

# Estimate on Performance Evaluation of China's Central Enterprise Listed Company Based on the EVA

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Received 5 June 2014; revised 5 July 2014; accepted 25 July 2014

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## Abstract

Since China joined the WTO, the enterprises, especially central enterprises, have actively participated in the international competition. Assessing the results of the operations and the asset utilization has become a top priority. To provide new investment ideas for investors, this paper introduces the EVA to assess the results of operation.

## Keywords

EVA, Performance Evaluation, Central Enterprises, The SASAC Development

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## 1. Development Process of Central Enterprise's Performance Evaluation

The central enterprise's performance evaluation has experienced the following process:

### 1.1. Before the Reform and Opening-Up

From 1949 to 1978, this period is the planned economy. The company didn't have the right of management. Its performance evaluation is abode by the instruction to confirm the operation and assess the company's leaders compared with the results of the end with year's resolutions. This method has a weakness. It only cares about the output, quantity and investment, leads to the inefficient operation, and lacks of technological innovation.

### 1.2. After the Reform and Opening-Up

After the reform and opening-up, the first way to assess is applying indexes around the fund, cost and profit under the contract system to adapt to the planned economy.

In 1992, the State Planning Commission, State Statistical Bureau and other organizations raised 6 indexes to evaluate the operation which included the sales rate, the utilization of funds, the ratio of profits to cost and so on. This system designed the index from the designer's perspective, emphasized on the quality, financial risk and profitability.

In 1999, the Ministry of Finance issued "the rules about assessing state-owned capital performance evaluation" passed 8 basic indicators and 16 revised indexes and formed three level to assess the enterprises about capital efficiency, management, solvency and development. This period's system took initial shape of financial indicators and non-financial indicators.

Since 2004, the system which combined of annual appraisal and term examination has fully implemented. From January 1, 2004, it has gradually imported the EVA to evaluate. This scheme can be divided into three stages: the introduction stage, the transition stage and the strengthening stage [1].

From **Table 1**, the first stage was 2004-2007. This was the introduction stage. Its key point was management by objectives. Most companies' performance evaluation was based on the traditional financial indexes and emphasized the key performance indicators. Its cores were the working principle, the target, the code of points and so on.

The second stage was 2007-2009. This was the transition stage. The key is the strategic management. It uses the comprehensive budget and the strategic planning as the guide.

The third stage was 2010-2013. This was the strengthening stage. Its key was value management. Improving the economic benefit is its guide. It appropriately increases the equity cushion to found the evaluation system with EVA as the core and the decision management system. Then, it gradually establishes the evaluation system with Chinese characteristics.

**Table 1.** Application of the accounting indexes and EVA index.

Introduction stage based on traditional indexes	2004-1-1 to 2007-1-1	Application of the accounting index: Apply the total annual profits, earning rate of net assets and two industry indexes, to measure, score, rate and evaluate the central enterprises, these indexes will be regarded as the basic for senior management's performance bonus
Transition stage	2010-1-1	Application of the accounting index: Apply the total annual profits, earning rate of net assets and two industry indexes, to measure, score, rate and evaluate the central enterprises, these indexes will be regarded as the basic for senior management's performance bonus
Strengthening stage based on the EVA	2013-1-1	Combination of accounting index and EVA: Apply the EVA to instead of the earning rate of net assets, integrate the total annual profits and the other two industry indexes, to measure, score, rate and evaluate the central enterprises, these indexes will be regarded as the basic for senior management's performance bonus

## 2. Calculation of EVA in China's Central Enterprise Listed Company

Nowadays, it depends on the interim procedures which are formulated by the SASAC and the assessment rules of EVA.

### 2.1. EVA Model

EVA is the balance, which the net operating profit after tax deduct the cost of capital [2].

$$\begin{aligned}
 \text{EVA} &= \text{net operating profit after tax} - \text{cost of capital} \\
 &= \text{net operating profit after tax} - \text{adjusted capital} * \text{average cost of capital} \\
 \text{net operating profit after tax} &= \text{net profit} + (\text{interest expense} + \text{the adjusted research and development spending}) \times (1\% - 25\%) \\
 \text{Adjusted capital} &= \text{the average of owns equity} + \text{the average liabilities} \\
 &\quad - \text{the average non-interest current liabilities} - \text{average in progress}
 \end{aligned}$$

The SASAC (the State-owned Assets Supervision and Administration Commission) publish the "The Interim Measures about performance evaluation of the central enterprise's executives", it sets 4 kinds of cost of capital,

most central enterprises is 5.5%, in general; Nevertheless if the enterprise is charged with high tasks, and its assets has poor liquidity, its cost of capital can be charged at 4.1%; In addition, if the asset-liability ratio is 75% or more, the industrial enterprises can use 6% to evaluate the cost of capital, and the non-industrial enterprises which asset-liability ratio is 80% or more, similarly apply 6% as its cost of capital; Last, the SASAC sets that the cost of capital cannot be changed within three years [3].

## 2.2. Calculation of the Sample Enterprise's EVA

### 2.2.1. Sample

This paper chooses the sample which is belonged to the listed companies, because the EVA need the high maturity of capital market and the perfect performance management. So we choose the companies which are form industry, Public utility, Real estate, commerce and chemical industry. These companies satisfy some conditions at the same time:

- 1) The state of operation is favorable.
- 2) No major irregularities within a year.
- 3) No major problems in financial report.
- 4) No major litigation cases within three years.
- 5) The stock price has not been manipulated.

### 2.2.2. Data Sources

The data are from the website of caning, which the information disclosure of enterprises are accepted by the China Securities Regulatory Commission (CSRS) and we select the values in the consolidated statements.

### 2.2.3. Data Description

- 1) Interest expense: we select the actual accrual of the current period;
- 2) Research and development spending (research and development spending), adjusted research and development spending: the data are from the intangible asset development expenditure in the balance sheet;
- 3) By definition of the SASAC, the corporate income tax rate is 25% when calculating the EVA, regardless of the actual tax about the company, and we unified specify at 25%;
- 4) Cost of capital generally calculates in accordance with 5.5%; for the enterprise which is charged with heavier tasks, its assets have poor liquidity. Its cost of capital can be 4.1%, the asset-liability ratio of more than 75% of industrial enterprises. The cost of capital is designed as 6%.

## 2.3. Assess the Performance Evaluation

### 2.3.1. The Standard of EVA Evaluation System

From **Table 2**, firstly, we can know that the Dongfeng Motor's EVA is 471 million in 2013, compared with 89 million in 2012, it has increased 382 million. However, the net operating profit after tax was 869 million in 2013, on the basis of net operating profit after tax in 2012, it has increased 311 million. The difference is owned that the net profit is increased and the cost of capital is decreased in 2013. Secondly, in 2013, the China Construction has increased 5963 million, from the perspective of 2012's EVA. Over the same period, its net operating profit after tax is 41,677 million and the growth is 9154 million, it raises 28.14%, compared with the net profit, the EVA has cut in half. Then, we also can read that the EVA of Petro China is 96,633 million and 105,542 million, in 2012 and 2013. The growth of EVA is 8.9 billion, but the net profit's growth is 11.6 billion. We can conclude that introducing the EVA can help us understand the real situation of the enterprise's operation. Next we can know that the China Unicom's EVA is -2576 million and -2641 million, its net profit is 7025 million and 10,292 million, in 2012 and 2013. The last sample company is CNNC (CNNC Sufa technology industry co.ltd), its EVA is 6.21 billion and raise 12% which compared with the 2012's EVA.

As well, companies will likely benefit as the economy improves. The sample companies are strong, their EVA are positive except the China Unicom. China Unicom's net profit has increased by 46.5%, but its EVA is -2.6 billion, we can comprehend that the company is "false profit" in the assessment period. Generally speaking, when the company is false profit, it always applies several ways to carry its point. For example: charging the loan interest for long-term deferred expenses, arbitrarily changing the depreciation method, little plan liability or expenses and so on.

**Table 2.** The statement of central enterprises' EVA.

2012-2013 the statement of the central enterprises' EVA											
Trade		Industry		Public utility		Real estate		Commerce		Chemical industry	
The name of firm		Dongfeng Auto		Petro China		China Construction		China Unicom		CNNC	
Index	unit	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
1) NOPAT	mil	869	558	189,142	173,060	41,677	32,523	13,989	10,496	620,971	554,767
Including: Net profit	mil	307	139	142,229	130,618	29,333	22,777	10,292	7025	620,939	554,739
Interest expense	mil	56	28	23,081	18,164	10,983	8117	4929	4627	12	13
Adjustment of R&D spending	mil	692	530	39,470	38,425	5475	4878	0	0	31	25
Including: R&D spending	mil	692	418	14,169	14,453	5475	4878	0	0	31	25
R&D spending capitalized in the current period.	mil	0	112	0	0	0	0	0	0	0	0
Exploration expenses	mil	0	0	25,301	23,972	0	0	0	0	0	0
Income tax rates	%	25%		25%		25%		25%		25%	
2) Capital cost	mil	398	469	83,600	76,426	16,703	13,512	16,631	13,072	50	47
Including: Adjusted capital	mil	7235	8522	1,520,007	1,389,569	278,379	225,195	302,378	237,672	1231	1158
Average owner's equity	mil	7635	7494	1,225,337	1,131,666	152,059	129,523	216,930	210,423	1042	997
Average debt	mil	11,762	11,511	1,030,084	911,517	565,699	453,079	307,931	278,018	740	649
Current liabilities (interest-free)	mil	11,509	9593	452,722	381,404	434,535	353,813	163,927	194,637	453	391
Including: notes payable	mil	4702	4019	832	2265	11,123	11,080	406	285	33	24
Accounts payable	mil	4315	3729	298,075	278,427	214948	182,563	95,746	103,512	249	235
Advance collections	mil	543	820	46,804	381	113,144	80,837	50,352	43,083	98	53
Tax payable	mil	-95	-248	69,718	72,045	31,872	26,101	2634	1832	-6	-6
Interest payable	mil	0	0	0	0	1619	1171	568	846	1	1
Wage payable	mil	297	228	4836	4161	4022	3738	4927	3917	9	8
Dividend payable	mil	0	0	0	0	461	73	2	9	0	0
Other payables	mil	1093	1042	27,025	23,642	33,623	25,896	9081	8960	49	53
Other current liabilities	mil	0	0	5432	483	23,724	22,354	210	32,193	20	22
Account payable special fund	mil	2	3	0	0	0	0	0	0	0	0
Special reserve fund	mil	0	0	0	0	0	0	0	0	0	0
Construction In Process	mil	653	890	282,692	272,210	4843	3594	58,556	56,132	98	97
The average capital ratio	%	5.5%		5.5%		6.00%		5.50%		4.10%	
3) EVA	mil	471	89	105,542	96,633	24,974	19,011	-2641	-2576	620,920	554,720
4) ΔEVA	mil	382		8908		5963		-65		66,201	

The Dongfeng Motor, its EVA exceeded the net profit, in 2013. That is, it optimizes financing structure, reduce financial cost, and improve the funding returns and strengthen the cost consciousness. Similarly, we can conclude “Science and technology constitute a primary productive force” [4]. The Dongfeng Motor, the “research and development spending capitalized” index is increased 112 million and the “research and development spending” index has raised 274 million. That is why its EVA exceeded the net profit.

### 2.3.2. EVA Better Reflect the Operation of Enterprises

Through the accounting adjustments, the EVA can veritably reflect the operation of enterprises. Based on the net profit, we can get the net operating profit after tax with some projects adjusted. First of all, from the table, we can know the sample companies, such as China Unicom, China Construction, Dongfeng Motor, their net operating profit after tax are far from the net profit, the adjusted project is interest expense, because the net operating profit after tax = the net profit + interest expense. If the interest expenses are accounted for the larger proportion of cost, we can get a larger net operating profit after tax, the reason is that the corporate income tax can be partly offset by a number of interest expenses. The China Construction’s interest expense is large. It raises the net operating profit after tax. However, the CNNC’s interest expense cost less, the defer assets is added, so these have little difference to the growth of net operating profit after tax. In the next place, the other adjusted project is the research and development spending. The research and development spending can effectively reflect the continued innovation ability and sustainable development ability. The Petro China’s research and development spending is 39,470 million (including the exploration expenses), which is much higher than other enterprises, thus it strengthens the sustainable development ability through increasing reserves.

### 2.3.3. The Effect of Introducing EVA

Based on the data, we can make some conclusions about introducing the EVA to evaluate the senior management and company’s value.

1) Improve the availability factor of fund. In order to achieve the maximum of EVA, the company must pursuit the higher asset turnover and rate of income on investment. And it also can improve profitability to make up cost of debt and equity cost.

2) Optimize the financial structure. The EVA index and the cost of capital have a negative correlation. The cost of capital is playing an important role in the financial structure, thus the company will give priority to retained earnings. Based on the control of the financial risk, the company can properly use leverage to keep a competitive cost of capital.

3) Encourage the senior management to make the increments by company value come true. By introducing the EVA to assess a company, it can deal with the agency relationship between the owners and managements, and make their aims to converge.

4) Strive to do excellent business bigger and optimize the allocation of resources. The more the net operating profit after tax is, the more the EVA is, when other conditions keep inalterability. By the guide of EVA, the enterprise will peel off none business assets, clean up the inefficient assets and integrate the main business assets to optimize the allocation of resources.

## 3. Conclusion

Compared with the performance evaluation system of the foreign country, the performance evaluation index of EVA which is implemented by the SASAC still has a large gap. Because overall the EVA’s calculation is loose. There are two evidences to reflect. Firstly, the current research and development spending all as an adjusted project, is added to the net operating profit after tax; secondly, the capital cost is 5.5%, it is obviously low. Nonetheless, the EVA is introduced to assess the operation of central enterprises, which play a role in the promotion of supervising the performance appraisal. By introducing the EVA to the performance evaluation, we can understand the operation of central enterprises from more dimensions, and it also can provide a new perspective to interpret the company’s values.

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