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Finance methodology of Free Cash Flow

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ABSTRACT

Free Cash Flow (FCF) was adopted in the late 1980s as a financial tool to evaluate the firm and its individual projects. We question the procedure of calculating the FCF where a significant portion of Current Liabilities is offset against Current Assets, thereby creating the hybrid asset Net Working Capital (NWC). Borrowed from accounting methodology, that procedure distorts the FCF size, composition, volatility, and estimated value. Our empirical analysis shows that the nature and extent of those distortions can misinform the firm's stockholders, lenders and borrowers, and investors at large. We propose a revised FCF that would avoid those distortions.

1. Introduction

The finance-based statement of Free Cash Flow (FCF) provides a basic tool for the valuation of a firm. Projection of past periodic net cash flows to or from claimants provides corporate managers and investors-

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at-large with useful data for estimating the value of the firm and its individual investment projects. Based on traditional financial statements and consistent with standard financial-economic methodology, the FCF should report the periodic cash flow components generated by the firm's operations.

The *positive* FCF developed in this paper measures the net periodic flow. This measure differs from Jensen's (1986) *normative* FCF, which seeks the firm's valuation-based *optimal* distribution to claim holders. It also differs from the flow measured by the accounting-based Statement of Cash Flow (SCF) (FASB 95, 1987), which is designed to measure the firm's liquidity, solvency, and financial flexibility and has only indirect implications for investment and valuation (Bradbury, 2011; Kieso et al., 2010).

Note that the apparent influence of the SCF on the FCF could originate from the focus of the former on the firm's Operating activities, which include unpaid or partially paid transactions (accrual accounts) classified as Accounts Receivable (AR) and Accounts (or Notes) Payable (AP). By focusing in addition on the periodic change in the amount of cash held by the firm, the accounting-based offset AR–AP implicitly ignores the unique and permanent economic roles played by short-term AR vs. AP both individually and as part of the overall sets of Current Assets (CA) vs. Current Liabilities (CL). In this respect, the SCF approach should differ from the FCF valuation-based approach since the latter ought to focus on the flow of financial claims facing the firm's Operations and Investment activities (see Kieso et al. (2010)).

Despite conceptual differences, corporate finance textbooks often follow the SCF procedure by which the flow of CL, or a significant portion thereof, is offset against the flow of CA to define the differential flow of Net Working Capital (NWC). This procedure denies a reality in which short-term debt is the main source of funding for most firms.

Direct consequences of the common FCF offset include distortions of the firm's size, debt and asset compositions, financial leverage, and risk profile. Indirect consequences include wider opportunities to manipulate the firm's FCF and estimated market value. The empirical analysis shows that the offset makes the FCF systematically larger and more stable. An average sample of 1220 U.S. public corporations studied over 22 years (1988–2009) reveals that the offset overstates the FCF mean by 33.7% and median by 128.2%. This result is due to the typically large share of CL that represents on average 19.8% of firms' size with a median of 24%.

U.S. firms are currently free to publish an unofficial FCF report subject to constraints of Regulation G (2002). Since this study does not rely on data of those reports but on official, accounting based, filings of Income Statement, Balance Sheet, and SCF, the analysis is limited to identifying *opportunities* for manipulating a FCF through the use of an offset. Concern over such behavior is supported by evidence from financial statements in general and recent cash flow statements in particular.[1] The fact that investors often misinterpret accounting numbers that rely on managerial discretion is also well established (e.g., Chen, Liu, & Chen, 2014; Dechow & Ge, 2006; Dechow, Kothari, & Watts, 1998).

Adhikari and Duru (2006) study the role of *voluntary* FCF statements designed by filing firms during 1994–2004 (and subject to Regulation G during 2002–2004), to be published side-by-side with mandatory GAAP-based financial statements. Firms that engaged in FCF disclosure are found to pay higher dividends, but are more leveraged and less profitable, and have a lower credit rating than matched non-disclosing firms. The same pattern is observed in the behavior of individual firms over time: years of FCF disclosure are associated with higher dividends, higher leverage, and lower profitability. In other words, poorly performing firms have both the incentive and confidence to design and publish their own FCF reports side-by-side with their official financial reports, thereby mitigating the undesirable impact of the latter (see Adhikari and Duru (2006)).

Siegel (2006) questions the reliability of cash flows reported in the SCF compared to earnings presented in the more traditional Income Statement. He argues that, despite early expectations, constraints set by GAAP do not prevent firms from manipulating their cash flow. Of the various examples analyzed by Siegel (2006), the most basic one concerns the overstatement of *operating* cash flow. This objective could be accomplished, at least temporarily, by slowing down the rate of payment to vendors (which is in itself a sign of weakness) to increase Accounts Payable. A shrinking *difference* between the flows of Accounts Receivable and Accounts Payable ($\Delta AR - \Delta AP$) is translated to an increasing cash flow from Operations. A more subtle variation of

[1] See Hackel and Livnat (1992).

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