



Business Valuation
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Because Value Matters

VALUE ADDED™

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YOUR CORPORATE BUY-SELL AGREEMENT Ticking Time-Bomb or Reasonable Resolution?

PART ONE Buy-sell agreements exist in many, if not most closely held businesses having substantial size and/or value. And they exist between corporate joint venture partners in many thousands of enterprises.

Buy-sell agreements are agreements by and between the shareholders (or equity partners of whatever legal description) of a privately owned business and, perhaps, the business itself. They establish the mechanism for the purchase of stock following the death (or other adverse changes) of one of the owners. In the case of corporate joint ventures, they also establish the value for break-ups or for circumstances calling for one corporate venture partner to buy out the other partner.

Buy-sell agreements (or put agreements in some cases) are more important than most business owners, shareholders and boards of directors realize.

NEVER UPDATED. We recently reviewed a buy-sell agreement that was fine on the day it was signed by a company's two major shareholders - more than ten years ago. The agreement stated that the parties will reset the value each year. Since then, the company has more than tripled in size and value. However, the valuation in the buy-sell when it was signed remains in effect today because it was never updated.

This creates no significant problems - unless something adverse happens to one of the

shareholders. In that case, one shareholder would benefit from a bargain purchase price and the other's family would suffer a true economic loss.

FORMULA PRICING. Many business owners want to create a formula to establish the pricing if a buy-sell agreement is triggered. Quite a few agreements have them, usually with disastrous long-term results. However, formula pricing is not uncommon because it is an inexpensive alternative to hiring a business appraiser.

The question is, will formula results be fair for both sides in all circumstances? No rigid formula can realistically determine the value of a business over time with changing company, industry, and economic conditions. That's why many buy-sell agreements use an appraisal process.

THREE APPRAISERS. Many buy-sell agreements are written with a valuation mechanism involving multiple appraisal firms. Three common variations are:

1. Buying party retains one independent appraiser, and the selling party a second. Both provide valuation opinions. If the values are within a set percentage, the price for the buy-sell agreement will be the average of the two. If they are more than a set percentage apart, the price will be determined by the average of a third appraiser's value and that of the one closest to him or her.

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Our suggestion is that the parties retain a mutually agreeable, independent appraiser at the time of the negotiation of the buy-sell agreement

2. Buying party retains one independent appraiser and the selling party a second. Neither provide appraisals. Instead, they mutually select a third appraiser, who will provide the valuation which is the agreed upon transaction value.
3. Buying party retains one independent appraiser and the selling party a second. Like Scenario 1, both provide valuation opinions which, if within a set percentage, will be averaged. Unlike Scenario 1, if the conclusions are more than a set percentage apart, the original two appraisers select a third appraiser, who must then pick one of the two appraisals as the more correct valuation transaction price.

A SINGLE APPRAISER. There are at least two variations of the single appraiser pricing mechanism.

1. The agreement states that the the parties select a

single appraiser *at the time of a trigger event*. The appraiser provides a valuation opinion that serves as the price for the transaction. Unless, of course, one party disagrees and litigation ensues.

2. The agreement states that the parties select an appraiser *at the time of the signing of the buy-sell agreement*. We've recommended this choice of pricing mechanism for years, with a twist. We suggest that the parties retain a mutually agreeable, independent appraiser at the time of the negotiation of the buy-sell agreement. The appraiser provides an appraisal, and the parties agree that this is the initial value for pricing if the agreement is triggered. All parties know the appraiser, can see the methodologies employed, and are comfortable, at the outset, that the valuation is reasonable and mutually agreeable.

The parties then agree that the selected appraisal firm reappraise the business for purposes of the buy-sell agreement every year or so in order to re-establish the price for transactions. If the appraisal is "stale" at a trigger event (say more than six months, the appraiser will reappraise as of the date of the trigger event.

This structure offers greater consistency and certainty for all parties involved. ♦

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This article originally appeared in Chris Mercer's blog, MERCER ON VALUE, which can be found at www.merceronvalue.com.

Look for Part Two of this article in the next issue of VALUE ADDED™.

BUY - SELL AGREEMENTS: THE DO'S AND DON'TS

*A New Book from Mercer Capital,
Coming in the First Quarter of 2006*

Mercer Capital has reviewed hundreds of buy-sell and other shareholder agreements, and we want to share our "lessons learned" with you. We do not offer legal opinions or guidance, but instead provide a list of things to watch out for and why they are important. Written for business owners, attorneys, CPAs, insurance providers, as well as other business appraisers, the book also includes case studies from our history of client engagements that powerfully illustrate the consequences of badly-drafted agreements.

To be notified of the publication date and qualify for the special pre-publication discount, email Barbara Price at priceb@mercercapital.com. Please type "Buy - Sell" in the subject line, and be sure to provide your name and address in the message.

www.mercercapital.com

VALUING EMPLOYEE STOCK OPTIONS

A Guide for Choosing Either Lattice or Black Scholes

As I draft this, comfortably ensconced in seat 6F on a flight home from the September meeting of the Appraisal Issues Task Force (AITF) in New York, it is admittedly difficult to believe the furor that erupted last year over the FASB's proposal to expense stock options. Currently, SFAS 123R is headed for the compliance phase, and the topic for discussion at the AITF is now the future of purchase price allocation, or SFAS 141R. Looking out my window at 35,000 feet I can see for hundreds of miles, and from that perspective it is apparent that 141R is but one part of the FASB's herculean effort to drag financial reporting out of the iron age and into the information age. Nevertheless, at 500 miles an hour I'm still not moving as fast as the changes in financial accounting as I know it, and pooling accounting doesn't look so bad.

Right now, finance professionals at companies across America are working late trying to figure out how best to value their equity based compensation to be ready to comply with SFAS 123R. This involves a range of considerations, but chiefly among these is choosing whether to value employee stock options using a closed form approach, such as the Black Scholes Option Pricing Model (Black Scholes), or some kind of lattice model such as a binomial model. In the initial exposure draft, the FASB favored lattice models over Black Scholes, but in the end sanctioned the use of either methodology. So how should a company decide how to

value their employee stock options? Mercer Capital has done option analyses for many years and for many different purposes. We tend to think that Black Scholes is generally more user friendly simply because it has only six inputs ("user" can be defined here as company management, auditors, and the investment community). Despite this, lattice models have generated quite a loyal following because they are far more flexible and are, therefore, thought to offer more precise indications of value. In the end, the models consider similar ranges of behavior in different ways, but typically do not result in materially different conclusions of value. So "getting the right answer" is not the primary criteria in choosing a valuation methodology for compliance with SFAS 123R.

Black Scholes. Black Scholes essentially has six inputs, four of which are entirely objective and two of which (typically the most sensitive two, by the way) are the product of reasonableness and informed judgment:

1. The underlying stock price - objectively knowable
2. The risk free rate of interest - objectively knowable
3. The strike price - objectively knowable
4. The dividend yield - this can usually be projected with some degree of certainty
5. The volatility factor - conventional wisdom says

that this is a product of the underlying stock's trading history or the imputed volatility embedded in publicly traded options on the underlying stock. But conventional wisdom can be lacking; the volatility factor is a forward looking expectation, which may or may not comport with history (in our experience historical volatility can change rapidly under changing market conditions). Imputed volatility on publicly traded options is also forward looking, but usually for much shorter timeframes than an employee stock option. As a result, this input involves analytical judgment, even if that judgment is to be a slave to history.

6. The expected term or life of the option - again, this is a judgment call. Exercise history is important because auditors will ask for it and because people think so but the input is, again, a forward expectation and history might not be predictive of future events. If your history covers the stock existing in pricing conditions which will not persist into the future then the exercise experience is guaranteed to change. Exercise history lends precision to this process, but precision here cannot be confused with accuracy.

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Value Added



For a non-dividend paying company, the use of a lattice model will probably not lead to a material difference in option expense

Lattice Models. Lattice models incorporate these same behaviors but allow you to change the expected behavior as much as needed. As a result, you can wind up with as many as 20 different assumptions instead of six - which can be unwieldy. And it is hard to argue that lattice models enhance the explanatory power of financial statements, as they are difficult to explain in financial disclosures such that the investing public can replicate them or evaluate their reasonableness. Lattice models consider early exercise of call options if it is optimal to exercise before expiration. If early exercise is expected to be optimal, the lattice call will have a higher value than that produced by Black Scholes.

A lattice model assumes the rate of return on a stock can have two possible values at the end of any discrete period. If we look at a one period model, the stock price will be either uS or dS at the end of the period. The stock price movement is represented in Figure 1.

Therefore, the value of a call with one period to expiration is equivalent to the representation shown in Figure 2.

At this point, the lattice model assumes the value of a call should be the expectation, in a risk-neutral world, of the discounted value of the payoff it will receive. As the time to expiration is divided into more intervals, the diagrams

shown in Figures 1 and 2 take on a lattice framework. If the time to expiration continues to be divided into smaller intervals with smaller up or down movements, the lattice valuation equation approaches the continuous-time valuation equation of Black Scholes.

Lattice models are very much in vogue right now, because, as mentioned, they are deemed to be "more precise" due to the infinite number of inputs. However, projecting forward risk free rates and volatility and exercise behavior five years hence is difficult to "get right." As such, there is a worthwhile distinction to be made between greater precision and greater accuracy.

For a non-dividend paying company, the use of a lattice model will probably not lead to a material difference in option expense, but can be much more cumbersome to implement. Further, a lattice model will offer no more information to investors or the analysts that follow a given stock, and will be harder for auditors to audit.

However, because lattice models are currently preferred by many, credibility with the investment community, the increasing use of lattice models by other public companies, and the comfort of auditors might be sufficient reasons to make the change to some sort of a lattice model.

Planning for Compliance. For those companies in the process of considering which type of model to employ, we offer this guidance:

1. Review your master option agreement, sample option grants, and your option valuation history thus far.
2. Perform a study of other public companies in your industry to see what they are doing to get an idea of what the "herd mentality" is.
3. Talk to your auditors on the front end about how strongly they feel about which option pricing model you choose.
4. Do a more formal comparison of your option expense using different models to show what is involved in actually using the different models.
5. Work with a qualified business appraiser to discern the pros and cons of which valuation model to choose.
6. Have the appraisal firm develop a model that you can reasonably implement, including the derivation of inputs to the model.
7. If applicable, have the business appraisal firm make a presentation to your Board of Directors to go over your protocol for compliance with SFAS 123R.

Figure 1

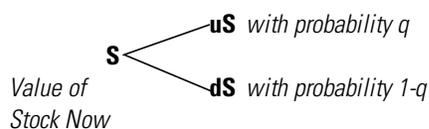
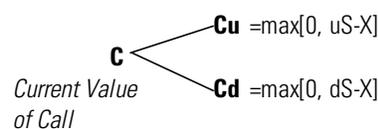


Figure 2



8. Choose a business appraisal firm that will be available to answer questions from your auditors with credibility.

Epilogue. Of these considerations to make in designing a protocol to comply with SFAS 123R, a few warrant some additional comment.

Much attention is being spent these days on peer behavior, and, indeed, if seven of the eight companies in your industry are using a lattice model to value their option compensation and your company elects to use Black Scholes, be prepared to defend your decision. Nonetheless, at the AITF meeting, I asked the group (which consisted of 50 other valuation practitioners like me from firms across the U.S.) whether or not observing peer behavior in valuation matters leads

to best practices or just herd mentality. The group correctly answered “yes.”

Elaborate histories of stock price volatility and exercise behavior are interesting and informative and worthy of consideration, but using them blindly as a proxy for the future is expecting past performance to be indicative of future results. Business appraisers make this mistake commonly. Sometimes the past is the only seemingly objective evidence we have to go on. But valuation is about tomorrow, not yesterday, and what is past should ultimately be treated as such (along with rotary dial telephones, Oldsmobile, and the pooling method of accounting for business combinations).

Don't be afraid to ask for help.

Mercer Capital has extensive experience in valuing options using both Black Scholes and lattice models. For more information on our services, please contact me at 800.769.0967, or by email at crowm@mercercapital.com.



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MERCER CAPITAL HIGHLIGHTS

NEW HIRES & PROMOTIONS

Mercer Capital is pleased to welcome **Travis B. Flenniken**, **Laura J. Hoffmeister**, **B. Patrick Lynch** and **Laura D. Stanford** to our professional staff as Financial Analysts.

Nicholas J. Heinz has been named Vice President, and **Eden A. Gipson**, **Laura O. Matthews** and **Conley W. Patton** have been named Senior Financial Analysts.

SPEAKING ENGAGEMENTS OF NOTE

September 30, 2005

“The Integrated Theory of Business Valuation”
8th Annual Conference of the Arizona Society of CPAs
Phoenix, Arizona
Z. Christopher Mercer, ASA, CFA

October 18, 2005

“M&A Overview”
Financial Executives International Memphis Chapter
Memphis, Tennessee
Timothy R. Lee, ASA & Nicholas J. Heinz

November 13, 2005

“Allocation of Enterprise Valuation to Various Classes of Equity”
FCG Seminar
Las Vegas, NV
Travis W. Harms, CFA, CPA/ABV

MERCER CAPITAL EXECUTIVES FEATURED IN ASA PROFESSIONAL BLOGGING ARTICLE

Two of Mercer Capital's top executives, CEO Z. Christopher Mercer and Senior Vice President of Marketing Barbara Walters Price, were featured in the article “To Blog or Not To Blog,” which appears in the Summer 2005 edition of *ASA Professional*, the quarterly magazine of the American Society of Appraisers.

In the article, Mercer relates the scope and purpose of his blog, MERCER ON VALUE (www.merceronvalue.com), which is targeted to C-level executives, and addresses issues relating to business valuation, values, and more. Started in April of 2005, MERCER ON VALUE was one of the first blogs in the business valuation profession, and has continued to increase its daily readership at a marked pace.

Price provides insight to the process of building MERCER ON VALUE from the ground up, and explains the importance of the blog to Mercer Capital's overall marketing strategy. Price, who authors her own blog, BWPRICE'S MARKETING U (www.bwprice.blogs.com), also provides some practical tips to business professionals that may be considering starting their own blog.

Mercer and Price are finding innovative ways to leverage MERCER ON VALUE, as Mercer is using the blog to write his next book, “Is Your Business Ready For Sale?™.” “The blog is a vehicle to develop ideas, get feedback, and flesh out a lot of material for my next book,” Mercer said. “This is a powerful use of the blog, and not one that we anticipated when we started,” Price added.

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Choose a business appraisal firm that will be available to answer questions from your auditors with credibility



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Mercer Capital Executives Featured in Blogging Article

Buy-Sell Agreements: The Do's and Don'ts

Complimentary Teleseminar Series:
Is Your Business Ready for Sale?™

He stared into his morning cup of coffee trying to fathom how he could have walked away from \$25 million.

This is the story of an owner/operator of a manufacturing business located in a small southern town. The business had been in the family for three generations. In the late 1980s, revenues were \$30 million with a hefty 20% pre-tax margin. The industry was highly competitive so growth was difficult but the family ran the business so well that they were able to increase market share and sales while generating excellent margins. At this point, the company was worth about \$35 million or 6x pre-tax earnings. It was a prime time to sell but the family enjoyed the income from and the social status of owning this business.

In the late 1990s, the economy was in a lengthy expansion and the acquisition market was dynamic. Revenues were now \$28 million and pre-tax margins were still in the 20% range. However, potential trouble was brewing. Domestic competitors were moving off-shore. Yet, there were still potential acquirers for the business now worth between 5x and 6x pre-tax earnings - or about \$30 million. Still, the family was comfortable and complacent.

It is early 2005 and revenues are about \$20 million and pre-tax margins have slipped to 12% and the downward trend appears to be continuing. The company is now worth about \$10 million, layoffs are not uncommon, and there are no buyers in sight.

COMPLIMENTARY TELESEMINAR SERIES Is Your Business Ready for Sale?™

Hosted by Chris Mercer

The owner/operator now spends his mornings staring into his coffee before facing another day at work. He knows he should have sold and knows now that the opportunity likely won't come again.

This classic story of "it can't happen to me" is a true story. In our experience working with thousands of business owners, we say "it can and likely will happen to you."

In a new teleseminar series, we are sharing the lessons we've learned in valuing and counseling hundreds of business owners.

Spend a few hours with us and you'll be focused every day on those activities and metrics that will position your business as "ready for sale" so that when the opportunity arises, you won't regret what might have been!

November 2	Noon - 1:30pm (Central Time)
December 14	Noon - 1:30pm (Central Time)
January 18	Noon - 1:30pm (Central Time)

**For more information or to register, visit
www.mercercapital.com/readyforsale.html**

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