An Investment Banking View of Enterprise Value

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SHOULD CASH BE DEDUCTED WHEN CALCULATING ENTERPRISE VALUE?

The valuation community currently uses two different approaches to calculate Enterprise Value (EV) as the numerator for multiples in the guideline company and acquisition methods. EV is sometimes defined as debt plus equity and sometimes as debt plus equity *minus cash.* We believe that in calculating EV, cash should be deducted. The valuation literature reflects this disorder: some writers exclude cash from the definition,[1] while others (including the author) state that cash should be deducted.[2] Pratt writes that both are acceptable approaches.[3] We set out to see what investment bankers actually do in practice. We then set forth our reasoning as to why the valuation profession should adopt what is the overwhelming investment banking practice: to deduct cash when calculating EV. We also discuss other factors to be considered in the determination of EV.

To determine how investment bankers and others rendering fairness opinions defined EV and, particularly, how they treated cash, we reviewed the published descriptions of fairness opinion methodologies used in cash acquisitions of U.S. companies. Under S.E.C Rule 13e-3, summaries of fairness opinion analyses must be included in the proxy statements or tender offer documents sent to shareholders. We examined documents filed with the S.E.C. for 315 acquisitions that contained 351 fairness opinions.[4]

We reviewed the 351 opinions to identify those which contained investment bankers' definitions of EV. Of the 351 opinions, 282 used multiples of revenues, EBITDA and/or EBIT with EV (by any name) in the numerator.[5] Of these 282 opinions, 210 described how EV was defined while 72 did not. Only one definition (not by an investment banker) did not deduct cash, one definition deducted only "excess cash,"[6] and a total of 208 (99 percent) of the definitions deducted all cash on the balance sheet.[7] The definitions called for the deduction of cash from the sum of debt and equity regardless of whether cash exceeded the amount of debt.

Our review shows clearly that the practice of investment bankers is to deduct cash and cash equivalents when calculating multiples.

WHY CASH SHOULD BE DEDUCTED

The investment banking practice of using net debt (interest-bearing debt minus cash) rather than gross interest-bearing debt reflects economic reality. The appropriateness of deducting cash in an EV calculation can be demonstrated by looking at the impact on EV of both a material debt repayment and a material debt issuance.

Consider a company with an equity market value of $200 million, debt of $200 million, and cash of $100 million. Its EV net of cash would be $300 million, but its EV would be $400 million if cash were not deducted. If we assume that the company were to use half its cash to repay debt, both debt and cash would be reduced by $50 million and, when cash is deducted from debt, its EV would still be $300 million. However, if cash were not deducted, EV would be reduced from $400 million to $350 million.

Alternatively, if the company were to borrow an additional $100 million, it would then have an incremental $100 million in debt and an incremental $100 million in cash, so that its EV would still be $300 million if cash were deducted; however, EV would increase from $400 million to $500 million if cash were not deducted.

When cash is deducted, the company's EV stays at $300 million in both the repurchase case and the debt issuance case. If the definition of EV were to provide that cash should not be deducted, the company's calculated EV would fall from $400 million to $350 million when it repays debt and would rise to $500 million after a debt financing. Such disparities in the EV value of a company whose net debt is unchanged throws into question any calculation of multiples based on EV. If a company's calculated EV were to change materially as a result of a debt retirement or of a financing, its EBITDA multiple would be materially affected even though the economics of the company would remain substantially unchanged.

A company's value is not reduced by retiring debt nor is its value increased by borrowing. Since cash is, in effect, negative debt, the logical and accurate method is to deduct cash in the computation of EV. Valuators who calculate multiples for guideline companies and acquisitions with EV unadjusted for

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expert TIP

When calculating enterprise value, cash should be deducted from the sum of interest-bearing debt and equity.

cash end up making invalid comparisons that lead to questionable valuations.

OTHER FACTORS TO CONSIDER IN CALCULATING ENTERPRISE VALUE

Our review of the data shows that investment bankers sometimes include additional data when calculating EV. The inclusion of minority interests and preferred stock is customary when these items are on the balance sheet. Marketable securities are usually considered to be cash equivalents and are therefore deducted. Depending on facts and circumstances, other items may be considered; e.g., capital leases may be added and non-operating assets and the present value of loss carryforwards may be deducted. We cite several examples of definitions:

> [E]nterprise value … is the market value of common equity plus the book value of debt and minority interest less cash and the value of unconsolidated assets.[8]

> Firm value of a particular company was calculated as market value of that company's common stock based on fully diluted shares using the treasury method … plus the value of that company's indebtedness, minority interest and preferred stock, minus that company's cash and cash equivalents and marketable securities.[9]

> Enterprise value of a particular company was calculated as market value of the company's equity . . . plus the value of the company's indebtedness, capital leases, minority interest and preferred stock minus the company's cash and cash equivalents, and marketable securities.[10]

> [Firm value] … [is] equity value … plus straight debt, minority interest, straight preferred stock and out-of-the-money convertibles, less cash and long term equity investments valued at the current market price where available, and at book value where market price is not available.[11]

> The enterprise value of each company was obtained by adding its short- and long-term debt to the sum of the market value of its common equity, the value of any preferred stock (at liquidation value) and the book value of any minority interest, and subtracting its cash and cash equivalents and the present value of the net operating loss carryforwards, if any.[12]

INVESTMENT BANKERS COMMONLY INCLUDE DEBT AT BOOK VALUE

Based on a separate, ongoing review of more than 100 fairness opinion presentations, investment bankers include debt in EV at book value rather than at market value, which is the academically preferred but impractical approach. Book value is used because the difference between the market value and book value is seldom material and because it is often difficult to obtain prices of illiquid debt securities.

Because zero-coupon debt and any other debt issued at a discount are carried on a company's books at accreted value, market value is usually in line with accreted book value. Since accounting rules require that zero-coupon debt and other debt issued below par be carried at accreted value, the book value for reporting purposes should be reasonably close to market value.

If a company's debt has an average market value of 95 percent or 105 percent of book and debt is 40 percent of EV, the impact on EV is only 2 percent. This is effectively a rounding error when the EV/EBITDA ratio is calculated to two significant figures, so that it is seldom worthwhile to expend the time and effort necessary to mark a company's debt to market.

CONCLUSION: AN INVESTMENT BANKER'S VIEW

1) When calculating EV, cash should be deducted from the sum of interest-bearing debt and equity. The valuation community should adopt this practice for two reasons. First, it is economically realistic. Second, it should do so because having two or more conflicting definitions for the same measure not only casts doubt on the validity and accuracy of valuations based on that measure, but also may contribute to criticisms of valuations in general as untrustworthy.
2) When appropriate, EV should recognize other balance sheet items, such as preferred stock, capitalized leases, and marketable securities.
3) Valuing debt at book value is a pragmatic approach that can be used in most situations. ∞

1 E.g., James R. Hitchner, *Financial Valuation Applications and Models*, 2nd. ed. (Wiley, 2006), p. 241; Philip J. Clements and Philip W. Wisler, *The Standard & Poor's Guide to Fairness Opinions* (McGraw Hill, 2005), p. 40.
2 E.g., Patrick A. Gaughan, *Mergers, Acquisitions, and Corporate Restructuring,* 4th ed. (Wiley, 2007), p.12; Matthews, "Fairness Opinions: Common Errors and Omissions" in *The Handbook of Business Valuation and Intellectual Property Analysis*, Robert F. Reilly and Robert P. Schweihs, eds. (McGraw Hill, 2004), p. 212.
3 Shannon P. Pratt, *Valuing a Business,* 5th ed. (McGraw Hill, 2008), p. 265.
4 This report is part of a larger study in which the 351 fairness opinions in cash acquisitions were reviewed to analyze valuation methodologies used in fairness opinions. That study is still in progress.
5 The numerator was called "enterprise value" in 88% of the disclosures. "Firm value" or "company value" was used in 8%, "aggregate value" in 3%, "market capitalization" (which is also sometimes used as a synonym for "market value of equity") in 1% and "total value of invested capital" once. It has been suggested in the past that "enterprise value" might also mean "market value of equity," but this study shows that investment bankers do not view the phrase to be ambiguous.
6 "Excess cash" was not defined. The same investment banker deducted all cash in 20 other opinions.
7 Most expressly deducted cash, while some used the phrase "net debt," which in industry practice means debt minus cash.
8 California Pizza Kitchen, Inc. Form 14D-9 dated June 8, 2011, p.31; fairness opinion by Moelis & Co.
9 EnergySouth, Inc. proxy statement dated August 20, 2008, p. 22; fairness opinion by JP Morgan.
10 United Retail Group, Inc. Form 14D-9 dated September 25, 2007, pp. 25-26; fairness opinion by Bear Stearns.
11 Anheuser-Busch Companies, Inc. preliminary proxy statement dated August 15, 2008, p. 39; fairness opinion by Citigroup Global Markets.
12 Mediacom Communications Corporation, p. 21; fairness opinion by Barclays Capital.

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