Economic Value Added (EVA™): A Thematic-Bibliography

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Abstract

Purpose - This paper provides a thematic-bibliography of a selection of published journal articles that pertain to the EVA™ model.

Design/methodology/approach – Searches were conducted on the EBSCO Host, ProQuest, and Googel Scholar databases to identify papers that had examined or otherwise incorporated the model in the research. This thematic-bibliography is divided into four categories regarding the literature on EVA™ - the first relates to the theory and development of the model the second where comparisons were made of the model against other models, and the next two relate to the use and application of the EVA™ model - as a tool for internal evaluation of projects and then as a tool for the measurement of wealth creation in terms of the share market value.

Implications – This analysis provides insights into the delineation between the uses and applications that have arisen in the literature and in that respect provides support for future research into the EVA™ model.

Keywords: Economic value added, EVA™, thematic-bibliography.

JEL Classifications: M41; G10
PsycINFO Classifications: 3600
FoR Code: 1501
Introduction

The Economic Value Added (EVA™) model can be traced back to the seminal work of Stewart (1991). Since its inception it has become an alternative approach for companies as a measure of financial performance both at corporate level and at a sub level when evaluating project or divisional performance (Uyemura, Kantor & Pettit, 1996). The EVA model has been held to provide a information that can be considered as incremental to the traditional Earnings Per Share (EPS) ratio and can arguably provide greater assistance in forecasting future earnings (Movassagh, Seyyedi & Tahmasebi, 2011). The EVA model has been subjected to empirical testing since its inception with some papers attempting to clarify variables inherent in the formula. A simple and somewhat easy to follow approach is presented in Figure 1 below.

Figure 1.
Economic Value Added Formula

\[
\text{EVA} = ( \text{Return on Capital} - \text{Cost of Capital} ) \times \text{Capital} \\
= ( \text{Capital} \times \text{Return on Capital} - \text{Capital} \times \text{Cost of Capital} ) \\
= ( \text{NOPAT} - (\text{Capital} \times \text{Cost of Capital}) \\
= \text{NOPAT} - \text{Capital Charge}
\]

Source: adapted from Uyemura, Kantor & Pettit (1996).

In an effort to address the need to calculate the EVA for small business Rotocki and Needy (2005) formulated an approach that was more applicable to the circumstances of a small business. The approach is presented in Figure 2 below. To distinguish between the traditional EVA model and this new variation to the model they used lower case italicised letters which in their own words were to emphasise "... objective of this system ...". Unfortunately, there is little evidence in the literature of this model being used to empirically test its application or robustness.

Figure 2.
Economic Value Added Formula for Small Business

Source: adapted from Roztocki & Needy (1999).
Since the EVA model has two possible uses, one at the corporate level and the other at the level of individual projects, the published research is rather diverse in nature and esoteric in addressing the use of the model. This paper is aimed at providing a review of those areas of the research that highlight the diverse nature of the industries and uses for which the model has been applied and accordingly this is intended to underpin future research.

Method

In keeping with the method as espoused by Perrin and Laing (2012) the thematic-bibliography involved a literature search of the databases ProQuest, EBSCOHost, and Google Scholar. The analysis is restricted to published journal articles because they have been subjected to a review process. This thematic-bibliography follows the approach established by Perrin and Laing (2012) and exemplified by Volkov (2012) – the literature is classified according to the characteristics identified in each of the journal. For the purpose of this paper, the literature was divided into four categories the first relates to the theory and development of the model the second where comparisons were made of the model against other models, and the next two relate to the use and application of the EVA™ model - as a tool for internal evaluation of projects and then as a tool for the measurement of wealth creation in terms of the share market value of organisations. Within each category the papers are presented in date order. A summary of these categories is provided in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Topic</th>
<th>Number of journal articles</th>
<th>Total number of citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA Theory and Model Development</td>
<td>21</td>
<td>478</td>
</tr>
<tr>
<td>EVA Comparisons with other Models</td>
<td>3</td>
<td>40</td>
</tr>
<tr>
<td>EVA as a tool for measuring Internal Investment Projects</td>
<td>6</td>
<td>40</td>
</tr>
<tr>
<td>EVA as a tool for measuring Organisational Wealth</td>
<td>19</td>
<td>360</td>
</tr>
</tbody>
</table>

This paper in keeping with the thematic-bibliography method does not provide annotated abstracts instead it provides details of the contribution of the papers, the number of citations, and any changes emanating from the papers in terms of the formula or variables in the model. The citations were current as at the 15th May 2013.

EVA Theory and Model Development:


Contribution - provides an overview of the literature up to 2008 addressing aspects of the EVA model and application to research.

Citations – 36.


Contribution – reviews the issues relating to value relevance of EVA, residual income (RI), earnings and operating cash flows.

Citations – 8.
**Contribution** – introduces new variations to the model – the version are nominal EVAnom and inflation adjusted EVAreal.  
**Citations** – .

**Contribution** – presents a new model Systemic Value Added (SVA) derived from net final values (NFV) and EVA.  
**Citations** – 16.

**Contribution** – contrasted EVA against MAV and earnings per share (EPS, dividends per share (DPS) return on assets (ROA and return on equity (ROE) .  
**Citations** – 47.

**Contribution** – examined the performance of companies that had employed EVA.  
**Citations** – 49.

**Contribution** – examines the implementation issues of EVA for a company and how it has been developed to measure customer value and profitability.  
**Citations** – 2.

**Contribution** – addresses the theoretical and empirical issues of estimating a company’s weighted average cost of capital (WACC).  
**Citations** – .

**Contribution** – examined the leverage effect of fixed costs to determine impact on EVA and MVA .  
**Citations** – 9.

**Contribution** – examined the theoretical aspect of EVA in semistrong form efficient market senario.  
**Citations** – 10.

**Contribution** - provides an investigation of the financial performance outcomes of EVA.  
**Citations** – 7.
**Contribution** – integrated EVA, DCF and MM to derive a new model referred to as financial and economic value added (FEVA).
**Citations** – 28.

**Contribution** – raises concerns over theoretical basis of the EVA model – citing the reduced relevance of accounting information.
**Citations** – 7.

**Contribution** – provides a response to Paula on the relevance of accounting information.
**Citations** – 17.

**Contribution** – provides a review of the books on EVA and the implementation process espoused by the authors.
**Citations** – 3.

**Contribution** – traduces a new variable into the EVA model – the concept of productivity.
**Citations** – 54.

**Contribution** – identifies the relationship of free cash flow to EVA concepts as well as DCF.
**Citations** – 79.

**Contribution** – provides an overview of the literature and comments on changes suggested by Zafiris and Bayldon (1999).
**Citations** – 2.

**Contribution** – presents insights into the use of EVA for strategic decisions with some suggested modifications to the model formulation.
**Citations** – 1.

**Contribution** - provides an overview of the literature up to 2008 addressing aspects of the EVA model and application to research.

**Citations** – 57.


**Contribution** - provides an overview of the literature up to 2008 addressing aspects of the EVA model and application to research.

**Citations** – 53.

**EVA comparisons with other Models:**


**Contribution** – uses EVA combined with data envelopment analysis (DEA) to evaluate bank efficiency.

**Citations** – 0.


**Contribution** – examines the correlation between corporate social responsibility (CSR) and EVA as well as market added value (MVA).

**Citations** – 37.


**Contribution** – presents a method for using EVA in terms of – EVA in monetary terms, EVA in real terms and cash flow return on investment as compared to traditional NPV evaluations.

**Citations** – 3.

**EVA as a tool for measuring Internal Investment Projects:**


**Contribution** - provides an overview of the literature up to 2008 addressing aspects of the EVA model and application to research.

**Citations** – 16.


**Contribution** – uses EVA to evaluate maximization of incremental income above capital costs includes ROI and ROA comparisons.

**Citations** – 5.

**Contribution** – uses EVA to evaluate capital budgeting and develops a new variation Academic Value Added Ratio (AVAR).

**Citations** – 0.


**Contribution** – uses EVA as a means to establish two portfolios with statistically different cumulative returns.

**Citations** – 19.


**Contribution** – examined the use of EVA and embedded value (EV) for strategic management planning and control.

**Citations** – 17.


**Contribution** – provides an overview of the literature up to 2008 addressing aspects of the EVA model and application to research.

**Citations** – .

EVA as a tool for measuring Organisational Wealth:


**Contribution** – provides empirical evidence on the relative and incremental information content of EVA but with mixed results.

**Citations** – 1.


**Contribution** – content test reveal that NOAPT and OCF outperform EVA in explaining the market value of Indian companies. Incremental information test shows that EVA makes a marginal contribution. results do not support the hypothesis that EVA is superior to traditional accounting-based measures in association with market value of the firm

**Citations** – 5.

**Contribution** – the research examined firms’ market values after adding Internet channels. The results showed that the magnitudes of the CAARs were uniformly positive and significant in [-10,+10] windows; the relationship between EVA before/after introducing Internet channels and abnormal returns were positive.

**Citations** – 1.


**Contribution** - A survey of the literature lead to the conclusion that the empirical evidence in support of the claims in favour of EVA® was not compelling, the epistemology and methodology of EVA® were examined, and were found to be deficient. There is insufficient supportive evidence to validate the claims of EVA®.

**Citations** – 9.


**Contribution** - studies conducted in the developed countries have largely been found to be supporting EVA though there are certain studies in these countries too that consider conventional measures as better tools of corporate performance reporting. However, in developing economies less numbers of studies are available supporting the empirical validity of the concept.

**Citations** – 3.


**Contribution** - found a marked disparity between EVA(TM) estimates of Present Value and actual market value for the US technology sector.

**Citations** – 5.


**Contribution** – results from the sample firms were inconsistent when applying traditional accounting measures (i.e. IT investment was not correlated with increases in ROI and ROA but was correlated with ROE and ROS). However, a significant relationship exists between IT investment and EVA®, indicating increased IT investment was associated with increased wealth creation.

**Citations** – 9.


**Contribution** – Examined stock market returns with EPS and EVA® found combination of EVA® with EPS increases significantly the explanatory power in explaining stock market returns.

**Citations** – 4.

**Contribution** - results of the thirty portfolios created following the Fama and French portfolio formation methodology show that the highest EVAM ratio (EVAM10) performed the best.

**Citations** – 22.


**Contribution** - results showed that residual income based on EVA@ was no better than that based on current GAAP in its capacity to explain variations in a firm's market value and that intellectual capital did provide incremental information for the evaluation of stocks.

**Citations** – 16.


**Contribution** – applies panel data regression to examine EVA as a measure of variation in stock returns.

**Citations** – 35.


**Contribution** – raised issues with the variables used in the EVA model – specifically with the calculation of the cost of capital.

**Citations** – 27.


**Contribution** – used event study method to investigate the performance of firms that had adopted EVA – found a higher average profitability.

**Citations** – 38.


**Contribution** – examined the use of EVA as a benchmarking tool for the performance of state owned enterprises.

**Citations** – 16.


**Contribution** – used pooled time series, cross sectional data to evaluate EVA against traditional accounting based measures.

**Citations** – 52.

**Contribution** – used EVA to examine performance of the US economy.

**Citations** – 2.


**Contribution** – re-examined the use of EVA to select investments – in the food companies.

**Citations** – 29.


**Contribution** – re-examined the link between EVA and firm performance compared to accounting measures.

**Citations** – 39.


**Contribution** – examined performance of food companies stock market values compared EVA to ROA ROE and CAPM.

**Citations** – 47.

**Summary**

The Economic Value Added (EVA) model has been held as the new metric for executives to evaluate, remunerate and communicate corporate performance and for investment managers to supervise portfolio performance. Research of Stern Stewart & Co. initially claimed EVA’s usefulness as being due to a superior association with stock prices. However, numerous studies have reported finding evidence that would seem to refute these claims. While few recent studies supported the notion that EVA ultimately provides superiority over earnings, changes in market recognition without analogous changes in financial reporting is a matter that requires further attention. In regards to the use of the model for internal evaluation of investment projects there is little research in the literature and the claim that it is superior to traditional methods such as NPV and IRR is an area that requires further examination. Future research may yield greater insights into this aspect of the model. Whilst there may be inconsistencies in the findings the work on developing and refining the model does show some promise with future research required to test these new variations to determine the robustness of the variables being used. The categories selected for use in this paper are designed for the purpose of a general overview of the literature and to that extent are consistent with the thematic-bibliography method.
This thematic-bibliography has highlighted the extent to which EVA has been subjected to scrutiny in regards to its application against corporate performance. The impact of EVA on the assessment of corporate performance is still not clear from the literature and the application to individual projects is something which because of its very nature is difficult to ascertain. Internal project evaluations are subject to greater secrecy due to their potential to undermine corporate privacy in the face of highly competitive business environment. This paper provides a general introduction to the literature on EVA and accordingly does not claim to be an absolute coverage of the literature.

Reference List


Economic Value Added (EVA) is a performance measure that is being used by an increasing number of companies, but academic research on EVA is limited. In addition, all prior empirical academic studies on EVA have used the firm as the unit of analysis. In this study, we examine the effect of EVA on the performance of individual managers. In corporate finance, as part of fundamental analysis, economic value added is an estimate of a firm's economic profit, or the value created in excess of the required return of the company's shareholders. EVA is the net profit less the capital charge ($) for raising the firm's capital. The idea is that value is created when the return on the firm's economic capital employed exceeds the cost of that capital. This amount can be determined by making adjustments to GAAP accounting. There are potentially Economic value added (EVA) is a concept used in value-based management to compare the economic profit and cost of capital provided by investors. Economic value added (EVA) [1] is a concept used in corporate finance to designate an excess or lack in value created over the cost of invested capital. In other words, it is the difference between net operating profit after taxes (NOPAT) and cost of invested or operating capital. The positive value of this performance indicator means that a company managed to cover the cost of capital and create additional value. Conversely, negative economic value added indicates that the value of invested capital is being destroyed. Formula. The basic formula to calculate economic value added is as follows: Economic value added (EVA) is a measure of surplus value created on a given investment. When a person is investing his funds, he does this only because he expects to earn a profit from the investment. Let us say, gold seems to be a good instrument to invest with a high-profit margin. If we just see the profit, then the profit on selling gold was $1200 – $1000, i.e., $200. But the actual creation of wealth is only $175 on account of expenses incurred. This is a very crude example of Economic Value Added (EVA). In this article, we discuss Economic Value added in detail.