

The Conundrums of Comparable Company Multiples

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Introduction

Notional market valuations and open market transactions sometimes make use of so called ‘comparable company multiples’ and related analysis to assist in establishing the value or price of a particular business. Comparable company multiples generally can be classified either as those that are based on public equity market prices for the securities of a publicly held company (‘public company multiples’), or those that are based on open market transactions (‘transaction multiples’).

While sometimes adopted as a primary valuation methodology, reliance on comparable company multiples can be fraught with difficulties. In addition to the fundamental issue of comparability between any two companies in general, comparable company multiples can be distorted depending on the circumstances in which they are calculated, and the inputs of the calculation. That said, properly applied, comparable company multiples can sometimes provide meaningful insight into the value or price of a particular subject business. In particular, comparable company multiples may be useful as a test of reasonableness against the value conclusions determined pursuant to a cash flow based valuation methodology (such as the discounted cash flow methodology).

This paper begins with a general discussion on some of the problems and practical applications of using comparable company multiples to assist in estimating the notional value or open market price of a particular subject company. It then examines some of the issues involved when calculating the enterprise value figure that is used as the numerator in many comparable company multiples calculations. These issues include the

determination of interest bearing debt and equivalents, the treatment of cash on hand, and the implications of redundant assets. This is followed by a discussion of determining the earnings or cash flow base that is used as the denominator when calculating comparable company multiples. The paper concludes with a brief discussion of the increasing availability of information in the context of comparable company multiples, and the consequences thereof.

General Comments on Comparable Company Multiples

An abundance of literature has been published on the shortcomings of using comparable company multiples to determine the value or price of a particular business. The basic argument is that no two businesses are exactly alike in terms of size, product mix, markets served, and so on, and it usually is not possible to adjust for these things in a meaningful way. There are numerous issues that should be considered when trying to compare public company multiples and/or transaction multiples to a fact-specific situation.

Using public company multiples to estimate the value or price of the shares or net assets of a business (either public or private) ‘en bloc’ can result in misleading conclusions due to such things as:

- fundamental differences in liquidity. Public equity market prices, and resultant public company multiples, typically reflect the prices paid for small lots of freely traded shares, which is substantially different from the market for the shares or net assets of a business as a whole;
- whether publicly traded shares trade at prices that reflect a ‘minority discount’, and if so, the quantum of such a discount. However, this issue may somewhat of a ‘red herring’. For organizations with a large float of actively traded shares that are widely held, it is unlikely that the observed public equity market trading prices incorporate a minority discount. This is because, while no one owner can control or significantly

influence the direction of the company, where a public company's shares are highly liquid, the owner of those shares has the ability to readily divest of his interest if he so chooses. In this sense, control over continued participation in the company offsets the consequences of lack of control over its management. This argument might not hold in circumstances where the shares of a company are not actively traded, or where there is a control block of shares such that one individual or group directly influences the future prospects of the organization. More research in this area is needed; and

- the information base by which buyers and sellers in the public equity markets make investment decisions, as contrasted with the information that normally is available pursuant to a formal valuation or pricing exercise. Public equity market participants have limited access to information regarding the prospects of a particular company given 'insider trading' rules. In particular, there usually is limited information regarding the prospective operating results of the company. However, the available information base normally is much greater pursuant to a notional valuation or open market pricing exercise, and in most cases includes access to management and long term plans and forecasts that help in assessing the long term prospects of a company.

Applying the multiples observed in open market transactions involving companies whose operations are believed to be similar to the business that is the subject of a notional market valuation or open market pricing exercise also presents challenges. In addition to the basic issue of having access to meaningful information in order to compute the transaction multiples, those multiples may be misleading due to things such as:

- issues surrounding the structure of the deal. The forms of payment in many open market transactions include one or more of a share exchange, vendor take-back note bearing a non-commercial rate of interest, earn-out, non-competition payments, lucrative management contracts, or other bases of compensation. It often is difficult to convert the non-cash component of the consideration paid to a cash equivalent;

- the degree to which the price paid reflects a component of synergies or strategic advantage perceived by the purchaser. In most open market transactions involving a corporate acquirer, there is an expectation that some synergies will be realized. However, the synergies component of the overall price paid typically is not readily identifiable; and
- fact-specific issues regarding the transaction itself, including the length of time the target company was exposed for sale in the market place, the negotiating position and negotiating abilities of the purchaser and vendor and their respective intermediaries, and so on. As a practical matter, in the absence of direct involvement in a particular transaction, it is not possible to determine what influence these things had on the price that ultimately was paid.

For the reasons listed above (and others) comparable company multiples are seldom adopted as a primary valuation methodology. In most cases, the preferred valuation methodology is a discounted cash flow (or capitalized cash flow) approach, based on a company's prospective discretionary cash flows. Discretionary cash flows normally are defined as cash flows available to the owner of a business after consideration of capital expenditure requirements, working capital requirements, and income taxes, but before debt servicing costs. Discretionary cash flows take into account all of the variables that influence the value of a particular business.

As a result, multiples can be viewed as 'value derivatives' based on the value conclusions determined pursuant to a discounted cash flow (or other) valuation methodology, compared to an earnings or cash flow base. In some cases, public company multiples and/or transaction multiples can be compared to the multiples imputed pursuant to a discounted cash flow methodology (or other valuation methodology) in order to serve as a meaningful test of the valuation conclusions reached pursuant such a methodology. In this regard:

- public company multiples may provide an indication of the intrinsic value of a subject company, which is consistent with the basis by which fair market value normally is determined. Public company multiples tend to be more meaningful where they are derived from companies with relatively stable operations, and whose shares are highly liquid and widely traded;
- where a private company is of sufficient size and is believed to be an attractive IPO candidate, public company multiples may provide some indication of the value that the owners of that private company could realize if they were to pursue a secondary public offering;
- public company multiples may provide an indication of the value perceived by the public market for a particular industry at a given point in time, or changes to the value perceptions for a given industry over time;
- when conducting a fairness opinion for a given public company, an assessment of comparable public company multiples may assist in establishing whether a particular transaction is ‘fair from a financial point of view’, depending on how that term is defined in the context of the specific valuation mandate;
- transaction multiples may be meaningful when divesting of a business, as they may provide an indication of the price that can be expected from a strategic industry buyer. As a practical matter, comparable transaction multiples normally are considered by both purchasers and vendors when negotiating the purchase and sale of a business in the open market; and
- for notional fair market value determinations that are the subject of litigation, Courts normally like to see that comparable company multiples have been considered in some form when arriving at a value conclusion.

Which Multiple(s) to Use?

Assuming that comparable company multiples are adopted as a test of the value conclusions reached pursuant to a discounted cash flow (or some other cash flow based) valuation methodology, with the appropriate caveats in mind, the issue then becomes which multiple(s) should be used? As a general comment, the comparable company multiples adopted should be those that are reflective of the future cash flow generating ability of the company.

The two basic types of multiples are those that are based on the equity value of a business, and those that are based on its enterprise value (i.e. equity plus debt). Enterprise value multiples tend to be more widely adopted in practice, based on the argument that such multiples are not distorted by the capital structure of a particular business. The most common enterprise value multiples are those that are a function of revenues, EBIT-DA (earnings before interest, taxes, depreciation, and amortization), and EBIT (earnings before interest and taxes).

Enterprise value to revenue multiples are most commonly encountered when analyzing open market transactions because, in many cases, that may be the only financial information made publicly available either by the purchaser or the vendor. However, adopting a revenue multiple as a test of valuation conclusions can be misleading. It requires that gross assumptions be made regarding the comparability of the cost structure between the business on which the multiple is based, and the subject business to which the revenue multiple is being applied. Further, as a practical matter, buyers and sellers of businesses in the open market seldom refer to a multiple of revenues, as it generally is too far removed from the cash flow generating ability of a business. Consequently, revenue multiples normally should be afforded little, if any, weight when valuing a particular subject company.

Enterprise value to EBIT-DA is a popular multiple. However, the amount of emphasis placed on this multiple is unwarranted in many cases. The EBIT-DA multiple ignores the

capital expenditures necessary for a business to continue to operate. This may be a significant shortcoming in the case of a capital-intensive business. Furthermore, EBIT-DA multiples do not take into account the amortization of deferred costs that may reflect a significant component of a business' operations. This may be particularly problematic when comparing EBIT-DA multiples of U.S. companies to test the value conclusions reached for a Canadian company. While accounting regulations in Canada are becoming more harmonized with those of the United States, important differences still remain. Specifically, in Canada, it generally is easier to justify the capitalization of various expenditures (cash outflows), that are subsequently amortized into income. A prime example of this is product development costs, which normally must be expensed pursuant to U.S. accounting regulations. In Canada however, product development costs frequently are capitalized where the specific criteria set out in the Canadian accounting regulations are satisfied. Accordingly, a multiple of EBIT-DA for a Canadian company may reflect neither the initial expenditure on product development, nor the amortization thereof. This could result in misleading conclusions.

EBIT-DA multiples also can become distorted depending on the way in which a company finances and accounts for its fixed assets. Many companies lease a substantial portion of their fixed assets rather than buying them outright. Where the leases are accounted for as capital leases, the substance of the transaction mirrors an outright purchase. However, many companies are able to arrange their leases in such a way as to allow them to treat the lease as an operating lease for both income tax and accounting purposes. This may result in the company reporting substantially different figures for EBIT-DA than it otherwise would, although after-tax discretionary cash flow may be substantially similar (apart from some impact on income taxes). Therefore, multiples of EBIT-DA can be distorted based on the structure of fixed asset leasing transactions.

Multiples of EBIT may compensate somewhat for capital expenditure requirements and deferred cost amortization. However, it does so based on historical costs, which may not be reflective of the prospective cash flow generating ability of a business. In light of this, it may be preferable to define the earnings base as 'EBIT-DA less Capex', which specifically accounts for ongoing capital expenditure requirements. In addition, it may

also be appropriate to deduct expenditures that are capitalized for accounting purposes (such as product development) as well as incremental working capital requirements. Incremental working capital requirements may be particularly relevant in the case of companies experiencing substantial revenue growth that must be supported by increases in accounts receivable, inventories, and so on.

Both the multiple of EBIT-DA and the multiple of EBIT (or EBIT-DA less Capex) are calculated before income taxes. While the most meaningful basis for estimating future cash flows normally is on an after-tax basis, pre-tax cash flows can be adopted so long as there is consistency in the multiples or rates of return that are applied thereto vis-à-vis the inclusion or exclusion of taxation. However, converting from a pre-tax basis to an after-tax basis (and vice-versa) may not be straight forward in circumstances where prospective income tax rates are not expected to remain stable. This is the case in the current environment in Canada, where prospective income tax rate reductions are anticipated, and to some extent, such reductions have been legislated. Accordingly, if some or all of these tax rate reductions are incorporated in the prospective discretionary cash flow projections of a business, converting the implied after-tax multiple to a pre-tax equivalent is problematic.

Whichever multiple is adopted, there often is an issue in determining the ‘correct’ enterprise value of a company, and the ‘correct’ earnings or cash flow base. These issues are discussed in the sections that follow.

Equity multiples normally are based on the market value of the business’ equity to an earnings base (such as pretax or after-tax net income, after interest expense), or some measure of book value.

Equity multiples of income are less popular than enterprise value multiples due to the perception that equity value multiples may be distorted due to differences in a company’s capital structure. However, that should not be a reason for dismissing equity multiples in their entirety.

Equity multiples can provide some insight into the 'hurdle rates' required by corporate acquirers and public equity market participants. In this regard, it normally is appropriate to measure the market value of a company's equity against discretionary cash flow available to shareholders. Consequently, accounting earnings as reported should be adjusted for such things as capital expenditures vs. accounting depreciation, cash income taxes, and so on. In addition, the amount of interest expense deducted should be adjusted, where required, to reflect such things as non-interest-bearing debt.

Equity multiples of a company's net book value often are dismissed as irrelevant based on the notion that book values can be distorted due to accounting rules (e.g. capitalized costs, etc.), and because cash flows typically are more important in determining business value. However, equity value to net tangible assets may provide some meaningful insight. The determination of net tangible assets involves adjusting the net book value of a company as reported in its financial statements to reflect the fair market value of its underlying assets and liabilities. In this context, intangibles that are without substance (such as deferred costs and accounting goodwill) are written off, while tangible assets such as real estate and identifiable intangible assets such as patents are restated to their estimated market values. A multiple of equity value to tangible net assets provides an indication of the amount of 'economic goodwill' that a buyer is paying for. The realization of value from the goodwill of a business generally is riskier than the realization of value from its underlying net operating assets. As a result, this measure may provide a corporate acquirer or valuation analyst with a gauge as to whether the value or price determined pursuant to a discounted cash flow methodology may overstate or understate the economic value of a subject business.

Calculating Enterprise Value

Enterprise value is comprised of the market value of the equity of a business plus the market value of its interest bearing debt (and equivalents) that is outstanding. However, the calculation of enterprise value sometimes is more complex than it may seem. In particular, issues that arise when calculating enterprise value include:

- the definition of interest-bearing debt and equivalents;
- whether cash on hand should be deducted against debt outstanding; and
- the treatment of redundant (or ‘non-operating’) assets.

Interest bearing debt and equivalents

An issue frequently encountered is whether operating lines of credit or other forms of short term interest bearing debt should be included as part of debt when determining enterprise value. In many businesses, operating lines of credit can fluctuate substantially based on things such as seasonality, the timing of accounts receivable collection, or the timing of accounts payable payments. Consider the following trite example. Assume that Opco reported normalized trailing EBIT-DA of \$1 million, and that its shares were recently acquired for a cash price of \$3.5 million. Further assume that the balance sheet of Opco at the transaction date could take on one of two possible scenarios, as shown below. The only difference between the two scenarios is that under Scenario A, Opco has \$1.6 million in accounts receivable, financed by a line of credit of \$1 million, whereas under Scenario B, accounts receivable are \$0.6 million, and no line of credit is outstanding.

**Opco Short Term Debt Example
Alternative Balance Sheets
\$000**

| | Scenario | |
|------------------------------|--------------|--------------|
| | A | B |
| Current assets | | |
| Cash | 0 | 0 |
| Accounts receivable | 1,600 | 600 |
| Inventories | <u>500</u> | <u>500</u> |
| Total current assets | 2,100 | 1,100 |
| Fixed assets (net) | <u>1,400</u> | <u>1,400</u> |
| Total assets | <u>3,500</u> | <u>2,500</u> |
| Current liabilities | | |
| Accounts payable | 1,200 | 1,200 |
| Line of credit | <u>1,000</u> | <u>0</u> |
| Total current liabilities | 2,200 | 1,200 |
| Long term debt | <u>500</u> | <u>500</u> |
| Total liabilities | 2,700 | 1,700 |
| Shareholders equity | <u>800</u> | <u>800</u> |
| Total liabilities and equity | <u>3,500</u> | <u>2,500</u> |

Under Scenario A, Opco's enterprise value normally would be calculated as \$5 million, based on the price paid for its equity of \$3.5 million, plus long term debt of \$0.5 million, plus the line of credit of \$1.0 million. Under Scenario B, Opco's enterprise value would be calculated as \$4.0 million given that no balance is outstanding under Opco's line of credit. Consequently, Opco's multiple of enterprise value to trailing EBIT-DA would be calculated as 5X under Scenario A, but only 4X under Scenario B.

But which (if either) of the two calculations is correct? The answer lies in analyzing the 'net operating working capital' (also termed 'net trade working capital') and debt to total capital of the business.

Net operating working capital is defined as a company's current operating assets (which normally consists of accounts receivables, inventories, and so on), less its current operating liabilities (accounts payable, accruals, and so on). Net operating working capital is distinct from net working capital in that net operating working capital only includes the current operating assets and current operating liabilities of a business, whereas net working capital is the difference between all current assets and all current liabilities. Therefore, net working capital includes those assets and liabilities that are operating in nature, as well as those that reflect the financing of a business (which may be comprised of short term interest bearing debt, non-interest bearing debt equivalents, and some or all of cash on hand). Net operating working capital distinguishes the operating assets of a business from the basis by which those assets are financed. This is the essence of the enterprise value calculation. By definition, enterprise value should incorporate debt where it is used to finance the net assets of a business in lieu of equity.

Returning to the example, under each scenario, Opco's working capital is negative \$100,000. However, under Scenario A, Opco's net operating working capital is \$900,000 (calculated as accounts receivable plus inventories less accounts payable), whereas under Scenario B, its net operating working capital is negative \$100,000. Most businesses require positive net operating working capital to maintain their operations. Therefore, in this case, some amount of financing likely is required to offset the shortfall. Consequently, Opco requires an 'operating cash balance' to offset its net operating working capital deficiency. But the question remains how much operating cash is required. One could argue that only \$100,000 is required, being the amount of the shortfall. However, this may not be adequate if accounts receivable and inventories cannot be converted to cash before the accounts payable are due. To assess the amount of 'normal' net operating working capital, the analyst usually should consider the:

- ‘normal’ ratio of current operating assets to current operating liabilities. This can be done through an analysis of historical balances, comparable companies (where they exist), and industry statistics (where believed to be meaningful); and
- ‘normal’ debt to total capital ratio, in reference the company’s asset base, earnings stability, and meaningful comparables where they exist. In this case, under Scenario A, the debt to equity ratio would be calculated as 30%, being \$1.5 million in total debt (comprised of the line of credit of \$1.0 million and long term debt of \$0.5 million), divided by an enterprise value of \$5 million. However, under Scenario B, the debt to capital ratio falls to 12.5%, being the long term debt of \$0.5 million, divided by the enterprise value of \$4.0 million.

While neither of these indicators will provide a definitive answer, they should assist in making a reasonable judgment as to the ‘normal’ amount of debt, and hence Opco’s appropriate enterprise value, and its multiple of EBIT-DA.

When assessing the reasonableness of the enterprise value conclusion, it often is helpful to prepare a notional balance sheet that segregates operating assets from financing sources. For example, if it were believed that a ‘normal’ line of credit for Opco is \$500,000, its notional balance sheet would look as follows:

**Opco Short Term Debt Example
Adjusted Balance Sheet
\$000**

| | <u>Operating</u> | <u>Financing</u> | <u>Total</u> |
|------------------------------|------------------|------------------|--------------|
| Current assets | | | |
| Cash | 500 | | 500 |
| Accounts receivable | 600 | | 600 |
| Inventories | <u>500</u> | | <u>500</u> |
| Total current assets | 1,600 | 0 | 1,600 |
| Fixed assets (net) | <u>1,400</u> | | <u>1,400</u> |
| Total assets | <u>3,000</u> | <u>0</u> | <u>3,000</u> |
| Current liabilities | | | |
| Accounts payable | 1,200 | | 1,200 |
| Line of credit | <u>0</u> | <u>500</u> | <u>500</u> |
| Total current liabilities | 1,200 | 500 | 1,700 |
| Long term debt | <u>0</u> | <u>500</u> | <u>500</u> |
| Total liabilities | 1,200 | 1,000 | 2,200 |
| Shareholders equity | <u>1,800</u> | <u>-1,000</u> | <u>800</u> |
| Total liabilities and equity | <u>3,000</u> | <u>0</u> | <u>3,000</u> |

In this case, it is assumed that Opco borrows \$500,000 on its line of credit, which is held in the form of operating cash. Therefore, for the purpose of the enterprise value calculation, the line of credit is regarded as a source of financing, whereas the cash on hand is treated as an operating asset. Consequently, in this case, while Opco's net working capital is still negative \$100,000, its net operating working capital is positive \$400,000 (comprised of cash plus accounts receivable, plus inventories, less accounts

payable). This would result in an enterprise value of \$4.5 million, comprised of \$3.5 million in equity, plus a \$0.5 million line of credit, plus \$0.5 million of long term debt. This calculation implies a 'normalized' debt to total capital ratio of approximately 22% for Opco, calculated as total debt of \$1.0 million divided by an enterprise value of \$4.5 million.

In circumstances where the amount of debt included in the enterprise value calculation differs from what appears on the balance sheet, one further adjustment may be required when calculating enterprise value multiples. Specifically, the earnings base (EBIT-DA in this case) should reflect the cost of financing that is treated as an 'operating item'. In this case, Opco's \$1 million line of credit under Scenario A can be viewed as consisting of \$0.5 million of financing, and \$0.5 million of an operating liability. Consequently, the EBIT-DA base against which the enterprise value is applied should be adjusted for the difference between actual interest expense and 'normalized' interest expense.

'Normalized' interest expense reflects the financing element, whereas the difference (positive or negative) between actual interest expense and normalized interest expense reflects an operating cost or saving, as applicable. If we assume that Opco's line of credit bears an interest rate of 8%, and that actual interest expense in respect of the line of credit for the year was \$60,000, then based on a 'normalized' line of credit of \$500,000, Opco's interest expense should be \$40,000 (i.e. 8% x \$500,000). Therefore, the additional \$20,000 of interest should be treated as an operating cost, and deducted from EBIT-DA for the purpose of calculating the enterprise value multiple (i.e. \$1,000,000 - \$20,000 = \$980,000). Therefore, Opco's multiple of EBIT-DA would be calculated as \$4.5 million / \$980,000 = 4.6X. While such an adjustment to the earnings base is appropriate in theory, it is not always done in practice because the necessary information often is not available, and in most cases, the amount of adjustment is not significant.

Another issue in determining the debt to include as part of enterprise value is determining what qualifies as 'non-interest bearing debt equivalents'. In most cases, non-interest bearing debt equivalents are liabilities that would otherwise have been interest bearing debt, such as loans from shareholders, related parties, and so on. However, non-interest bearing debt equivalents sometimes are less evident. A prime example is bonuses

payable to the shareholder(s) of private companies. It is not unusual for a private company to declare a bonus to its shareholder(s) at the end of a fiscal year in order to reduce income for tax purposes, which bonus is paid to the shareholder(s) during the following fiscal year. This causes the bonus payable amount to appear on the company's balance sheet at the end of the preceding fiscal year. Whether or not the bonus payable should be treated as a non-interest bearing debt equivalent or an operating liability depends on the circumstances. Where the shareholder bonus (or bonus to other parties) reflects compensation that is in excess of market based remuneration, it normally is treated as a non-interest bearing debt equivalent. This is because a buyer would be obligated to incur a one-time cash outflow to pay the outstanding bonus following the transaction (similar to a loan). However, unlike accounts payable or another current operating liability, the 'financing' available from the bonus payable at a point in time will not renew in the future given that market rate remuneration will be paid.

Finally, when determining the amount of debt outstanding for the purpose of calculating enterprise value, it is important to look beyond the balance sheet. Accounting rules allow companies to remove some of their debt obligations and related assets from the balance sheet, and place them in a note to the financial statements. Prime examples of this practice are observed for securitized accounts receivable and leveraged leases. These things should be considered when calculating enterprise value, and either accounted for therein at their face value, or 'normalized', as appropriate. As noted above, where these things are normalized, it may be necessary to adjust the earnings base to reflect the 'operating cost' of what otherwise would be a source of financing.

Cash on hand

When calculating enterprise value, cash on hand normally is deducted from interest bearing debt outstanding on the assumption that cash can readily be applied to reduce such debt. This assumption may not be valid where cash on hand is required in order to maintain the ongoing operations of the business.

As an illustration, assume that Opco has normalized trailing EBIT-DA of \$1 million and that the cash price paid to acquire all of its shares was \$3.5 million. Further assume that the balance sheet of Opco can take on one of two possible scenarios as shown below. The only difference between the two scenarios is that pursuant to Scenario A, Opco has \$1.6 million in accounts receivable and no cash on hand, whereas under Scenario B, Opco has \$0.6 million in accounts receivable and no cash on hand.

**Opco Cash on Hand Example
Alternative Balance Sheets
\$000**

| | Scenario | |
|------------------------------|--------------|--------------|
| | A | B |
| Current assets | | |
| Cash | 0 | 1,000 |
| Accounts receivable | 1,600 | 600 |
| Inventories | <u>500</u> | <u>500</u> |
| Total current assets | 2,100 | 2,100 |
| Fixed assets (net) | <u>1,400</u> | <u>1,400</u> |
| Total assets | <u>3,500</u> | <u>3,500</u> |
| Current liabilities | | |
| Accounts payable | 1,200 | 1,200 |
| Line of credit | <u>1,000</u> | <u>1,000</u> |
| Total current liabilities | 2,200 | 2,200 |
| Long term debt | <u>500</u> | <u>500</u> |
| Total liabilities | 2,700 | 2,700 |
| Shareholders equity | <u>800</u> | <u>800</u> |
| Total liabilities and equity | <u>3,500</u> | <u>3,500</u> |

In most cases, the multiple of EBIT-DA under scenario A would be calculated as 5.0X, based on an assumed enterprise value of \$5.0 million and EBIT-DA of \$1.0 million. Under Scenario A, the enterprise value normally would be comprised of the price paid for Opco's shares (\$3.5 million), plus short term debt (\$1.0 million), plus long term debt (\$0.5 million).

However, under Scenario B, the EBIT-DA multiple would be reduced to 4.0X, based on an assumed enterprise value for Opco of \$4.0 million, being \$5.0 million as previously calculated under Scenario A, less the cash on hand of \$1.0 million.

The difference between an EBIT-DA multiple of 4X and 5X is fairly significant. So which of the two calculations (if either) is correct? The answer is, it depends. The implicit assumption behind the enterprise value calculation in Scenario B is that Opco's debt is overstated, and has resulted in a temporary surplus in cash on hand. However, if the \$1 million of cash on hand under Scenario B is used to reduce Opco's line of credit, then Opco's net operating working capital would be negative \$100,000, calculated as current operating assets of \$1.1 million (comprising accounts receivable and inventory), less current operating liabilities of \$1.2 million (accounts payable).

Therefore, it is likely that at least some cash is required in order to bring Opco's net operating working capital balance to normal operating levels. As before, the amount of operating cash required can be gauged by reference to such measures as the normal ratio of current operating assets to current operating liabilities, and the normal debt to total capital ratio. If it were believed that Opco should have a normal operating working capital ratio of approximately 1.3X, and a normal debt to total capital ratio in the range of 20% to 25%, then Opco would obtain \$500,000 through its line of credit, which cash would be held as a current operating asset. Consequently, the notional balance sheet for Opco would be as follows:

**Opco Cash on Hand Example
Adjusted Balance Sheet
\$000**

| | <u>Operating</u> | <u>Financing</u> | <u>Total</u> |
|------------------------------|------------------|------------------|--------------|
| Current assets | | | |
| Cash | 500 | | 500 |
| Accounts receivable | 600 | | 600 |
| Inventories | <u>500</u> | | <u>500</u> |
| Total current assets | 1,600 | 0 | 1,600 |
| Fixed assets (net) | <u>1,400</u> | | <u>1,400</u> |
| Total assets | <u>3,000</u> | <u>0</u> | <u>3,000</u> |
| Current liabilities | | | |
| Accounts payable | 1,200 | | 1,200 |
| Short term debt | <u>0</u> | <u>500</u> | <u>500</u> |
| Total current liabilities | 1,200 | 500 | 1,700 |
| Long term debt | <u>0</u> | <u>500</u> | <u>500</u> |
| Total liabilities | 1,200 | 1,000 | 2,200 |
| Shareholders equity | <u>1,800</u> | <u>-1,000</u> | <u>800</u> |
| Total liabilities and equity | <u>3,000</u> | <u>0</u> | <u>3,000</u> |

Redundant assets

It generally is accepted that redundant (or non-operating) assets should be excluded from enterprise value for the purpose of calculating comparable company multiples. However, there may be circumstances where a redundant asset is better regarded as a cash equivalent, and deducted from interest bearing debt otherwise outstanding. As an

illustration, assume again that Opco has normalized trailing EBIT-DA of \$1.0 million and that the price paid to acquire all of its shares was \$3.5 million. Further assume that Opco's balance sheet at the closing date of the transaction can be either Scenario A or Scenario B, as shown below. The only difference between the two scenarios is that pursuant to Scenario A, Opco has \$1 million of cash on hand and nothing due from its shareholder, whereas under Scenario B, Opco has \$1 million owing from its shareholder and no cash on hand.

**Opco Redundant Asset Example
Alternative Balance Sheets
\$000**

| | Scenario | |
|------------------------------|--------------|--------------|
| | A | B |
| Current assets | | |
| Cash | 1,000 | 0 |
| Accounts receivable | 1,600 | 1,600 |
| Inventories | 500 | 500 |
| Due from shareholder | <u>0</u> | <u>1,000</u> |
| Total current assets | 3,100 | 3,100 |
| Fixed assets (net) | <u>1,400</u> | <u>1,400</u> |
| Total assets | <u>4,500</u> | <u>4,500</u> |
| Current liabilities | | |
| Accounts payable | 1,200 | 1,200 |
| Line of credit | <u>2,000</u> | <u>2,000</u> |
| Total current liabilities | 3,200 | 3,200 |
| Long term debt | <u>500</u> | <u>500</u> |
| Total liabilities | 3,700 | 3,700 |
| Shareholders equity | <u>800</u> | <u>800</u> |
| Total liabilities and equity | <u>4,500</u> | <u>4,500</u> |

In most cases, the multiple of EBIT-DA under Scenario A would be calculated as 5.0X, based on an assumed enterprise value of \$5.0 million, consisting of the price paid to acquire Opco's shares (\$3.5 million), plus its line of credit of \$2.0 million, plus its long term debt (\$0.5 million), net of cash (\$1.0 million). Cash on hand likely would be applied against the line of credit because Opco's resultant net operating working capital would be \$0.9 million (calculated as accounts receivable plus inventories less accounts payable).

However, under Scenario B, Opco's EBIT-DA multiple normally would be calculated as 6.0X, based on an assumed enterprise value of \$6.0 million (being the sum of its equity value plus line of credit and long term debt), given that Opco has no cash on hand.

However, under Scenario B, the amount due from Opco's shareholder may be better viewed as a 'cash equivalent' for the purpose of calculating enterprise value, given that it appears that the funds advanced to Opco's shareholder were financed through the company's line of credit. As a general rule, to the extent that a company uses some form of debt financing to finance a redundant asset, the two should be offset for the purpose of calculating enterprise value multiples.

Calculating the Earnings or Cash Flow Base

Another issue in calculating comparable company multiples (both enterprise value multiples and equity value multiples) is defining the earnings or cash flow base that is the denominator of the calculation. It generally is accepted that the base against which enterprise value or equity value is applied should be adjusted for unusual and non-recurring items. However, two other issues are whether:

- historical or prospective earnings (cash flows) should be used; and

- synergies should be included or excluded where the multiples being calculated relate to an open market transaction.

With respect to the first issue, where prospective earnings (cash flows) are known, it normally is a preferred base on which to calculate multiples. This is consistent with the principle that value is a function of prospective cash flows. However, prospective earnings (cash flow) information is not always readily available. Therefore, many calculations revert to the earnings or cash flows for the previous fiscal year or trailing twelve months. This can be problematic where historical earnings (cash flows) are not believed to be indicative of prospective operating results. In addition, multiples of (normalized) trailing operating results usually should be considered to some extent, since they represent 'baseline earnings' (or cash flows) based on actual results, as contrasted with expected earnings or cash flows that may not be realized.

On the second issue, it normally is useful to consider the earnings or cash flow base on a 'with' and 'without' synergies basis, where this information is available. Multiples of prospective earnings including synergies can provide an indication of value to the purchaser. This is because a multiple based on pro-forma earnings or cash flows following the transaction can be viewed as an intrinsic value indicator from the standpoint of the purchaser, which may be particularly useful when determining stand-alone fair market value in a notional valuation context. Alternatively, multiples computed on an earnings or cash flow base exclusive of synergies may be relevant to a vendor that is adopting its own historical earnings (or cash flows) as a base on which to apply the multiple.

Information Availability

In many cases, information on companies that are believed to be comparable has become more readily available in recent years. The Internet has simplified the process of gathering information regarding both comparable public companies, as well as comparable transactions for both public and many private companies.

With respect to public companies, financial information is more readily available than historically has been the case. In addition it is now generally easier to access quantitative and qualitative information regarding the prospects of a particular public company (and in some cases a private company), or a transaction that it has recently undertaken. The analysis of these things can provide important insights in the determination of comparable company multiples. For example, if an analysis of publicly available information suggests that it is widely believed that a publicly held company will outperform the market in coming years, one would anticipate that a multiple of that company's historical earnings might overstate value when applied to a particular subject company where expectations are not as buoyant.

In addition to general Internet access, numerous databases now exist that contain transaction multiples organized by industry. These databases can help simplify the process of information searching and analysis. However, users of these databases should be cautioned against over-reliance on the data as presented therein. In some cases, industry definitions are not well established, and therefore the multiples presented may not be true comparables. In addition, these databases tend to offer little qualitative information on the transactions that they cover, and therefore users cannot be certain that there are not unusual circumstances that may have had a significant influence on the price paid, and the resultant implied multiples.

Another ongoing development pertains to public company disclosure requirements. Accounting rules and shareholder expectations regarding corporate governance are causing publicly held companies to disclose more information regarding their operations and finances than they had in the past, including more disclosure regarding transactions they have undertaken. These things should assist in calculating and analyzing comparable company multiples, and in assessing the degree to which they are relevant in a fact-specific circumstance.

Overall, the valuation and transaction intermediary industries likely will have a greater amount of information at their disposal for calculating comparable company multiples.

This may result in greater emphasis being placed on comparable company multiples than has been the case in the past. However, it will be necessary to invest the time and effort necessary to conduct a rigorous and objective analysis of that information in order to formulate meaningful (though not all-inclusive) conclusions.

Conclusions

Information regarding companies that are believed to be comparable generally is becoming more readily available. However, it is only through a thorough and objective analysis of this information that meaningful conclusions regarding the comparability of those multiples to a particular subject business can be drawn.

There are numerous issues when calculating the enterprise value used to calculate comparable company multiples. These issues revolve around the determination of debt outstanding, the treatment of cash on hand, and the implications of redundant assets. In this regard, it is helpful to segregate a company's operating assets and operating liabilities from its financing sources. It also is helpful to consider a company's net operating working capital and its 'normal' debt to total capital ratio when forming a conclusion as to its enterprise value.

There also can be issues with respect to determining the earnings base against which enterprise value is applied. It generally is preferable to consider prospective earnings or cash flows, where that information is available. Determining the multiples both inclusive and exclusive of synergies in the earnings base also can provide insights where such calculations can be made.

In summary, using comparable company multiples, either based on public equity market data for a public company, or based on industry transactions, can be fraught with difficulties. However, in many cases an analysis of such multiples can provide valuable insights and generally should be considered in both notional valuation exercises and open market transactions. Where used, comparable company multiples normally should serve

as a test of the value conclusions determined pursuant to a cash flow based valuation methodology, as opposed to being a primary valuation methodology in and of themselves.

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