WHAT INFLUENCE THE COMPANY'S ECONOMIC VALUE ADDED?

EMPIRICAL EVIDENCE FROM CHINA'S SECURITIES MARKET[1]

Chen Lin[2] Qiao Zhilin[3]

Abstract: This paper empirically examined what would influence economic value added of the companies listed in China's securities market. The methods of Factor analysis and multivariable linear regression model were used here. It drew the conclusion that the company's capital structure, profit ability, size, growth ability, management ability, and industry's return on equity had positive influence on EVA, indicating that these factors had an active influence on EVA. The intangible asset had poor negative relationship with EVA. And the inventory management ability had no influence on EVA. The possible reasons were discussed later and, some advice was given at the end in order to increase the company's economic value.
Key words: Economic value added, Influence factor, China

1. INTRODUCTION

The real value of corporations is one of the most important things that stakeholders care about. Traditional performance measures are mainly from the company's financial report based on Generally Accepted Accounting Principles (GAAP). Many kinds of preparations, goodwill, deferred taxes and some other items are deduced directly from the income account. The legal capital is so considered to be reduced and some unnecessary financing or investment behavior occurs. At the same time, although debt cost has been reflected in traditional performance measurement, capital cost is not yet. So cost calculation is not exact. It couldn't reflect the corporation's real operation and value creation.

Economic value added (EVA), a new performance measure, has been paid a lot of attention in recent years. EVA is such a method that is viewed as an effective measure reflecting both the value of company and the interest of shareholder (Tully, Hadjian, 1993; Topkis, Maggie, 1996). Many researches have shown that EVA better reflects the company's real economic profit than traditional performance

[1] **Financial support from Shaanxi Social Science Foundation (07E003Z), Plan of Soaring Star and Youth Innovation Fund of Northwestern Polytechnical University is gratefully acknowledged, China.**
本文受中國陝西省社會科學基金專案(07E003Z)、中國西北工業大學翱翔之星計畫和青年科技創新基金專案資助。
[2] School of Management, Northwestern Polytechnical University, Xi'an, Shaanxi, 710072,. P.R.China.
E-mail: chenlin@nwpu.edu.cn
[3] Antai College of Economics and Management, Shanghai Jiao Tong University, 200052, P.R.China.
* Received 27 November 2007; accepted 21 January 2008

measurement (Stewart, 1994). It is the right measure most directly linked to the creation of value for shareholders (Stern, Stewart, Chew, 1995; Ameels, Werner, Geert, 2002). However, EVA of different companies is quite different even if their accounting profits are similar. What are the reasons that lead to this consequence? What are the factors influencing the company's economic value added? This is our paper aiming to do.

Many studies have been done on the influencing factors of EVA. Sougiannis (1994) analyzed the influence of R&D expenditure on the increase of the company's future EVA. It showed that R&D expenditure had significant positive influence on the increase of future EVA. But he did not take other factors into account. O'Byrne (1996) studied EVA's explanative content to market value and influencing factors. He found company scale, the positive or negative of EVA, and industry all had significant influence on the improvement of EVA's explanative content. Deng et al. (1999) chose chemistry, pharmacy and electronics industry as the research objects. Their results indicated that the company's research on subsequent innovations, patent measures reflecting the company's research activity volume, and the closeness of R&D to science were responsibly associated with future performance of R&D-intensive companies. But they did not consider the growth of future EVA. Young and O'Byrne (2002) analyzed such factors as R&D expenditure, sale growth, goodwill, and industry revenue. They found that R&D expenditure, sale growth, and industry revenue had significant positive relationship with the growth of future EVA, but goodwill had hardly influence on it. They also pointed out that these factors would have some change in different industries.

Altogether there are many studies on influencing factors of EVA, but this kind of research is hardly seen in China. Chinese social background is quite different from western countries. The discrepancy of capital markets is also distinct. So it is very important and useful to test whether the results of foreign studies apply to China. It is this paper aiming to do. It will discuss which factors would influence EVA in Chinese capital market and how they work.

The remainder of the paper is organized as follows. Section 2 outlines the concept of EVA and the relationship with market value. Section 3 presents the testing model and section 4 tells the data and sample sources. Section 5 shows the empirical results. And conclusion is presented in section 6.

2. ECONOMIC VALUE ADDED AND MARKET VALUE

EVA, developed by Stern Stewart and Co., is viewed as an estimation of a company's true economic profit that differs from accounting profits (Biddle, Bowen, Wallace, 1999; Lokanandha, Raghunatha, 2006). Based on residual income(RI), Stern Stewart made some adjustments on net operating profits after tax (NOPAT) and invested capital to eliminate the accounting distortions caused by GAAP (Stewart, 1995; Gup, Taylor, 2004), then put forward EVA:

$$EVA_t = NOPAT_t - Cap_t * cc \tag{1}$$

In formula (1), NOPATt is the company's net operating profits after tax in period t. Capt is the company's total invested capital in period *t*. And *cc* represents capital cost. The relationship between EVA and market value (MV) can be described as follows：

$$MV_t = Cap_t + \sum_{i=1}^{\infty} \frac{E(EVA_{t+i})}{(1+cc)^i} \tag{2}$$

It means market value is equal to the sum of invested capital and present value of expected future EVA. If EVA increases, the corresponding market value will increase too. So market value has a close relation with EVA. It shows that EVA is a powerful driver to improve the stock price and it is the real method to capture the true economic profit of the company (Dodd, Johns, 1999). Some researches showed that EVA had more explanation on the company value and stock returns than traditional

accounting indices (Dodd, Chen, 1996; Chen, Dodd, 2001; Clinton, Chen, 1998). Some proved with economics that incentive scheme based on RI or EVA can effectively eliminate financial risk and reducing agency cost, then optimizing incentive contract (Reichelstein, 1997; Dutta, Reichelstein, 1999; Huang, Li, 2004).

If we make some change to formula (2), we will get formula (3).

$$MV_t = Cap_t + \frac{E(EVA_t)}{cc} + \sum_{i=1}^{\infty} \frac{E(\Delta EVA_{t+i})}{(1+cc)^i} \qquad (3)$$

In formula (3), the sum of Cap_t and $E(EVA_t)/cc$ is the so-called current operating value (COV). The last item is future growth value (FGV). It is the present value of future EVA increases. It reflects the company's future development ability. In this way, market value is divided into two parts, i.e. COV and FGV. Under the continuity (going-concern) assumption, COV will represent market value if the company can keep current operation in future periods. If future EVA is improved as the growth of company, the present value of EVA increases will compose another part of market value, i.e. FGV. So in fact, FGV is the extension of EVA.

3. TESTING MODEL AND VARIABLE DESIGN

3.1 Testing model

Based on Young and O'Byrne's study, it uses multi-regression method to analyze the relationship between EVA and influencing factors in Chinese capital market. The regression model is set up as follows.

$$EVA = \alpha + \sum_{i=1}^{n} \beta_i X_i + \varepsilon \qquad (4)$$

In formula (4), X_i represents the influencing factors, α is constant, β_i is the coefficient of influencing factors, ε is the residual and n represents the volume of influencing factors.

The regression model needs to meet two assumptions. One is that there is no significant linear problem among explanatory variables. The other is that there is no serial correlation problem among residuals. Variance inflation factor (VIF) and Durbin-Watson statistics will be used here to do the test. VIF is the measure to analyze whether variables have multi-collinearity problem. If VIF>10, it is believed that variables are high collinear. Durbin-Watson statistics is the measure to test whether residuals are serial correlated. Its value is between zero and four. If it is close to zero, it means positive serial correlation. If it is close to four, it means negative serial correlation. If it is close to two, it means no serial correlation.

3.2 Variable design

EVA is related to not only the company's structure and characteristics, but also the industry. Usually there are many variables to describe the company's characteristics, such as earnings per share, return on equity, prime operating revenue increasing rate, account receivable turnover, total asset turnover, inventory turnover, liability/asset ratio, current ratio, equity ratio, net asset per share, total asset, net assets increasing rate, total assets increasing rate. Variables describing the industry include industry earnings per share, industry return on equity, industry net profit increasing rate，and industry rate of return on sale. All these factors will have some impact on EVA. Foreign studies also discussed the influence of goodwill on EVA. Limited to the data source, we could not get the exact information about

goodwill. So we use intangible asset to replace goodwill after taking Chinese accounting report characteristic into account.

Some things need to be paid attention to. First, most dependent variables in this model are comparative indices. But EVA is an absolute index. If EVA is the independent variable, the difference in the amount of dependent and independent variables will be very large and the error will be huge. In order to increase the reliability of the model and the comparability of the results, we refer to O'Byrne's method and divide EVA by total asset (*TotaAsse*), i.e. using $EVA/TotaAsse$ as the independent variable to reflect the company's value creation. Second, the variable of intangible asset (*TotaInta*) is also the absolute index. Similarly to avoiding error enlargement problem caused by the use of absolute index, we divide intangible asset by total asset, i.e. using $TotaInta/TotaAsse$ as the representative variable. Third, we take natural logarithm of total asset, the absolute index. It means let ln(*TotaAsse*) to be the representative variable.

All these factors will influence EVA to some extent. Correlation test shows that the factors are correlated to certain degree. It will not be accurate to take regression analysis directly with all the factors. So the paper makes factor analysis to these factors first and abstracts common factors reflecting their common characteristic. Then it makes regression analysis using common factors as dependent variables, thereby decreasing the error.

4. DATA AND SAMPLES

4.1 Data source

The data are based on Chinese listed companies in 2002. EVA comes from the website of Stern Stewart & Co. China (www.sternstewart.com). Intangible asset and total asset are from CSMAR financial data base. Earnings per share, return on equity, prime operating revenue increasing rate, net assets increasing rate, total assets increasing rate, account receivable turnover, total asset turnover, inventory turnover, liability/asset ratio, current ratio, equity ratio, and net asset per share are the data in great tide date base (www.cninfo.com.cn). And the information on industry earnings per share, industry return on equity, industry net profit increasing rate, and industry rate of return on sale comes from netease financial data center (money.163.com).

4.2 Samples

The samples are selected according to the following rules.

①All the companies are listed in Shenzhen and Shanghai stock exchange.

②Stock and accounting information in the studying period is complete.

③Exclude the companies in financial industry because their characteristic is very special and the financial report is quite different from other industry.

④Exclude the companies of special treat and particular transfer because these stock information is not exact and could not well reflect the company's market value.

⑤In order to make the results more representative, it assumes the data fit the normal distribution and eliminates some extreme data according to $\mu \pm 3\sigma$.

In term of these rules, 984 samples are finally selected. The descriptive information of the variables is shown in Table 1.

Table 1 Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
EVA	984	−0.277	0.262	−0.017	0.050
Earnings per share	984	−1.040	0.950	0.134	0.246
Return on equity	984	−207.360	44.330	2.319	17.671
Prime operating revenue increasing rate	984	−94.420	216.100	18.148	36.495
Account receivable turnover	984	0.000	497.910	18.096	44.535
Total asset turnover	984	0.000	2.250	0.561	0.383
Inventory turnover	984	0.000	992.090	9.479	44.313
Liability/asset ratio	984	0.071	0.910	0.451	0.164
Current ratio	984	0.180	6.770	1.590	0.938
Equity ratio	984	8.490	92.590	51.919	16.707
Net asset per share	984	0.230	7.100	2.835	1.204
Total asset	984	18.798	23.689	21.089	0.828
Intangible asset	984	0.000	0.245	0.033	0.041
Net assets increasing rate	984	−70.560	1151.080	13.871	62.332
Total assets increasing rate	984	−66.120	118.640	12.983	23.377
Industry earnings per share	984	−0.246	0.476	0.110	0.108
Industry return on equity	984	−0.159	0.127	0.038	0.037
Industry net profit increasing rate	984	−9.007	6.380	0.250	0.886
Industry rate of return on sale	984	−0.222	0.360	0.044	0.062

5. EMPIRICAL RESULTS

5.1 Result of factor analysis

There is a latent request in factor analysis, which is the variables should be highly correlated. So it takes KMO (Kaiser-Meyer-Olkin) test and Bartlett's test of sphericity to all the variables. The KMO value is 0.710, more than 0.7, showing that original variables suit to factor analysis. The statistic of Bartlett's test of sphericity is 11011.934 and sig. is 0.000, less than 0.01, indicating original variables are correlated and fit for factor analysis.

It makes factor analysis and finally chooses eight factors in term of the accumulative variance contribution rate large than 80% (here is 80.522%). At the same time, it makes varimax orthogonal rotation in order to get better factor explanation (shown in Table 2). Obviously, the meanings of factors become clearer after rotation. The first factor reflects the earnings condition of industry, i.e. industry return (*InduRetu*). It dominates the variables like industry earnings per share, industry return on equity, industry net profit increasing rate，and industry rate of return on sale. The second factor indicates capital structure of the company (*CapiStru*), including liability/asset ratio, current ratio, and equity ratio. This

factor is highly negative correlated with liability/asset ratio and positive correlated with current ratio, equity ratio. So in fact, it describes the company's equity capital. The third factor reflects the company's profit ability (*ProfAbil*) including earnings per share, return on equity, prime operating revenue increasing rate. Some people believe that prime operating revenue increasing rate describes the growth ability, but in essence it is the measure of the company's profit ability. So it is reasonable to abstract it to this factor. The fourth factor depicts the company size (*Size*). It dominates total asset and net asset per share. The fifth factor describes the growth ability (*GrowAbil*) covering net assets increasing rate and total assets increasing rate. The sixth factor includes account receivable turnover and total asset turnover, reflecting the management ability of the company (*ManaAbil*). The seventh factor dominates only intangible asset (*IntaAsse*). It shows that intangible asset is a very important factor in the analysis. The last factor dominates inventory turnover and reflects the company's management ability of inventory (*InveMana*). Fig.1 clearly paints the meanings of factors.

Table 2 Rotated Component Matrix

Variable	Component							
	1	2	3	4	5	6	7	8
Earnings per share	.164	.229	.701	.430	.217	.101	−.067	.009
Return on equity	.106	.254	.738	.249	.155	.070	.008	−.024
Prime operating revenue increasin rate	.016	−.196	.762	−.063	.045	−.100	.053	.133
Account receivable turnover	.049	.006	−.032	.120	.022	.899	.098	.081
Total asset turnover	−.035	−.131	.460	−.091	.099	.486	−.439	−.193
Inventory turnover	.112	.039	.081	.003	.014	.046	−.045	.948
Liability/asset ratio	−.092	−.948	−.082	−.052	.043	−.041	−.071	−.074
Current ratio	.014	.783	−.044	−.011	.154	−.118	−.175	−.048
Equity ratio	.107	.952	.035	.022	−.049	.048	.062	.038
Net asset per share	.025	.355	.188	.739	.160	−.012	−.017	−.052
Total asset	.103	−.230	.083	.817	−.106	.122	−.124	.054
Intangible asset	−.046	−.056	.037	−.136	−.055	.080	.904	−.067
Net assets increasing rate	.097	.108	.045	−.107	.841	.109	−.044	−.002
Total assets increasing rate	.060	−.066	.247	.173	.795	−.071	−.037	.015
Industry earnings per share	.935	.050	.071	.072	.114	.015	−.051	.011
Industry return on equity	.966	.035	.079	.050	.050	.029	−.043	.016
Industry net profit increasing rate	.877	.031	.056	−.017	.051	.000	−.069	−.052
Industry rate of return on sale	.813	.129	−.004	.085	−.019	.022	.135	.270

Note：Rotation converged in 7 iterations.

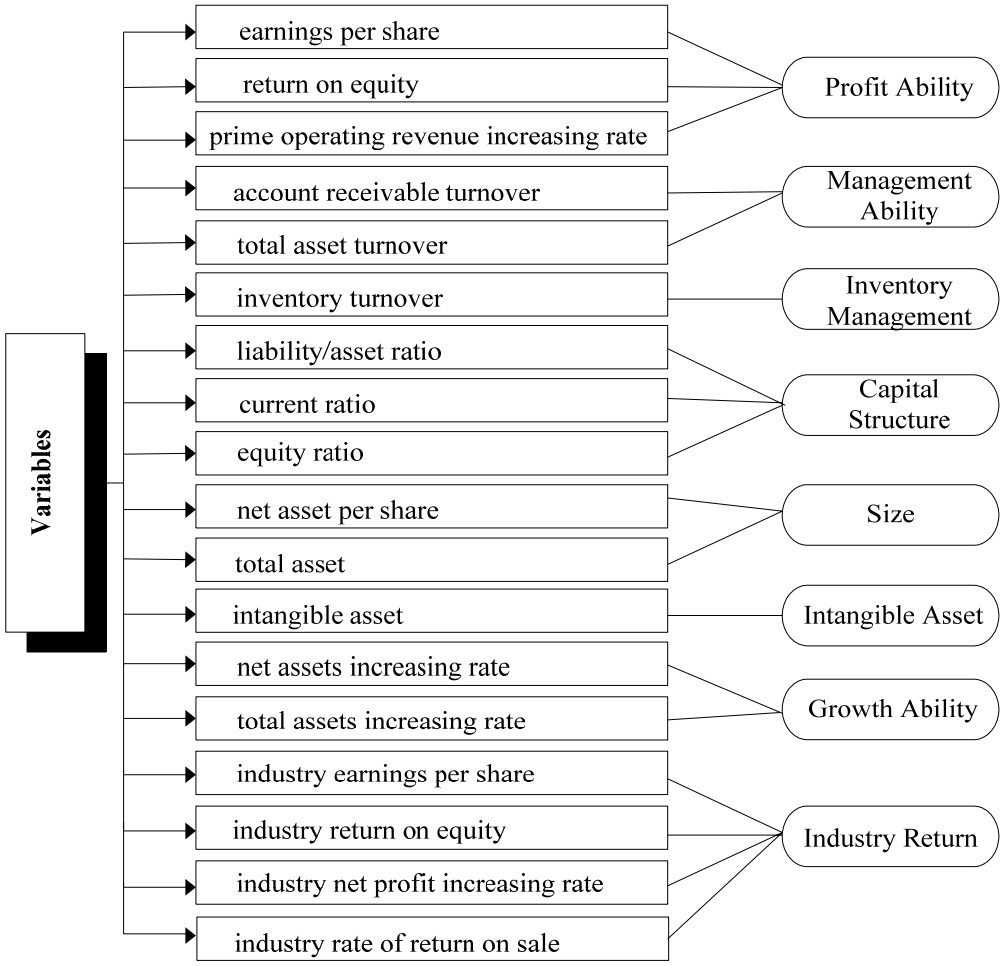

Fig.1 Meanings of factor variables

5.2 Regression model test

In order to analyze what influence the factors may have on EVA, it makes regression analysis with eight factors as the dependent variables. The results of regression analysis are shown in Table 3.

Table 3 Model Summary

Model	*R*	R^2	Adj. R^2	Std. Error of the Estimate	Durbin-Watson	F	Sig.
1	.790	.624	.621	0.031	2.013	202.648	.000

First, the results of significance test of regression model show F value is 202.648 and Sig. is 0.000. It indicates that the regression model has significant statistic meaning. The coefficient of determination R^2 and adjusted R^2 are 0.624 and 0.621 respectively. It shows the regression model's good explanation ability and fitting effect is significant.

Second, it tests the dependent variables with variance inflation factor. All the VIF is 1.000, less than

10, showing no multi-collinearity problem among dependent variables. In fact, these dependent variables come from factor analysis. They are orthogonal and irrelated. There is of cause no multi-collinearity problem. Residuals are tested with Durbin-Watson statistic. The value is 2.013, close to 2, indicating no serial correlation among residuals.

5.3 Result of regression analysis

Regression analysis is made with factors as the dependent variables. The regression coefficients and the results of t test are shown in Table 4.

Table 4 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	−1.675E-02	.001		−17.106	.000
InduRetu	6.361E-03	.001	.127	6.495	.000
CapiStru	5.947E-03	.001	.119	6.072	.000
ProfAbil	3.441E-02	.001	.690	35.135	.000
Size	1.402E-02	.001	.281	14.317	.000
GrowAbil	8.085E-03	.001	.162	8.255	.000
ManaAbil	4.434E-03	.001	.089	4.527	.000
IntaAsse	−3.299E-03	.001	− .066	−3.368	.001
InveMana	1.604E-03	.001	.032	1.637	.102

In Table 4, the standardized regression coefficient of *InduRetu* is 0.127 and concomitant probability sig. of t test is 0.000. It shows that industry return and EVA are positive correlation under significance level 0.01 and indicates that EVA has a close relationship with the industry of the company. If the industry is booming in future development, the whole industry return will be high and EVA will correspondingly go high. So industry return has a significant influence on EVA.

The standardized coefficient of *CapiStru* is 0.119 and sig. of t test is 0.000. It means that capital structure and EVA are positive correlation under significance level 0.01, showing whether the company's capital structure is good or not will influence EVA. If the company's equity capital is little and debt ratio is high, investors will think twice about their investment because of the higher debt pressure, even if there is a lot of chances in future development. Thus EVA is negatively affected. On the other hand, if the company has many growth and investment opportunities in the future, the variability of cash flow will be great and risk will be high too. Then the risk of bankruptcy will become larger if managers do not take any action to decrease debt ratio. So the economic value will also get a bad influence.

The standardized coefficient of *ProfAbil* is 0.690 and sig. of t test is 0.000, indicating that profit ability and EVA are significant positive correlation under significance level 0.01. Usually, the company with better profit ability will meet lower bankruptcy risk. The company could make a lot of profit for future development. Then it will make more economic value creation. So profit ability has a good influence on EVA.

The standardized coefficient of *Size* is 0.281 and sig. of t test is 0.000. It indicates that size and EVA

are significant positive correlation under significance level 0.01.The assets the company has reflect its size. The larger production scale is, the lower cost per product will be. When selling price and volume are given certain, the income will become greater, bankruptcy risk will get lower and growth opportunity will become more and more. So EVA will increase too. Therefore, size has a good influence on EVA.

The standardized coefficient of *GrowAbil* is 0.162 and sig. of t test is 0.000. It shows that growth ability and EVA are positive correlation under significance level 0.01. Better development potential means stronger growth ability in the future. Then the profit and value creation will become more. So do EVA. Thus the company's future development potential will have an active influence on EVA.

The standardized coefficient of *ManaAbil* is 0.089 and sig. of t test is 0.000. It means that management ability and EVA are positive correlation under significance level 0.01. If the company's management ability is good, the assets left unused and wasted will be reduced. The assets turnover will be quickened. It will bring more economic profit to the company and correspondingly, EVA will become better. So management ability has a positive influence on EVA.

The standardized coefficient of *IntaAsse* is −0.066 and sig. of t test is 0.001. Although the result passed significance test, the value is too small. It indicates intangible asset has little influence on EVA. The possible reasons may include: (1) although the rules and criterions of intangible asset have come into being in China and begin to play an active role in society, many managers and directors still have little consciousness of intangible asset. They do not pay much attention to intangible asset. Then its influence on the company's production and operation is quite limited. The economic value creation is little too. (2)Some companies have made great efforts on the transformation and increment of intangible asset. But the mechanism is still not complete. Transformation power is insufficient and transformation efficiency is very low. They all affect intangible asset's ability to create economic value and lead to little effect on EVA. By the way, compare the result with that of Young and O'Byrne's research. They chose goodwill as the dependent variable, but the result did not pass significance test. It seems that intangible asset do have little influence on EVA.

The standardized coefficient of *InveMana* is 0.032 and sig. of t test is 0.102. It seems that inventory management ability and EVA are not significant correlated. Theoretically, the better the company manage its inventory, the greater EVA created is. The reasons why the relationship between inventory management and EVA is not significant may be as follows. (1) Some companies might take certain measures to manage their earnings in order to achieve expected profit or gain the support of bank loan. In those measures, inventory is a very important one because of its special characteristics such as various items, many different valuation methods, and strong liquidity. The company could control the inventory's price by choosing different valuation methods. It could adjust the volume by choosing the way to check and calculate the inventory. Then expected profit will be realized and given goal will be achieved. (2) Companies are required to set up provision for inventory to each single item according to the documents of ministry of finance and China securities regulatory commission. The randomicity of provision for inventory will be reduced to some extent. But it is still very difficult to determine each stock's net realizable value. So there will also be many chances to control the provision for inventory subjectively. These two points may lead to the insignificant relationship between inventory management ability and EVA.

6. CONCLUSION

This paper empirically analyzed the influence factors of economic value added of China's listed companies with factor analysis and multivariable linear regression model. It drew the following conclusion. (1) The factors of industry return, the company's own capital structure, profit ability, size, growth ability and management ability had a positive relationship with EVA. It means these factors will have an active influence on EVA. (2) Intangible asset had poor negative relationship with EVA. It's believed that little attention paid to intangible asset and low transformation efficiency might lead to this

result. (3) Inventory management ability had no significant relationship with EVA. It's considered that the great subjectivity on inventory calculation and provision might lead to this insignificant relationship.

Therefore, when EVA is used to evaluate the performance, the company could make the following efforts to create more economic value. (1) Improve production techniques and flows effectively. Then reduce product cost and increase sales to improve the company's economic performance. (2) Increase production investment and expand the company size to realize scale economical benefit. (3) Decrease the debt ratio properly and increase the size of self-owned capital. So the company can keep a reasonable balanced capital structure without too high capital cost and too large financial risk. (4) Analyze market demand seriously and develop multi-investment so as to improve the company's future development ability. (5) Enhance the production and operation management. Accelerate asset turnover and reduce idle and waste assets so to improve the company's whole management ability. (6) Pay close attention to industry trend and well analyze the development foreground. Then make an effective strategic decision for the company to help it decide whether to add investment, or maintain the status quo, or exit at the right time.

REFERENCES

Ameels, A., Werner, B., and Geert, S. (2002) Value-based management control processes to create value through integration: a literature review, Working paper, Vlerick Leuven Gent Management School.

Biddle, G. C., Bowen, R. M. and Wallace, J. S. (1999) Evidence on EVA[J]. *Journal of Applied Corporate Finance*, 12(2), 69-79.

Chen, S., Dodd, J. L., and James, L. (2001) Operating income, residual income and EVA(TM): which metric is more value relevant? *Journal of Managerial Issues*, 13(1), 65-86.

Clinton, B. D., Chen, S. (1998) Do new performance measures measure up? *Management Accounting*, 80(4), 38-44.

David, S.Y., and O'Byrne, S. F (2002) EVA & value-based management: a practical guide to implementation. Beijing: Social Sciences Academic Press.

Deng, Z., Lev, B., and Narin, F. (1999) Science and technology as predictors of stock performance, Financial Analysts, 55(3), 20-32.

Dodd, J. L., and Chen, S., (1996) EVA: A new panacea? *Business & Economic Review*, 42(4), 26-28.

Dodd, J. L., and Johns, J. (1999) EVA revisited, *Business & Economic Review*, 45(3), 13-18.

Dutta, S., and Reichelstein, S. (1999) Asset valuation and performance measurement in a dynamic agency setting, *Review of Accounting Studies,* 4, 235-258.

Gup, B., and Taylor, G, (2004) Residual income and stock valuation techniques, Working paper, Culverhouse College of Commerce and Administration, University of Alabama.

Huang, W., and Li, C. (2004) EVA's effects upon the game between shareholders and managers, *Nankai Business Review*, 7(2), 66-71.

Lokanandha, R. I., and Raghunatha, R. (2006) Performance evaluation, economic value added and managerial behaviour, *PES business review*, 1(1), 1-7.

O'byrne, S. (1996) EVA® and market value, *Journal of Applied Corporate Finance*, 9(1), 116-125.

Reichelstein, S. (1997) Investment Decisions and Managerial Performance Evaluation, *Review of Accounting Studies,* 2,157-180.

Sougiannis,T. (1994) The accounting based valuation of corporate R&D, *The Accounting Review*, 69, 44-68.

Stern, J. M., Stewart, G. B., and Chew, D. H. (1995) The EVA® financial management system, *Journal of Applied Corporate Finance*, 8(2): 32-46.

Stewart, G. B. (1994) EVA: fact and fantasy, *Journal of Applied Corporate Finance*, 7(2), 71–84.

Stewart, G. B. (1995) EVA works - but not if you make these common mistakes, *Fortune*, 131(8), 117.

Topkis, and Maggie. (1996) A new way to find bargains, *Fortune*, 134 (11), 265-266.

Tully, S., Hadjian, A. (1993) The real key to creating wealth, *Fortune*, 128(6), 38-44.