

Economic Value Added for Performance Evaluation: a Financial Engineering

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Abstract

This article utilizes Financial Engineering method to build the performance evaluation system centering on the value creation ability of commercial banks. It makes the evaluating indicators dimensionless with the extreme value processing method to obtain comprehensive score and sequence of the performance for the sample commercial banks, and finally the conclusion is made that it is important and practical to replace traditional indicators with EVA indicator in the performance evaluation of commercial banks.

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Keywords: Value Creation; Economic Value Added(EVA); Financial Engineering

1. Introduction

1.1. Purposing and meaning of the research

The so-called value creation is the opportunity cost of the capital gains for shareholders created by enterprises that are greater than its capital cost. Here the value creation mainly refers to the Economic Value Added (EVA). In banking industry, the performance evaluation method using value creation as the core index has generally been

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accepted by banks in many western countries, but it is only at the early testing stage in China. In our country, only few banks, for instance, China Construction Bank (CBC), Industrial and Commercial Bank of China (ICBC), Shenzhen Development Bank (SDB), and China Merchants Bank (CMB), have just begun to explore the use of the EVA index. Therefore, learning from experiences of the western banking industry, introducing the new performance evaluation method using value creation as the core index and connecting the EVA with traditional financial evaluation index to establish a new performance evaluation method for commercial banks, it is an important practical significance for raising business performance and enhancing competitiveness of China's commercial banks.

1.2. Research and review on EVA

(1) International research on EVA

Putting forward by Stern Stewart^[1], EVA is established on the basis of enterprise value evaluation theory researched by Franco Modigliani^[2], Merton H. Miler^[3] and William F. Sharpe^[4], EVA index was rapidly promoted when it was put forward in USA, and was introduced for performance evaluation in many enterprises such as COCA-COLA, SIEMENS and so on. The introduction of EVA has further promoted with the development of the financial engineering management concept, and has been gradually and widely recognized as the core of the financial engineering management strategy.

Through the comparison of a group of companies using EVA to evaluate the companies performance with another group of companies to evaluate their performance based on the traditional accounting, James S Wallace (1997) found that the former managers' behavior followed by the incentive, which preferred the behaviors for maximizing the shareholders' wealth by processing assets, reducing investment, assigning excess funds to investors, fully using assets, etc.^[5]. John O'Hanlon, Ken Peasnell (1998) pointed out that EVA index has more superior ability to explain stock price changes than the traditional index^[6]. E McIntyre (1999) analyzed to know that different accounting methods have different results to EVA, and pointed out that we should use comprehensive evaluation index to make up for EVA inherent defects in the performance evaluation^[7]. Johann de Villiers (1997) analyzed the influence degree of the inflation to EVA calculation results and their improving methods, and made adjustments to EVA index^[8]. In addition, to form a management cycle, William P Rogerson (1997) and Al Ehrbar (1998) discussed the issues on how to use EVA index into specific application of enterprise performance management, and how to establish a perfect system for value management, which includes strategic planning, capital spending decisions, performance management and evaluation, compensation plan and some else^{[9][10]}. Mark Hodak discussed how to reasonably divide the centre of EVA, and what kind of EVA central division is feasible, that is, the ultimate reasonable EVA centre will be a separate individual offering their own profits and losses, and then they established the frame model for judging partition way of EVA^[11].

(2) Current research of EVA in China

The theory research of EVA in China started late, and its practice application is on the primary stage. In the terms of the banking industry, the situation is even more so.

In 1993, the article of *Additional economic value rules* introduced the basic concept and principle of EVA. After that, many experts and scholars have given concerns on this theory.

Gao Li, Fan Weidong (2003) comprehensively analyzed the whole value creation ability of the banking industry at that time with EVA return index. Yan Yun, Huang Yiping, Xu Jin (2004) pointed out how Chinese banking creates value according to EVA calculation formula through examples. Zhai Ying (2006) contrasted the Chinese traditional commercial banks performance evaluation method with EVA method from the two aspects of theory and empirical research. Considering empirical analysis with EVA method, Gao Lifeng, Zhu Honggui (2008) put forward the specific suggestions to improve the ability of the value creation of the urban commercial Banks. Lin Panyin, Zheng Ming (2010) examined the relationship between value creation and EVA. Jiang Rongxuan (2010) evaluated finance of CMB with EVA, and pointed out that the EVA can more accurately reflect the performance of the bank than traditional accounting index.

Although the Chinese and foreign experts and scholars have researched the financial engineering application of EVA in performance evaluation of bank, there are still many controversies, for example, how to identify the weight of EVA indexes in comprehensive performance evaluation. Therefore, the financial engineering application and empirical problems of EVA remains are needed to be further discussed and studied.

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