that connects the ownership structure with the performance of the private companies also concluded that the structure of ownership has an effect on the performance of the company (see Palmer, 1973; Stano, 1976; Levin and Levin, 1982; Murali & Welch, 1989).

The privatization of the SOEs in Indonesia aims to improve the performance of the SOEs. Privatization results in the change of ownership in the SOEs in which the government will no longer be the 100 % shareholder. Through the ownership of the public or private sector outside the old stockholder (government), it is expected that control towards the company or public assets will become better, so that in turn the company performance will increase (Syakhoroza, 2000; Cragg and Dyck, 1999). The research result of 9 SOEs which have gone public, however indicates, that the ownership structure of the SOEs in Indonesia does not have much impact towards the performance of the SOEs. It seems that the ownership structure will apply more effectively for private companies rather than for SOEs. It should be noted, however, that inconsistency with the result may be caused by the policy of the government to maximize the political and social purposes rather than to maximize profits of the SOEs (Megginson, Nash, Rodenborgh, 1994). That is, the social purpose factor of the SOEs is more dominant compared to the similar factor that applies to the private enterprises. This is in line with the general opinion (see Boycho, Sheefer, Vishny, 1996; Dewenter and Malatesta, 2001 in Sun, Tong & Barrel, 2002). In addition, the ownership structure is still dominated by the government, which makes it difficult to implement good corporate management required to reach good financial performance.

The ownership structure of the SOEs in Indonesia can be said to imitate the model generally used in the United Kingdom and in the US. That is, there are a lot of individual investors who are able to sell their ownership in short-range and quickly, and in general such investors are not interested in being involved in the management of the SOEs. It seems that this condition is created by the government of Indonesia since the privatization of the SOEs aims to decrease the state deficit, rather than to improve the performance of the SOEs.

As for the second hypothesis, there is a positive correlation between the EVA and the MVA although not overwhelming. The result explains why the EVA as an assessment indicator of the performance of the SOEs, although the relationship is weak, can improve the share market price of the SOEs listed at Jakarta stock exchange. Furthermore, it can be argued that the MVA has not yet fully reflected the information of the EVA. The result of this research supports the study conducted by Hendry (1999). The result is also in line with the research conducted by Ramana in Indian capital market (http://ssrn.com/abstract), who concluded that there is a relationship between the MVA with EVA at Indian Companies, although not strong.

Whether or not there is a correlation between the EVA and the MVA is very much determined by the capital market efficiency and by whether or not there is asymetric information, and other factors which influence the

share price, like the rate of interest of The Fed, the SBI, and the growth of the economy. With respect to these factors, it is possible that Indonesian capital market is truly not yet efficient and there still exists asymetric information. This situation can be caused by the placement of employees at the SOEs because of political network rather than of professionalism, by high asimetric information, and by high transaction cost (Megginson, Nash, Rodenborgh, 1994).

CONCLUSION

The ownership structure of the SOEs which is partially owned by the public, is unable to improve the economic added value. This may still occur because the ownership structure is dominated by the government. That is, the government still dominates the decision-making in the SOEs both for strategic and operational reasons. In addition, the SOEs, in Indonesia have to serve political and social purposes rather than profit-making purposes.

The performance of SOEs, measured by the EVA (economic Value Added) correlates with the MVA (Market Value Added) as market indicator of public companies significantly. This result can mean that investors begin to possess adequate knowledge in assessing or evaluating public companies in the capital market. The relation shows that when the economic value increases, the SOEs will undergo a change and this will affect the price of shares in the capital market.

The change of the ownership structure through privatization actually does not have an impact towards the performance of the SOEs. This occurs because the ownership by the minority group does not result in the control of the SOEs. The Privatization is only conducted as an effort to obtain funds to help with the state budget deficit rather than to expand the SOEs or to improve the added value of the SOEs.

SUGGESTIONS

It is recommended that the acquired funds from the privatization of the SOEs not fully be used to compensate for the state budget deficit. That is, the majority of the funds should be allocated for the purpose of developing or expanding the SOEs themselves so that they can perform optimally for the sake of the society.

Because the EVA and the MVA have a significant relationship to a certain degree, the author suggests that the SOEs attempt to improve their performance continually since the market openly evaluates the activities of the SOEs, and the market will respond to the performance as shown by the price of the shares. The higher price reflects the better performance of the SOEs.

AUTHOR INFORMATION

Sri Hasnawati earned her first degree from University of Lampung, Indonesia. In 1994, she completed her Master's degree, with Finance as her major, from the University of Indonesia. In 2005, she earned her doctoral degree – majoring in Finance – from the University of Padjadjaran. Hasnawati is now a lecturer at the Department of Management, University of Lampung and at the Management Program, Graduate School, Atma Jaya Catholic University. She has had a number of publications in Indonesian journals and has presented her papers at international seminars. Apart from teaching experience, she has had some experience as a stock analyst and investment advisor.

REFERENCES

- 1. Basri, Faisal H. 2002. Konsep Privatisasi. Makalah yang disampaikan dalam seminar terbatas: Privatisasi Ditinjau dari Aspek Ekonomi Makro, Yang diselenggarakan oleh kantor Badan Usaha Milik Negara, Graha Sawala, Gedung Utama Departemen Keuangan: Jakarta, 21 Mei 2002.
- 2. Boubakri & Jean Cosset. 1998. The Financial and Operating Performance of Newly Privatized Firms: Eviden from Developing Countries. *The Journal of Finance*, Vol. LIII No 8. June 1998.
- 3. Cook & Colin Kirkpatrick. 1995. *Privatisation Policy and Performance International Perspectives*. Prentice Hall.

- 4. D'Souza & William L. Megginson. 1999. The Financial and Operating Performance of Privatized Firms during the 1990s. *The Journal of Financial*. Vol LIV, No 4. August 1999.
- 5. Ferguson; Kevin C. K. Lam & Grace Meina Lee. 2002. Voluntary Disclosure by State Owned Enterprices Listed on The Stock Exchange of Hongkong. *Journal of International Financial Manajemen and Accounting* 13: 2 2002.
- 6. Hendry Muhamad. 1999. Hubungan antara Economic Value Added dengan Market Value Added dan Identifikasi Variabel-variabel yang mempengaruhi Economic Value Added: Studi Kasus perusahaan-perusahaan di PT Bursa Efek Jakarta. Tesis Magister Manajemen ITB.
- 7. Kane. Edward J, 1998." Lessons of Privatization". *Pasific Basin Finance Journal* 6 (1998) 234-249.
- 8. Kester; Richard S. Ruback & Peter Tufano. 2005. *Case Problems in Finance*. McGraw-Hill International edistion
- 9. Megginson; Robert C. Nash; Jeffry M. Netter & Adam L. Schwartz, 2000. The Long Run Return to Investors in Share Issue Privatization. *The Financial Management* Spring 2000.
- 10. Murali & Johnathan B. Welch. 1989. Agent, Owners, Control and Performance. *Journal of Business Finance and Accounting* Summer 16 (3).
- Natalia & Indra Wijaya. 2006. Analisis kinerja Keuangan Menggunakan Metode EVA dan MVA (Studi Empiris Pada Perusahaan Teknologi Informasi di bursa efek Hajarta) *Telaah Manajemen* Vol 1 No 2/Nov/2006.
- 12. Ramana. Market Value ADDed and Economic Value Added: Same Empirical Evidences. 8th Capital Markets Conference. Indian institute of caoital Market paper. <u>http://papers.ssrn.com/sol3/papers.cfm</u>.
- 13. Rosanne London. 2002. Tools for Governing: Privatization Public-Private Partnership, and Enterpreneurial Management. *Public Administration Review*. January/February 2002, Vpl 62 No 1.
- 14. Sun & Wilson H. S. Tong. 2002. Malaysia Privatization: A Comprehensive StudY. *Financial Management*. Winter 2002.
- Sun; Wilson H. S. Tong & Jing Tong. 2002. How Does 1Government Ownership Affect Firm Performance? Evidence from China's privatization Experience. *Journal of Business Finance & Accounting*, 29 (1) January/ March.
- 16. Syahris & Samosir Agunan P. 2002. Analisis Privatisasi BUMN Dalam Rangka Pembiayaan APBN. *Jurnal Kajian Ekonomi dan Keuangan*, Vol 6, No 4. Desember 2002.
- Abeng. 1998. Kebijakan Pemerintah Dalam Pengelolaan BUMN Melalui Upaya Reformasi dan Privatisasi. Makalah yang disampaikan dalam seminar tentang Reorientasi dalam Upaya Mencari Fomula BUMN Ideal.
- Viverita; Ati Harianti & Sri Hasnawati. 1998. Privatisasi dan Kinerja BUMN yang listing di BEJ dan NY stock Exchange.
- 19. Yasin. 2002. Restrukturisasi dan Privatisasi. Pointers Seminar Kordinasi direksi/komisaris BUMN di Jakarta, 17 April 2002.

Exhibit 1: Regression Analysis - EVA versus PUBLIC; GOV

The regression equation is:

EVA = - 3342526 + 218067 PUBLIC - 59844 GOV

26 cases used, 2 cases contain missing values

Predictor Coef SE Coef T P VIF Constant -3342526 9002439 -0,37 0,714

 Predictor
 Coef
 SE
 Coef
 T
 P
 VIF

 Constant
 -3342526
 9002439
 -0,37
 0,714

 PUBLIC
 218067
 166204
 1,31
 0,202
 1,602

 GOV
 -59844
 82482
 -0,73
 0,475
 1,602

S = 5858042 R-Sq = 19,2% R-Sq(adj) = 12,2%

PRESS = 1,057307E+15 R-Sq(pred) = 0,00%

Analysis of Variance

 Source
 DF
 SS
 MS
 F
 P

 Regression
 2
 1,87804E+14
 9,39019E+13
 2,74
 0,086

 Residual Error
 23
 7,89283E+14
 3,43167E+13
 1
 1

 Lack of Fit
 16
 2,54598E+14
 1,59124E+13
 0,21
 0,996

 Pure Error
 7
 5,34685E+14
 7,63836E+13
 7
 1
 1

 Total
 25
 9,77087E+14
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1
 1

Source DF Seq SS PUBLIC 1 1,69739E+14 GOV 1 1,80648E+13

Unusual Observations

 Obs
 PUBLIC
 EVA
 Fit
 SE Fit
 Residual
 St Residual

 13
 19,3
 -28333564
 -3967419
 2145544
 -24366145
 -4,47R

R denotes an observation with a large standardized residual.

Durbin-Watson statistic = 1,79807

Exhibit 2: Correlation EVA vs MVA

| | | EVA | MVA |
|-----|---------------------|------|------|
| MVA | Pearson correlation | 1 | ,447 |
| | Sig. (2-tailed) | | ,022 |
| | Ν | 26 | 26 |
| EVA | Pearson correlation | ,447 | 1 |
| | Sig. (2-tailed) | ,022 | |
| | Ν | 26 | 26 |

* Correlation is significant at the 0.05 level (2-tailed)