

# Discussion on EVA Performance Evaluation Standard of Central Enterprise Based on WACC Valuation

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**Abstract:** Weighted average cost of capital (WACC) is a method of calculating a company's cost of capital by weighting the weight of each type of capital to the total source of capital. Economic Value Added (EVA) is the net operating profit after tax of an enterprise minus the opportunity cost of all invested capital including equity and debt. Given the "one-size-fits-all effect" of WACC in the evaluation of central enterprises' performance, this paper uses PetroChina as an example to verify whether there is an "inflated" or "overestimated" EVA in the evaluation of central enterprises' performance through the valuation of WACC. The results show that the relatively small WACC in EVA performance evaluation directly leads to the EVA overstatement of PetroChina. National industries are classified according to the competitiveness of industries in terms of economic value added creation and contribution. Replacing the current EVA evaluation criteria with EVA rate evaluation criteria or Delta EVA evaluation criteria is a more practical idea to solve the problem of "overstated" or "overestimated" national EVA.

## 1 Introduction

Ohlson J. A. Earnings [1] found that the four revisions of EVA mark a change in the thinking of the State-owned Assets Supervision and Administration Commission (SASAC) on the business performance assessment of principals of central enterprises. That is to say, it is from the initial EVA performance appraisal oriented at setting budget target value, to the EVA performance appraisal oriented at overall budget management. Finally, it turns to the state-owned capital quality, efficiency, and scientific development-oriented EVA performance appraisal central enterprises.

Modigliani [2] found that the weighted average of "all-in-the-world effects" refers to the "three non-considerations" that apply to the current assessment system. Under this concept, WACC machinery is unified as the average cost of capital for different Chinese central enterprises in EVA performance evaluation. In addition, there are three grades: basic cost of capital (5.5%), reduced cost of capital (4.1%) and increased cost of capital (6.0%). The empirical analysis by Yangyang [3] shows that among the thirteen industries in China, the cost of equity capital was 9.61% over the ten-year period, which is an issue worth exploring. The base capital cost ratio (5.5%) is 9.61%, a decrease of 4.11 percentage points; (a) is the floating capital cost of 3.61 percentage points at 6.0%; an average decrease of 4.41%. The above three are underestimated on average by [2.61%, 8.13%], while the average underestimation is 5.37%. If these three ratios are compared with WACC, which takes into account creditors' equity, the average ratio of these three ratios in the performance assessment of central enterprises

will be significantly lower. This not only biases the usefulness of the EVA assessment system but also deviates from its substance.

Based on the above analysis, and on the premise of sorting out the mechanism and difficulties of EVA performance assessment for the heads of central enterprises, this paper empirically proves whether EVA is "inflated" or "overestimated" through the estimation of WACC, combined with the basic data of PetroChina. Finally, the basic ideas and methods to solve EVA "inflated" or "overestimated" are proposed.

## 2 Eva Performance Appraisal Mechanism for Principals of Central Enterprises

### 2.1 Basic Method of EVA Calculation

According to the EVA assessment rules attached to the Interim Measures for The Assessment of Business Performance of The Heads of Central Enterprises, EVA is the balance of the after-tax net operating profit of central enterprises minus the cost of capital. Net operating profit after tax refers to the net profit in the income statement adjusted for taxable income and tax and expenses, and the cost of capital is equal to the adjusted capital and the average cost of the capital product. Adjusted average equity capital can be further combined with average total debt and average minus interest-free and average current liabilities and construction works [4]. That is:

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