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

RONALD E. SHRIEVES & JOHN M. WACHOWICZ JR.

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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™) 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.