# The Guideline Publicly Traded Company Method and the Market Value of "Invested" Capital: Should Market Value of "Stakeholder" Capital be the Appropriate Reference? 

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#### Abstract

If a business appraiser ignores the value of employee stock options when calculating the market value of invested capital (MVIC) for guideline publicly traded companies, the appraiser may significantly undervalue his or her subject company, all else being equal.


## Introduction

The use of comparable publicly held corporations as a guide to valuation, as a practical matter, may be the most important and appropriate technique for valuing a privately held operating business. ${ }^{1}$

Historically, value measures or multiples for this method have been based on either the value of common stock or the value of all invested capital. The common definition of invested capital is the market value of all classes of stock and all interest-bearing debt.

## The Issue

Notice, this "definition" does not list employee stock options, which are effectively warrants ${ }^{2}$ on the stock of a company. Why not?

As of 2001, The Investor Responsibility Research Center reported that more than $14 \%$ of the equity of the average S\&P 500 firm had been promised to employees through stock option plans. If employee stock options exist, are they not additional claims on the future earnings and cash flow of a publicly traded company? Of course, they are. Are they not valuable? Of course, they are. In fact, often times they are worth substantial sums of money. ${ }^{3}$ Yet, the authors have never seen another

[^0]appraiser incorporate the value of employee stock options into the calculation of the market value of "invested" capital in our combined 40 years of experience. ${ }^{4}$

It should be noted that we have seen very limited references to this technique. One of the most prominent references to this concept is found in Valuing a Business, 4th edition, by Pratt, Reilly, and Schweihs, which states on page 252:

Therefore, the numerator for market value of invested capital (MVIC) ratios in the guideline company method usually is the aggregate market value of all equity (including options and warrants) and all interest bearing debt. (Emphasis added)
However, the examples cited in the book (specifically in Chapter 21) ignore the value of existing employee stock options.

## Purpose

The purpose of this article is to support the inclusion of the value of employee stock options when calculating the market value of "invested" capital (MVIC) in the Guideline Publicly Traded Company Method. ${ }^{5,6}$ Thus, a more appropriate reference may be the market value of stakeholder capital (MVSC). ${ }^{7}$

## Background

The semistrong form of the efficient market hypothesis (EMH) states that stock prices incorporate all publicly available information. Whether or not the EMH in this form is $100 \%$ true is open to debate. However, we

[^1]Table 1
Hobby \& Craft Retail Industry MVIC and MVSC

|  | (A) | (B) | $(\mathrm{A}) *(\mathrm{~B})=(\mathrm{C})$ | (D) | $(\mathrm{C})+(\mathrm{D})=(\mathrm{E})$ | (F) | $(\mathrm{E})+(\mathrm{F})=(\mathrm{G})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Shares Outstanding | Share price 28 February 2005 | Market Value of Common Stock | Book Value of Debt** | Enterprise Value (MVIC) | Value of Options†† | Enterprise Value (MVSC) |
| Michaels Stores* | 134,783,296 | \$31.89 | \$4,298,239,309 | \$200,000,000 | \$4,498,239,309 | \$179,987,976 | \$4,678,227,285 |
| Jo-Ann Stores $\dagger$ | 22,762,840 | \$30.06 | \$684,250,970 | \$200,000,000 | \$884,250,970 | \$49,522,146 | \$933,773,116 |
| A. C. Moore Arts \& Crafts§ | 19,666,892 | \$25.52 | \$501,899,084 | \$29,357,000 | \$531,256,084 | \$18,080,349 | \$549,336,433 |

* Michaels Stores shares outstanding as of 3 December 2004 in accordance with 30 October 2004 Form 10-Q. Book value of debt as of 30 October 2004.
$\dagger$ Jo-Ann Stores shares outstanding as of 3 December 2004 in accordance with 30 October 2004 Form 10-Q. Book value of debt as of 30 October 2004.
§ A. C. Moore Arts \& Crafts shares outstanding as of 10 March 2005 in accordance with 2004 Form 10-K. Book value of debt as of 31 December 2004 (excludes capitalized leases).
** Assumed equal to market value.
$\dagger \dagger$ See Table 2.
know that research has indicated that common stock prices reflect the existence of employee stock options (the extent and direction of which depend on various factors and are company-specific).

For example, David Aboody in the article, "Market Valuations of Employee Stock Options," published in the Journal of Accounting \& Economics 22 (1996) states:

I find a negative correlation between the value of outstanding options and a firm's share price. The correlation is stronger (i) for the option's intrinsic value than for the option's time value, (ii) for options that are late in their vesting stage than earlier in their vesting stage, ${ }^{8}$ and (iii) for large firms than for small firms.
Gerald T. Garvey and Todd T. Milbourn in their article "Do Stock Prices Incorporate the Potential Dilution of Employee Stock Options?" state:

The controversy over how employee stock options should be treated in accounting reports has largely neglected the question of whether market prices already account for the associated costs. If prices do not reflect these costs, it should then be possible to devise a profitable stock selection strategy based on public information.
Jenkins (2002) ${ }^{10}$ states the case with much stronger language:

[^2]Myth: Failing to deduct an expense for management stock options inflated earnings and therefore stock prices. Good grief. We've been discussing this rule change for a decade now. It would be the overripe short-selling opportunity of the century if the market were somehow fooled into mispricing stocks simply because we failed to adopt a particular accounting treatment for the non-cash value of options.

In their article, "The True Cost of Stock Options," Michael A. Thompson and Frederic W. Cook explain: ${ }^{11}$

The cost of options is reflected in the difference between Basic EPS and Diluted EPS. This difference results in a reduction in share price from what would have been had valuable options not been outstanding. Since a company's aggregate market value is constant at any point in time, any gain in option value results in an equal reduction in total shareholder value available to other shareholders.

The research above (generally) observed a negative correlation between employee stock options and common share price. However, the main point here is that employee stock options, which can be very valuable securities, are a claim on the future prospects of a company. Given these observations, any proper application of the Guideline Publicly Traded Company Method must include the value of employee stock options. To exclude these valuable instruments systematically undervalues the market value of equity and invested capital.

## Example of Impact

Here we look at the hobby and craft retail industry to observe the potential impact of including the value of employee options in the Guideline Publicly Traded

[^3]Table 2
Hobby \& Craft Retail Industry Value of Options

|  | (A) | Inputs into Black-Scholes Option Pricing Model |  |  |  |  |  | Output | $(\mathrm{B}) *(1-.3)=(\mathrm{C})(\mathrm{A}) *(\mathrm{C})=(\mathrm{D})$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | (B) |  |  |
|  | Options Outstanding | Wtd. Avg <br> Remaining Life | Wtd. Avg. Exercise Price | Risk-free Rate (as of 28 February 2005) | Stock Price (as of 28 February 2005) | Expected Volatility | Dividend Yield | B-S Value per Option** | Fair Value per Option $\dagger$ | Total Value |
| Michaels Stores* | 12,240,000 | 3.1 | \$13.84 | 3.75\% | \$31.89 | 64.90\% | 0.88\% | \$21.01 | \$14.70 | \$179,987,976 |
| Jo-Ann Stores $\dagger$ | 3,077,917 | 5.7 | \$12.42 | 4.09\% | \$30.06 | 61.50\% | 0.00\% | \$22.99 | \$16.09 | \$49,522,146 |
| A. C. Moore Arts \& Crafts§ | 1,431,132 | 6.8 | \$14.76 | 4.18\% | \$25.52 | 54.90\% | 0.00\% | \$18.05 | \$12.63 | \$18,080,349 |
| * Options outstan accordance with $\dagger$ Options outstan presented in 2003 § Options outstan <br> ** B-S stands for <br> $\dagger$ Accounting fo considerations we value these option | ding as of 3 2003 Form 1 ding as of 31 Form 10-K. ding as of 3 Black-Scho r employee re determine s, but rather | January 2004 -K. Three-year January 2004. <br> December 200 s. <br> ehavior (forfeit to result in a d on their inclusi | ere $6,120,000$ reasury interest verage of five-y <br> 7-year treasury <br> e and early ex count equal to in the method | with a weighted avera rate was used as risk ear and seven-year tre <br> y interest rates used <br> rcise), vesting restrict $30 \%$ of the B-S value | ge exercise price of free rate. asury interest rates w risk-free rate. Exp ions, and lack of tra of the option/share for | 27.68. Sh as used as cted volat nsferability or all three | ares split risk-free ility in ac of option companie | $2: 1$ on 10 Octo rate. Volatility cordance with <br> s. For purpos s. Again, the f | ber 2004. Expe was calculated 2004 Form 10s of this article ocus of this artic | volatility is in erage of range e complex not on how to |

Company Method. We purposely picked an industry where one would not expect a large number of outstanding options relative to common shares outstand-ing-at least compared with the high technology industry. We believe that this will show a "minimum" effect. Generally, the impact in the high technology arena could be much more severe, as we will see below. ${ }^{12}$ (Please refer to Tables $1-4$ for a detailed description of this analysis.)

As one can see, depending on the guideline company selected, the valuation of a privately held company in the hobby and craft industry could be affected by more than $5 \%$ (under our hypothetical example). In other words, by not including the value of employee options in the calculation of enterprise value, an appraiser could undervalue his or her hobby and craft-related company by more than $5 \%$, all else being equal.

To show an example in the high technology industry, we selected Cymer, Inc., a company in the semiconductor equipment and materials industry. ${ }^{13}$ As one can see, if one excluded the value of options when using Cymer as a guideline comparable, one would undervalue Cymer's stakeholder capital by more than $8 \%$. Thus, the appraiser would also undervalue his or her privately held company by more than $8 \%$, all else being equal. (Please refer to Tables 5-8 for a detailed description of this analysis.)

## Conclusion

It has been shown that options have an adverse impact on the value of common stock because dilution generally dominates any advantages from reductions in agency costs ${ }^{14}$ or salaries. Regardless of the impact, employee stock options have a claim on a firm's future cash flow. Therefore, if one only uses common and preferred stock in calculating the market value of equity, then the appraiser may be significantly undervaluing the enterprise value, as well as the equity value, of the publicly traded comparables and, by extension, his or her subject company, all else being equal. (Please see Tables 4 and 8, which highlight larger multiples under the MVSC approach.)

[^4]Table 3
Hobby \& Craft Industry Comparative Income Statements

|  | Michaels Stores |  |  | Jo-Ann Stores |  | A.C. Moore |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | $10 / 30 / 2004$ | $\%$ | $10 / 30 / 2004$ | $\%$ | $12 / 31 / 2004$ | $\%$ |
| Gross receipts or sales | $\$ 3,271,797,000$ | $100.0 \%$ | $\$ 1,776,800,000$ | $100.0 \%$ | $\$ 497,626,000$ | $100.0 \%$ |
| Cost of goods sold + rent* | $\$ 2,069,958,000$ | $63.3 \%$ | $\$ 939,300,000$ | $52.9 \%$ | $\$ 299,872,000$ | $60.3 \%$ |
| Gross profit | $\$ 1,201,839,000$ | $36.7 \%$ | $\$ 837,500,000$ | $47.1 \%$ | $\$ 197,754,000$ | $39.7 \%$ |
| SG \& A (not including interest expense) | $\$ 866,768,000$ | $26.5 \%$ | $\$ 684,700,000$ | $38.5 \%$ | $\$ 166,485,000$ | $33.5 \%$ |
| Store pre-opening costs | $\$ 8,560,000$ | $0.3 \%$ | $\$ 16,800,000$ | $0.9 \%$ | $\$ 4,036,000$ | $0.8 \%$ |
| Operating income (not including interest expense) | $\$ 326,511,000$ | $10.0 \%$ | $\$ 136,000,000$ | $7.7 \%$ | $\$ 27,233,000$ | $5.5 \%$ |
| Interest expense $\dagger$ | $\$ 20,516,000$ | $0.6 \%$ |  |  | $\$ 380,000$ | $0.1 \%$ |
| Interest income | $\$ 3,943,000$ | $0.1 \%$ |  | $\$ 543,000$ | $0.1 \%$ |  |
| Net interest expense $\dagger$ | $\$ 16,573,000$ | $0.5 \%$ | $\$ 16,300,000$ | $0.9 \%$ | $-\$ 163,000$ | $0.0 \%$ |
| Income before income taxes§ | $\$ 309,938,000$ | $9.5 \%$ | $\$ 119,700,000$ | $6.7 \%$ | $\$ 27,396,000$ | $5.5 \%$ |
| Interest expense | $\$ 20,516,000$ | $0.6 \%$ | $\$ 16,300,000$ | $0.9 \%$ | $\$ 380,000$ | $0.1 \%$ |
| EBIT | $\$ 330,454,000$ | $10.1 \%$ | $\$ 136,000,000$ | $7.7 \%$ | $\$ 27,776,000$ | $5.6 \%$ |
| Depreciation and amortization | $\$ 87,988,000$ | $2.7 \%$ | $\$ 39,700,000$ | $2.2 \%$ | $\$ 8,967,000$ | $1.8 \%$ |
| EBITDA $\S$ | $\$ 418,442,000$ | $12.8 \%$ | $\$ 175,700,000$ | $9.9 \%$ | $\$ 36,743,000$ | $7.4 \%$ |

[^5]
## Table 4

Hobby \& Craft Industry Guideline Publicly Traded Company Multiples

|  | Michaels <br> Stores | Jo-Ann <br> Stores | A. C. Moore |
| :--- | :---: | :---: | :---: |
| MVIC Multiples: |  |  |  |
| MVIC/Sales | 1.37 | 0.50 | 1.07 |
| MVIC/EBIT | 13.61 | 6.50 | 19.13 |
| MVIC/EBITDA | 10.75 | 5.03 | 14.46 |
| MVSC Multiples: |  |  |  |
| MVSC/Sales | 1.43 | 0.53 | 1.10 |
| MVSC/EBIT | 14.16 | 6.87 | 19.78 |
| MVSC/EBITDA | 11.18 | 5.31 | 14.95 |
| \% Difference | $4.0 \%$ | $5.6 \%$ | $3.4 \%$ |
| Multiples |  |  |  |

MVSC, rather than MVIC, is the appropriate measure of enterprise value for all companies. ${ }^{15}$ Employees who hold vested or unvested options have a future claim on the value of a company and its earnings and cash flow. Therefore, the value of their options (regardless of how subjective it may be to value such securities) must be considered in the calculation of enterprise value. ${ }^{16}$ To do otherwise implicitly assigns a value of $\$ 0$ to employee options, which we know with $100 \%$ certainty is incorrect.

[^6]Table 5
Semiconductor Equipment and Materials Industry MVIC and MVSC
$\left.\begin{array}{ccccccc}\hline(\mathrm{A}) & (\mathrm{B}) & (\mathrm{A}) *(\mathrm{~B})=(\mathrm{C}) & (\mathrm{D}) & (\mathrm{C}) *(\mathrm{D})=(\mathrm{E}) & (\mathrm{F}) & (\mathrm{E}) *(\mathrm{~F})=(\mathrm{G}) \\ \hline & \begin{array}{c}\text { Shares } \\ \text { Outstanding }\end{array} & \begin{array}{c}\text { Share Price } \\ \text { 28 February 2005 }\end{array} & \begin{array}{c}\text { Market Value } \\ \text { of Common Stock }\end{array} & \begin{array}{c}\text { Book Value } \\ \text { of Debt }\end{array} & \begin{array}{c}\text { Enterprise Value } \\ (\text { MVIC })\end{array} & \begin{array}{c}\text { Value } \\ \text { of Options }\end{array}\end{array} \begin{array}{c}\text { Enterprise Value } \\ \text { (MVSC) }\end{array}\right]$

[^7]Table 6
Semiconductor Equipment and Materials Industry Value of Options

|  |  | Inputs into Black-Scholes Option Pricing Model |  |  |  |  |  |  | Output <br> (B) | $(\mathrm{B}) *(1-.3)=(\mathrm{C})(\mathrm{A}) *(\mathrm{C})=(\mathrm{D})$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (A) |  |  |  |  |  |  |  |  |  |  |
|  | Options Outstanding | Wtd. Avg Remaining Life | Wtd. Avg. Exercise Price | Risk-free Rate (as of 28 February 2005) | Stock Price (as of 28 February 2005) | Expected Volatility | Annual Dividend | Dividend Yield | B-S Value per Option $\dagger$ | Fair Value per Option§ | Total Value |
| Cymer* | 7,462,000 | 6.64 | \$31.62 | 4.18\% | \$28.91 | 75.90\% | \$0.00 | 0.00\% | \$20.12 | \$14.08 | \$105,094,808 |
| * Option Seven-y $\dagger$ B-S st § Accou consider these op | s outstanding ear treasury i ands for Blac nting for em ations determ tions, but rath | as of 31 Decem terest rate was k -Scholes. loyee behavior ined to result in a er on their inclu | ber 2004 were used as risk-free <br> forfeiture and discount equa sion in the met | $7,462,000$ with a wei rate. <br> early exercise), vesting to $30 \%$ of the B-S va od. | ted average exe <br> restrictions, and of the option/s | price of <br> of trans for all th | \$31.62. <br> erability ree comp | pected <br> option <br> ies. Ag | atility is in <br> For purpos the focus | accordance with <br> of this article, the this article is no | 4 Form 10-K <br> complex how to value |

Table 7
Semiconductor Equipment and Materials Industry Income Statement

|  | Cymer |  |
| :--- | :---: | ---: |
|  |  |  |
|  | 31 December 2004 | $\%$ |
| Total Revenue | $\$ 418,079,000$ | $100.0 \%$ |
| Cost of Revenue | $243,473,000$ | $58.2 \%$ |
| Gross profit | $174,006,000$ | $41.8 \%$ |
| Total operating expenses | $12,700,000$ | $27.0 \%$ |
| Operating income | $\$ 61,906,000$ | $14.8 \%$ |
| Total other income/expenses net | $\$ 8,161,000$ | $2.0 \%$ |
| EBIT | $\$ 70,067,000$ | $16.8 \%$ |
| Interest expense | $\$ 9,493,000$ | $2.3 \%$ |
| EBT | $\$ 0,574,000$ | $14.5 \%$ |
| Income tax | $\$ 5,144,000$ | $3.6 \%$ |
| Net income (not including | $\$ 45,430,000$ | $10.9 \%$ |
| minority interest) | $\$ 28,494,000$ | $6.8 \%$ |
| Depreciation and amortization | $\$ 98,561,000$ | $23.6 \%$ |
| EBITDA |  |  |

Table 8
Semiconductor Equipment and Materials Industry Guideline Publicly Traded Company Multiples

|  | Cymer |
| :--- | ---: |
| MVIC Multiples: |  |
| MVIC/Sales | 3.02 |
| MVIC/EBIT | 18.03 |
| MVIC/EBITDA | 12.82 |
| MVSC Multiples: | 3.27 |
| MVSC/Sales | 19.53 |
| MVSC/EBIT | 13.89 |
| MVSC/EBITDA | $8.3 \%$ |
| \% Difference |  |
| Multiples |  |

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# Business Valuation Cases in Brief 

by John J. Stockdale, Jr.

## Estate \& Gift Tax Valuations

In the Estate of Pearl I. Amlie v. CIR, T.C. Memo. 2006-76, the Tax Court determined that a buy-sell agreement satisfied sec. 2703 and the Lauder test such that it fixed the value of a minority interest in closely held bank stock for estate tax purposes. In reaching this decision, it considered the motive for entering the agreement, the presence of valuation advice in ascertaining the transaction price, and the presence of a comparable unconsummated arm's-length offer.

In Ian G. Koblick and Tonya A. Koblick v. CIR, T.C. Memo. 2006-63, the Tax Court determined the fair market value of a minority interest in a company was donated to a charitable organization, as part of a plan by all shareholders of the company to donate all the stock to the nonprofit organization. The court reduced the size of the minority interest discount proposed by the IRS (22\%) to $10 \%$ because of the shareholders' prearranged plan. It further valued the business, an undersea lodge, using a net asset value where the value of the submersible lodge was computed using replacement cost.

In Michael W. and Caroline P. Huber v. CIR, T.C. Memo. 2006-96, the U.S. Tax Court determined that the value of closely held stock was established by the price used in a recent transaction of that stock for gift tax purposes where that price was established by an appraisal obtained by the subject company for its internal purposes. The Tax Court applied the four-prong Morrissey test to determined whether the transaction were arm's length.

In the Estate of Lillie Rosen v. CIR, T.C. Memo. 2006-115, the U.S. Tax Court applied a multifactor analysis to determine if the objective facts indicated whether an FLP had a legitimate and substantial nontax purpose such that sec. 2036 did not apply to recapture the value of assets transferred to a family limited partnership (FLP) formed when the decedent was old and incompetent. The court also applied a multifactor test to determine whether a demand note was a bona fide debt or a shame and indicative of an implied agreement that the decedent retains the enjoyment of the transferred assets.

In the Matter of The Estate of Norman B. Hjersted, No. 93,470 (Kan. App. June 2, 2006), the Kansas Court of Appeals determined that discounts for lack of control and lack of marketability should not be applied on account of a limited partnership which held all the stock of a closely held operating company that was discounted for lack of marketability. In reaching this decision, it
found the facts that the son effectively held or controlled all the limited partnership units and the decedent and the son, the only partners, did not respect the partnership.

## Divorce Valuations

In Vinod K. Adlakha v. Purnima S. Adlakha, No. 04-P-1288 (Mass. App. March 31, 2006), the Massachusetts Court of Appeals determined that double dipping did not occur where the private practice was valued using an income approach and a reasonable salary expense for the owner-spouse was deducted from the income base.

In Ruby Morris Fowler v. Clyde M. Fowler, No. 1265-05-2 (VA App. March 14, 2006), unpublished, the Virginia Court of Appeals affirmed the valuation of a promissory note at the amount of principal remaining on the valuation date when neither party presented any evidence regarding the present value of the note.

In In re the Marriage of Pearlstein, No. A108235 (Cal. App. 1 Dist. March 28, 2006), the California Court of Appeals concluded that the value of restricted stock and cash received in connection with the sale of a business should not be included in the computation of a payor's income for child support purposes except to the extent that the cash when received or stock when sold was not reinvested in capital assets. However, the court, in its discretion, may impute a reasonable rate of return on those capital assets and include that as income.

In In re the Marriage of Nelson, No. H028352 (Cal. App. 6 Dist. May 11, 2006), unpublished, the California Court of Appeals, Sixth District, affirmed the lower court's decision to value a retail flower business operated by the wife on the date of separation rather than the date of trial where the wife had control over the business between the date of trial and the date of separation and where the wife poorly maintained the business records, precluding an accurate valuation.

In Blanton Fortson v. Jayne Fortson, No. S-11332 (AK February 17, 2006), the Alaska Supreme Court concluded that a lower court erred when it declined to award the nonoperating spouse a share in the postseparation profits of the professional practice even though the lower court held that the practice had no goodwill value because it was unmarketable (despite the fact that a goodwill value was calculable). It reversed for a determination of the portion of the practice's profits that were attributable to factors above and beyond the owner-spouse's work.

In Ingrid Parry v. Timothy Parry, No. 2D04-2109 (Fla. 2 DCA April 28, 2006), the Florida Court of

Appeal, Second District, reversed the lower court's characterization of unvested, but partially earned, incentive stock options as separate property of the earning spouse. Rather, it remanded for the application of a time-rule formula to calculate the portion of unvested stock options that were marital property. The court also affirmed the application of a discount for lack of marketability to stock restricted pursuant to SEC Rule 144. Lastly, the court permitted the valuation date to be set as the date of filing rather than the date of trial, even though the stock appreciated between those dates and was publicly traded, because the lower court determined the stock appreciated as a direct result of the husband's efforts as a senior member of the company.

In Thomas John Farrell v. Olivia Farrell, No. 05-433 (Ark. March 9, 2006), the Supreme Court of Arkansas affirmed the valuation of the appreciation in a controlling interest in a closely held company that was the wife's non-marital property. It valued the stock by reference to a recent transaction involving a minority interest in the company, which the parties agreed contained a minority interest discount, because the recent transaction was the best evidence of value. The Supreme Court also rejected the argument that the stock should be characterized as marital property under the source of funds doctrine because the loan used to purchase the stock was retired during the marriage.

In In re the Marriage of Covelli, No. 2005AP1960 (Wis. App. May 3, 2006), the Wisconsin Court of Appeals affirmed the lower court's valuation of the parties' business based on inadmissible hearsay evidence regarding an unconsummated offer to buy the business when the opposing party failed to object to the evidence when it was offered; where the value indicated by the offer to buy was supported by expert testimony, and where the opposing party did not present any contrary, credible valuation evidence.

In Mary Jane Daugherty Fogarty v. Larry Joe Fogarty, No.2004-CA-02244-COA (Miss. App. February 28, 2006), the Mississippi Court of Appeals affirmed a lower court's decision to treat the earnings of a business as alimony rather than as property where the only valuation evidence before the lower court were the tax returns, the business was a sole proprietorship, and the business lacked physical assets.

In Wesley B. Binder v. Tamatha E. Thorne-Binder, No. WD65273 (Mo. W.D. March 28, 2006), the Missouri Court of Appeals, Western District, affirmed a lower court's valuation of a business's intangible asset. The valuation was based on the testimony of a spouse, who was involved in the business as its accountant. Further, the other spouse's pleadings were stricken as a discovery sanction.

In Linda Ellen Moore v. Jaclyn Kathleen Moore, et al., No. WD 64015 (Mo. App. W.D. March 21, 2006), the Missouri Court of Appeals, Western District, considered the proper amount of appreciation in separate property stock where a spouse is employed at the stock-issuer and is undercompensated. It held the amount of the increase in value, which is marital property, is limited by the amount of the undercompensation suffered by the employed spouse during the marriage.

In Paul Louis Gratton v. Bernadette Juliana Gratton, No. M2004-01964-COA-R3-CV (Tenn. App. March 28, 2006), the Tennessee Court of Appeals determined that a spouse may not recover funds loaned to a family business where the value of the business is less than the amount of the debt, the loans were not memorialized with promissory notes, the loaned funds had been expended, and the business is awarded to other spouse.

In Dolores H. Meeks v. Carl W. Meeks, 2006-Ohio642 (decided February 14, 2006), the Ohio Court of Appeals, Tenth District, affirmed the valuation of a hair salon, in the absence of expert valuation testimony, at one year's gross receipts plus goodwill value, which was based on the owner-spouse's opinion.

In James W. Zerrenner v. Bonnie S. Zerrenner, No. 127273 (Mich. April 7, 2006), the Michigan Supreme Court reversed the Court of Appeals' decision, which determined that a spouse who contributed uncompensated efforts to his or her spouse's separate property business was entitled to equitable restitution for those efforts under Postema v. Postema, 189 Mich. App. 89 (1991), because it found that the practice did not appreciate during the marriage and therefore there was no marital property to distribute.

In In re the Marriage of Campbell, No. 04CA2133 (Col. App. May 18, 2006), the Colorado Court of Appeals reversed and remanded a lower court's valuation of an interest in a law partnership for findings regarding the dissipation of the value of the partnership. The lawyer spouse filed for bankruptcy during the pendency of the divorce proceeding after receiving his and his wife's valuation experts' reports that indicated similar values with which he did not agree. As a result of the bankruptcy, the lawyer was expelled from the partnership and his interest repurchased under a bankruptcy expulsion provision in the partnership agreement. The bankruptcy court and the family court adopted the value determined and actually received under the partnership agreement, but the family court failed to address the dissipation issue, necessitating remand.

## Litigation

In Juan Armstrong v. LaSalle Bank National Association, No. 05-3417 (7th Cir. May 4, 2006), the U.S. Court of Appeals for the Seventh Circuit determined that
the appropriate standard of review to apply when considering whether an employee stock ownership plan (ESOP) trustee adopts a valuation of the subject stock is the abuse of discretion standard. It noted that one method for testing a trustee's abuse of discretion is whether a discount for marketability should have been applied. In making this recommendation, it gave some implied approval to the quantitative marketability discount model.

In Joseph Henry v. Champlain Enterprises, Inc., No. 05-0606-cv(L) (2nd Cir. April 26, 2006), the U.S. Court of Appeals for the Second Circuit reversed a district court's decision finding that an Employee Stock Ownership Plan (ESOP) trustee engaged in a prohibited transaction when purchasing stock in the company from its owners because the trustee did not ensure that the ESOP paid adequate consideration, which is defined as a good faith determination of the fair market value of the stock. It noted that the lower court must establish (1) the errors made in the fairness opinion and (2) that a prudent ESOP fiduciary would have recognized those errors.

In PharmaNetics, Inc. v. Aventis Pharmaceuticals, Inc., No. 05-1621 (4th Cir. May 31, 2006), unpublished, the U.S. Court of Appeals for the Fourth Circuit affirmed the lower court's exclusion of a economic expert in this Latham Act action because the expert failed to account for potential causes of lost sales that were independent of the wrongful advertising and because the damage assessment did not differentiate between PharmaNetics's claims. Therefore, it concluded that the testimony ran afoul of Daubert's fit requirement and was not sufficiently tied to the facts of the case.

In Delaware Open MRI Radiology Associates, P.A.. v. Howard B. Kessler, No. 275-N (Del. Chan. April 26, 2006), the Delaware Court of Chancery determined the fair value of $S$ corporation stock in this statutory appraisal action. In doing so, it tax-affected the value of the stock using a calculation of its own design that purported to determine the value of the $S$ corporation status to the dissenting shareholder. Additionally, the court rejected the company expert's position that facilities planned but not yet open for business should not be included in the value of the business, because such as position was in conflict with the operative reality of the business on the date of the dissented-to event.

In Richard S. Gesoff v. IIC Industries Inc., No. 19473 (Del. Chan. May 18, 2006), the Delaware Court of Chancery determined that a company-specific risk premium should not be added when computing the cost of capital when there is no financial analysis supporting the company-specific risk. Furthermore, the court held that a small stock premium, as reported in Ibbotson's, should be applied when computing the cost of capital used to value foreign subsidiaries so long as those subsidiaries are operating in a highly developed foreign market.

In East Park Limited Partnership v. Barbara A. Larkin, No. 289 (Md. Sp. App. March 6, 2006), the Maryland Court of Special Appeals determined that, generally, discounts for lack of control and lack of marketability should not be applied when determining the fair value of limited partnership interest under a statutory provision permitting a withdrawing partner to receive fair value for his or her interest, but they may be considered when determining the value of the interests. Additionally, it determined that post-valuation date evidence impacting the value of the business that was not knowable on the valuation date was not relevant to the determination of fair value on the valuation date.

In Wilbur K. Warnick v. Randall M. Warnick, 2006WY 58 (decided May 12, 2006), the Wyoming Supreme Court determined that the hypothetical costs of selling a partnership's assets could not be deducted from the value of the partnership when determining the value of a disassociated partner's interest under Wyoming's Revised Uniform Partnership Act, W.S. § 17-21-701(b), because the statute specifically requires the assets to be valued using the fair market value standard and the fair market value standard implicitly accounts for selling costs.

In Matthew Headley Holdings, LLC v. McCleary, Inc., No. 05-2122 (8th Cir. May 19, 2006), the U.S. Court of Appeals for the Eighth Circuit determined that a district court properly admitted expert testimony quantifying lost profits in this breach of contract action where the expert's assumptions and projections were based on market analysis and familiarity with the subject company's operations.

In Adonis Raphael v. Geraldine Elizabeth Raphael, No. 05-1403 (La. App. 3 Cir. May 3, 2006), the Louisiana Court of Appeals, Third Circuit, affirmed the jury's award of lost profits in this breach of settlement agreement case, which delayed the transfer of a funeral home business for seven months. The lost profits award was based on the post-delay profit history of the plaintiffs over the subsequent three years. Further, the court declined to limit the recovery period to the period of the delay, but found that it was reasonable to foresee damages resulting from that delay lingering during the postdelay period.

In M.A. Hajianpour, M.D., P.A. v. Khosrow Maleki, P.A., No. 4D05-2142 (Fla. 4 DCA May 31, 2006), the Florida Court of Appeal, Fourth District, determined that a professional association should be valued using a going concern premise when the professionals are not obliged to continue working together following the breach. In reaching this decision, the court analogized the breakup of professional association to a divorce, which forbids the inclusion of personal goodwill in the calculation of value of a professional practice.

In In re John Richards Homes Building Co., L.L.C., No. 04-2154 (6th Cir. March 1, 2006), the U.S. Court of Appeals for the Sixth Circuit affirmed a bankruptcy court's determination of lost profits flowing from a bad faith filing of an involuntary bankruptcy proceeding where the lost profits of the new business were based on the profit history of affiliated companies that were in the process of being rolled into the subject company.

In Saks Fifth Avenue, Inc. v. James, Ltd., No. 051613 (VA June 8, 2006), the Virginia Supreme Court reversed a trial court's decision and struck a lost profits calculation that attributed the entire loss in profits to the loss of an at-will employee, because the calculation did not differentiate between the loss attributable solely to the departure of an employee who was free to leave the employer for any reason from losses attributable to the employee's use of confidential information and competitive actions.
In Manta Management Corporation v. City of San Bernardino, No. E036942 (Cal App. 4 Dist. May 11, 2006), the California Court of Appeals determined that lost profits could be awarded when the business was unlawfully enjoined from operation and where the business earned profits from legal and illegal activity, so long as the profits from the illegal activities could be segregated from the lost profits award and the entire business cannot be characterized as a criminal enterprise. Additionally, the business post-injunction operations provided a sufficient basis from which to compute the lost profits incurred during the period the business was enjoined from operation.

In William Richert v. Ronald Marinaro, No. B179812 (Cal. App. 4 Dist. May 1, 2006), unpublished, the California Court of Appeals, Second District, determined that damages for breach of fiduciary duty could not be determined by reference to the value of a successor business when the first business is destroyed because the proper standard of recovery is lost profits and not
the value of the lost business. Furthermore, evidence of the value of the successor business alone is insufficient to establish lost profits of the first business with reasonable certainty.

In Fairway Dodge, Inc. v. Decker Dodge, Inc., No. A-1736-03T2 (NJ App. June 12, 2006, unpublished, the New Jersey Superior Court, Appellate Division, determined that an accountant's lost profits estimate was not a net opinion where the approach used was adequately supported by reference to accounting and industry standards. Rather, it found that the assumptions used in the approach were properly the subject of cross-examination.

In Advanta USA, Inc. v. Farmers Fertilizer Company, Inc., No. 2005-CA-000662-MR (Ky. App. June 9, 2006), unpublished, the Kentucky Court of Appeals determined that the trial court improperly computed the amount of lost profits in this breach of contract action when it awarded profits over a five-year period rather than over the 30 -day period called for in the contract.

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[^0]:    ${ }^{1}$ Valuing a Business, The Analysis and Appraisal of Closely Held Companies, Fourth Edition, Pratt, Shannon P., Reilly, Robert F., and Schweihs, Robert P., McGraw-Hill, New York, 2000.
    ${ }_{2}$ Warrants are securities that give owners the right, but not the obligation, to buy shares of common stock directly from a company at a fixed price for a given period of time. Importantly, warrants are issued by firms, whereas call options are issued by individuals. When a warrant is exercised, a firm must issue new shares of stock, diluting the existing shareholder base. However, the firm will at least receive the exercise price of the warrant as a cash inflow. When a call option is exercised, the exercise price flows to an individual.
    3 "Under somewhat optimistic assumptions, the value of Jack Welch's GE stock options could reach $\$ 1$ billion by the year 2010 if GE stock continues to climb at the same average rate of growth it experienced over the last ten years." Source: Ferraro, Steven R. Ph.D., CFA, 2003. "Recognize the True Cost of Compensation: Expensing Options Increases Transparency in Financial Reporting." Graziadio Business Report, 2003, Volume 6, Number 1.

[^1]:    ${ }^{4}$ While we have not conducted a formal study, we recognize that the lack of application of this approach might simply be the result of our sample.
    ${ }^{5}$ This topic may be particularly timely given the new Financial Accounting Standards Board (FASB) Statement 123R, which requires both publicly traded and privately held companies to expense sharebased compensation after 15 December 2005. However, how to value these options is not the focus of this article. We refer the reader to FASB Statement 123R for guidance.
    ${ }^{6}$ Furthermore for the same reasons cited below related to invested capital, we recommend that the value of employee options, which are quasi-equity instruments, also be included in the calculation of the market value of equity. In other words, if options exist, then only using the market value of common and preferred stock undervalues the market value of equity.
    ${ }^{7}$ Our goal as appraisers is comparability. This article addresses but one of the possible items we might consider when calculating enterprise value or MVSC. For example, appraisers may also want to value non-interest-bearing liabilities, such as retiree health and pension benefits, among others. While this topic alone could be the source of another article, it points to the possibility that stakeholder capital even as defined in this article is incomplete.

[^2]:    ${ }^{8} \mathrm{Mr}$. Aboody also found that there is a positive relation between firm value and options that are early in the vesting stage.
    ${ }^{9}$ Garvey, Gerald T. and Milbourn, Todd T., "Do Stock Prices Incorporate the Potential Dilution of Employee Stock Options?" (November 3, 2003). Available at SSRN: http://ssrn.com/abstract=266973 or DOI: 10.2139/ssm.266973. Dr. Milbourn is an Associate Professor of Finance at Washington University in St. Louis. Dr. Garvey is an Associate Professor of Finance at the Peter F. Drucker Graduate School of Management at Claremont Graduate University.
    ${ }^{10}$ Holman W. Jenkins Jr. is a member of the editorial board of The Wall Street Journal and writes editorials and the weekly Business World column.

[^3]:    11 www.fwcook.com/070698.html. July 6, 1998.

[^4]:    ${ }^{12}$ High technology companies have historically granted more options to their employees than companies in other industries. Moreover, their expected stock price volatilities are generally greater than companies in other industries, increasing the value of employee options, all else being equal.
    ${ }^{13}$ A company we selected at random.
    14 Agency costs are costs to resolve the conflicts of interest that may exist between shareholders and management. Theory purports that shareholders and managers will both act in their own self-interest if left alone. By granting options to management, these conflicts may be diminished. Moreover, management may be inclined to accept lower salaries (a benefit to the firm) in exchange for options.

[^5]:    * Rent included for Michaels Stores, but not for Jo-Ann Stores or A. C. Moore.
    $\dagger$ Interest income not separated from interest expense for Jo-Ann Stores.
    § For Jo-Ann Stores, stock-based compensation expense and loss associated with purchase of senior subordinated notes were not considered. For A.C. Moore, noncash change in accrued lease liability was not considered.
    EBIT (Earnings Before Interest and Taxes).
    EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization).

[^6]:    ${ }^{15}$ If a company does not issue share-based compensation, then MVIC is appropriate.
    ${ }^{16}$ Please note that appraisers also may want to consider the value of other claims on the cash flow of a business, such as retiree health and pension benefits, among others.

[^7]:    * Shares outstanding as of 31 December 2004 in accordance with 31 December 2004 Form 10-K. Book value of debt as of 31 December 2004.

