

Direct Market Data Method: Value Disparity Issues, Part II

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The direct market data method is an effective and intuitively logical approach to valuing a privately held business. The transaction data obtained from various databases represents actual transactions of similar privately held businesses in the selected industry, and the multiples at which these transactions took place. It is relatively simple to apply the direct market data method (DMDM) to produce an indication of value. The appraiser analyzes the transaction data, selects an appropriate multiple based on the specific attributes of the subject being valued relative to the transaction data, then multiplies the selected earnings stream (usually EBITDA or another measure of cash flow) or revenues by the selected multiple.

Though simple in theory, there are some challenges to using the DMDM to provide a reliable indication of value. In Part I, we discussed value disparities between the DMDM and the multi-period discounted earnings

method.* The significantly different value indications usually result from high growth expectations over the forecast period used in the multi-period discounted earnings method.

Value disparities are also possible between the DMDM and the single-period capitalization method. This usually occurs when the transaction data used in the DMDM are not representative of fair market value but, rather, reflect strategic value to a specific investor, skewing the value indication higher.

Example

To illustrate this problem, I'll use a simple example. Triumvirate Plastics, Inc., is a hypothetical plastic injection molding firm that has experienced modest but steady growth of roughly 4 to 6 percent in revenues over the last several years, during which time activity in the plastic injection molding industry has been relatively steady. Though many plastic injection molders have lost customers to low-cost competitors

overseas, Triumvirate Plastics has been somewhat insulated from such competition, as it has long-standing customer relationships. Furthermore, with revenues for the most recent fiscal year ended December 31 of \$50,000,000, Triumvirate Plastics is well positioned as one of the largest competitors in a mature industry where consolidation has been a driving force in competing with low-cost firms overseas. Despite diminishing profit margins characteristic of its domestic competitors, Triumvirate Plastics has managed to maintain profitability at a level slightly above the industry. Furthermore, Triumvirate Plastics' net cash flow to invested capital of \$4,000,000 for the most recent fiscal year continues its trend of steady 4 percent growth (nominal) over the last decade. Given its history and current tepid activity in the industry, Triumvirate Plastics is expecting revenues (and net cash flow to invested capital) to grow modestly, but in line with its historic trend, for the foreseeable future.

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In preparing a valuation of Triumvirate Plastics, the appraiser decides to use a market approach and an income approach to develop the indication of value. Under the market approach, the appraiser selects the DMDM, after a search for publicly traded companies yields no firms that are comparable to Triumvirate Plastics. A search of several transactional databases provides a statistically significant sample of similar and relevant privately held companies in the plastic injection molding industry. From those data, the appraiser determines that the price to sales ratio is a more reliable measure for developing an indication of value, given the wide range of reported price to earnings ratios and the potential disparities in how different levels of earnings are calculated by different reporters of the data. The average price to sales multiple is 0.75 with a median of 0.70 and a standard deviation of 0.15.

After analysis of Triumvirate Plastics' financial statements and risk characteristics, the appraiser determines that the company's performance is comparable to that of the industry with respect to numerous financial ratios. In addition, Triumvirate Plastics has a strong financial position, with relatively little leverage in the capital structure, and favorable

Table 1:

Triumvirate Plastics, Inc.
Direct Market Data Method
Price to Sales Multiple

Revenues	\$ 50,000,000
Price to Sales Multiple	0.75
Subtotal (rounded)	\$ 37,500,000
Adjustments	
+ Cash	\$ 2,500,000
+ Accounts Receivable	\$ 3,750,000
- Accounts Payable	\$ (4,250,000)
Enterprise Value Indication on a Control, Non-Marketable Basis (rounded)	\$ 39,500,000
Less Long-Term Debt	\$ (7,500,000)
Equity Value Estimate	\$ 32,000,000
Discounts	0
Equite Value Indication on a Control, Non-Marketable Basis (rounded)	\$ 32,000,000

earnings capacity, which it has maintained over the last several years. Given the company's position within the industry, the appraiser determines that there is an average level of risk associated with the company. Therefore, based on the financial analysis and risk assessment, the appraiser elects to use a price to sales multiple of 0.75 to develop an indication of value under the DMDM. Since the transactional data are based on historical financial performance, conventional appraisal theory applies the price to sales multiple to the most recent fiscal year end for the company, in this case December 31. Table 1 provides the indication of value based on this multiple.

The transaction database indicates that the transactions did not include the acquired companies' cash, accounts receivables, and accounts payable. The

adjustments for cash, accounts receivable, and accounts payable are necessary to reflect the packaging differences between the company and those companies in the database. The figures are from the company's December 31 balance sheet.

In addition, the value of the company's long-term debt (\$7.5 million as of December 31) must be subtracted from the enterprise value indication in order to arrive at an equity value indication. Since the interest being valued is a 100 percent interest, no discount for lack of control is required. The price to sales multiple was based on transactions in similar privately held companies. Therefore, the data are implicitly adjusted for the lack of marketability of privately held companies. No further discount for lack of marketability is required.

As a result, based on the DMDM, the appraiser deter-

Table 2:

Triumvirate Plastics, Inc.
 Single-Period Capitalization Method
 Value Indication
 Invested Capital Model

New Cash Flow to Invested Capital	\$ 4,000,000
Capitalization Rate	12.0
FMV of Invested Capital (rounded)	\$ 33,333,000
Less Long-term Debt	\$ (7,500,000)
Equity Value Indication	\$ 28,833,000
Less Discount for Lack of Marketability (15%)	\$ (3,875,000)
Equity Value Indication on a Control, Non-Marketable Basis (rounded)	\$ 21,958,000

mines that that fair market value of the company's equity is roughly \$32,000,000.

The appraiser then calculates the value indication of Triumvirate's equity using an income approach. Given the steady growth in revenues and net cash flow to invested capital that the company has experienced over the last several years, and that is expected to continue into the foreseeable future, the appraiser decides to use the single-period capitalization method to develop an indication of value. Within the single-period capitalization method, the appraiser decides to use an invested capital model. This method will produce an indication of value at the enterprise level for the company. From this, the value of the company's long-term debt will be subtracted to derive an indication of its equity value.

Through the analysis of the company and the appraiser's financial models, the company's weighted average cost of capital is estimated at 16 percent.

Based on a weighted average

cost of capital of 16 percent and an estimated 4 percent perpetual growth rate of net cash flow to invested capital, the appraiser calculates an appropriate capitalization rate of 12 percent, which equates to a capitalization multiple of 8.3 (the inverse of the capitalization rate). This will be used to develop the indication of value at the enterprise level. Table 2 illustrates the appraiser's calculation of the value indication for Triumvirate Plastics using the single-period capitalization method.

From the enterprise value indication of \$33,333,000, the company's long-term debt is subtracted. This value is then adjusted to reflect the company's relative lack of marketability. The risk premia used to develop the company's cost of equity capital, as part of determining the weighed average cost of capital, were derived from data associated with publicly traded companies that possess a much higher degree of marketability. Through an analysis of factors impacting the company's marketability and

using reasoned, informed judgment, the appraiser determines the appropriate lack of marketability discount to be 15 percent. As a result, the fair market value of the company's equity is estimated at \$21,958,000.

There is a substantial disparity in the value conclusions reached using the DMDM (\$32,000,000) and the single period capitalization method (\$21,958,000). Theoretically, the two approaches employed should produce value indications that are relatively similar. Given that the DMDM produced a value indication that is nearly 1.5 times the single-period capitalization method, the appraiser should consider what factors led to such a value disparity.

It is likely (but not certain) that the greater value estimate produced using the DMDM is a result of transaction multiples that reflect strategic or investment value rather than fair market value. Most transaction providers merely report the data on the acquired company and do not indicate if the acquirer was a financial buyer or a strategic buyer within the company's industry. For certain kinds of businesses, such as restaurants or flower shops, the transaction data likely reflect an approximation of fair market value. The acquirers are likely (a) individual buyers seeking to "buy a job" or a lifestyle, or (b) financial buyers in search of a return on their investment. For larger industrial companies, such as a plastic injection molding firm, transactions are likely consummated between a strategic acquirer seeking synergies and

Table 3:

Option 1—Value Reconciliation

Method	Value Indication	Weighting	Weighted Value
Single-Period Capitalization Method	\$21,958,000	50%	\$10,979,000
Direct Market Data Method	\$32,000,000	50%	\$16,000,000
Fair Market Value Estimate of Equity on a Control, Non-Marketable Basis			\$26,979,000

Table 4:

Option 2—Value Reconciliation

Method	Value Indication	Weighting	Weighted Value
Single-Period Capitalization Method	\$21,958,000	70%	\$15,370,000
Direct Market Data Method	\$32,000,000	30%	\$9,600,000
Fair Market Value Estimate of Equity on a Control, Non-Marketable Basis			\$24,971,000

the target company. In situations where the industry is undergoing rapid consolidation, such as the plastic injection molding industry, the transaction data likely are more representative of strategic value. This, in essence, skews the value estimate higher when using the DMDM.

Potential Solutions

As in the case where the DMDM produces a value estimate lower than the multi-period discounted earnings method due to the latter's ability to capture rapid future growth, the appraiser is once again confronted with a difficult challenge: how to address the value disparity. As discussed in Part I, there are several alternatives from which the appraiser may choose, including:

- Option 1: Do nothing, but explain the difference as discussed above and weight the methods equally.
- Option 2: Apply a lower

weight to the value indication developed using the DMDM.

- Option 3: Adjust the price to sales multiple under the DMDM.

Option 1

The appraiser could elect to merely explain why the large difference occurred and weight the methods equally, producing an indication of value as illustrated in Table 3.

Though the higher value under the DMDM would serve to inflate the overall value indication, it could be reasonably argued that some of the transaction data (most likely a minority of the transactions) may indeed approximate fair market value rather than strategic value. In reality, the appraiser's ability to determine whether the transaction data represent fair market value (as is commonly the case) or strategic value is virtually nonexistent (as is likely in this particular situation).

Option 2

Many appraisers and other professionals assign a higher weight to the value indication derived using earnings, as earnings is a key value driver for companies. In addition, it has been argued that the transaction data may not actually reflect fair market value and may be biased upwards by strategic transactions that produce values with implicit synergies. Therefore, the appraiser could use reasoned, informed judgment to place a higher weight upon the single-period capitalization method in reconciling the value estimates. Table 4 illustrates how this may impact the value.

Note, however, that there is no method to quantify a higher weighting for one approach; this is totally at the discretion of the appraiser, whose experience and judgment are the basis for the selection of the appropriate weightings. This approach could suffer from accusations that the weighting scheme is arbitrary.

Table 5:

Triumvirate Plastics, Inc.
Direct Market Data Method
Price to Sales Multiple

Revenues	\$ 50,000,000
Price to Sales Multiple	0.60
Subtotal (rounded)	\$ 30,000,000
Adjustments	
+ Cash	\$ 2,500,000
+ Accounts Receivable	\$ 3,750,000
- Accounts Payable	\$ (4,250,000)
Enterprise Value Indication on a Control, Non-Marketable Basis (rounded)	\$ 32,000,000
Less Long-Term Debt	\$ (7,500,000)
Equity Value Estimate	\$ 24,500,000
Discounts	0
Equite Value Indication on a Control, Non-Marketable Basis (rounded)	\$ 32,000,000

Option 3

The final option discussed here for dealing with the disparity in value between the DMDM and the single-period capitalization method is perhaps the least attractive alternative, yet it is the simplest. The appraiser could merely decrease the price to sales multiple applicable to the company's most recent fiscal year's revenues. The decrease in the multiple would be justified as a result of the likelihood that the transaction data are more reflective of strategic value than fair market value. Table 5 illustrates the effect of decreasing

the price to sales multiple.

Many appraisers accept that adjusting the multiple is the most appropriate course of action when the subject company's performance is likely to differ substantially from those companies included in the transaction data. Decreasing the price to sales multiple without any quantitative means places the selection of the multiple completely upon the appraiser's experience and judgment. This could be criticized as nothing more than manipulation of the data or "fuzzy math" intended to produce a specific outcome. In the above example,

the price to sales multiple was decreased by one standard deviation from the mean multiple of 0.75. Calculating the decrease in the price to sales multiple using the standard deviation from the mean provides some quantification of the selected multiple rather than relying totally upon the judgment of the appraiser. This is helpful in defending the selected multiple from criticism.

This value indication would be weighted equally with the value indication produced by the single-period capitalization method in the final value reconciliation. Table 6 provides the reconciliation of value.

Conclusions on Options

Employing one of the previously discussed options may bring the value indication arrived at under the DMDM closer to the value arrived at under the single-period capitalization method. Table 7 provides the breakdown of the various value indications for each option and the value contributed by each method.

Adjusting the price to sales multiple can easily have the largest impact on decreasing the value disparity between the DMDM and the value indication derived under the single-period capitalization method, when the weighting schemes are equal.

Table 6:

Option 3—Value Reconciliation

Method	Value Indication	Weighting	Weighted Value
Single-Period Capitalization Method	\$21,958,000	50%	\$10,979,000
Direct Market Data Method	\$24,500,000	50%	\$12,250,000
Fair Market Value Estimate of Equity on a Control, Non-Marketable Basis			\$23,229,000

Table 7:

Value Estimates Comparisons Option	DDMD Contribution	Single Period Contribution	Final Value Estimate
Option 1—Equal Weighting	\$16,000,000	\$10,979,000	\$26,979,000
Option 2—Lower DMDM Weighting	\$9,600,000	\$15,370,600	\$24,971,000
Option 3—Adjust Multiple	\$12,250,000	\$10,979,000	\$23,229,000

Note that adjusting the multiple under the DMDM results in the lowest overall indication of value for the firm's equity. Weighting the value indication from the DMDM less than the single-period capitalization method produces a final indication of value that is roughly midway between the two other value indications. It is clear that the option selected for determining the value estimate under the DMDM could have a significant impact on the final value estimate.

Conclusion

The question remains, which option is the most suitable? As discussed in Part I, there is no single correct answer to this question, nor is there a consensus as to which approach is the most appropriate.

Our firm, Highland Global, believes the traditional calculation using the most recent fiscal year's revenues, and weighting the DMDM equal to the other methods, is an appropriate approach. The appraiser must ensure, however, that an equal weighting of the methods is appropriate based upon the case's specific circumstances. Recall that Revenue Ruling 59-60 Section 5 states:

The valuation of closely held corporate stock entails the consideration of all relevant

factors as stated in section 4. Depending upon the circumstances in each case, certain factors may carry more weight than others because of the nature of the company's business.

Section 7 discusses averaging of factors as follows:

Because valuations cannot be made on the basis of a prescribed formula, there is no means whereby the various applicable factors in a particular case can be assigned mathematical weights in deriving the fair market value. For this reason, no useful purpose is served by taking an average of several factors (for example, book value, capitalized earnings and capitalized dividends) and basing the valuation on the result. Such a process excludes active consideration of other pertinent factors, and the end result cannot be supported by a realistic application of the significant facts in the case except by mere chance.

As an alternative to weighting the methods equally, the appraiser may conclude that placing less weight on the value indication derived under the DMDM, based on the appraiser's

comfort level with the transaction data, is a more prudent alternative. This is particularly attractive because this approach is likely to produce a final indication of value that would lie between the value indications arrived under the other options discussed above. Subsequently, it may also be appropriate and prudent for the appraiser to select more than one option under the DMDM in developing an indication of value.

This perplexing issue is one that each appraiser must consider when confronting a disparity between value indications produced under the DMDM and the single-period capitalization method. Each appraiser must select the option that is deemed most appropriate, given the data set and circumstances with which they are confronted. This selection should reflect an understanding of the various options available as discussed herein. **VE**