



The Engineering Economist >

A Journal Devoted to the Problems of Capital Investment

Volume 46, 2001 - [Issue 1](#)

4,144 58

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# FREE CASH FLOW (FCF), ECONOMIC VALUE ADDED (EVA<sup>TM</sup>), AND NET PRESENT VALUE (NPV):. A RECONCILIATION OF VARIATIONS OF DISCOUNTED-CASH-FLOW (DCF) VALUATION

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Pages 33-52 | Published online: 30 May 2007

Cite this article

<https://doi.org/10.1080/00137910108967561>

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## ABSTRACT

The paper assists the user of DCF methods by clearly setting forth the relationship of free-cash-flow (FCF) and economic value added (EVA<sup>TM</sup>) concepts to each other and to the more traditional applications of DCF thinking. We follow others in demonstrating the equivalence between EVA and NPV, but our approach is more general in that it links the problems of security valuation, enterprise valuation, and investment project selection. Additionally, our approach relates more directly to use of standard financial accounting information. Beginning with cash budget identity, we show that the discounting of appropriately defined cash flows under the free-cash-flow valuation approach (FCF) is mathematically equivalent to the discounting of appropriately defined economic profits

under the EVA™ approach. The concept of net operating profit after-tax (NOPAT), found by adding after-tax interest payments to net profit after taxes, is central to both approaches, but there the computational similarities end. The FCF approach focuses on the periodic total cash flows obtained by deducting total net investment and adding net debt issuance to net operating cash flow, whereas the EVA™ approach requires defining the periodic total investment in the firm. In a project valuation context, both FCF and EVA™ are conceptually equivalent to NPV. Each approach necessitates a myriad of adjustments to the accounting information available for most corporations.

Related Research Data

ON THE EQUIVALENCE OF NET PRESENT VALUE AND MARKET VALUE ADDED AS MEASURES OF A PROJECT'S ECONOMIC WORTH

Source: The Engineering Economist

The Search for the Best Financial Performance Measure

Source: Financial Analysts Journal

Discounted Cash Flow in Historical Perspective

Source: Journal of Accounting Research

USING EARNINGS AND FREE CASH FLOW TO EVALUATE CORPORATE PERFORMANCE

Source: Journal of Applied Corporate Finance

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Source: Journal of Political Economy

Does EVA® beat earnings? Evidence on associations with stock returns and firm values

Source: Journal of Accounting and Economics

EVA™: FAST AND FANTASY

Source: Journal of Applied Corporate Finance

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