The *Business Appraisal Practice* is one of the industry's most widely acclaimed peer-reviewed technical business appraisal journals.

To order a subscription, call (800) 299-4130.
Annual Subscription Fees: IBA Members and Non-Members: $95.00.

2014
FIRST QUARTER

Business Appraisal Practice

IN THIS ISSUE:

Articles by outstanding business appraisal professionals:

IBA
INSTITUTE OF BUSINESS APPRAISERS
THE PIONEER OF BUSINESS APPRAISAL

Business Appraisal Practice

FIRST QUARTER 2014

TABLE OF CONTENTS

IBA
INSTITUTE OF BUSINESS APPRAISERS
THE PIONEER OF BUSINESS APPRAISAL

EDITOR'S COLUMN

Shawn M. Hyde, CBA, CVA,CMEA

Results from Previous Issue's Survey

In the previous issue of the *Business Appraisal Practice,* I posed a series of questions to all of you as readers of the journal and valuation practitioners, relating to the topic of holder's interest as defined subsequent to the Michigan court case, *Kowalesky v. Kowalesky.* These questions are shown in the box to the right.

I promised to report our findings in this issue. The answers to the first three questions were surprisingly unanimous in their results. Unfortunately, we only received two responses to the survey.

I am still quite curious as to the answers to these questions. For those of you who might also be interested in these results, the survey is still active and can be found at the following web address: https://www.surveymonkey.com/s/4Q2013BAP

If we receive sufficient responses to at least the first three questions, we could have the basis for a very interesting discussion about our industry.

On another note, in this quarter's issue we have a guest editorial column authored by Robert P. Schweihs on built-in capital gains.

***Business Appraisal Practice* Survey**
Fourth Quarter 2013

What Is Your Opinion?

We would like to hear from you about the Fourth Quarter 2013 issue of *Business Appraisal Practice* (BAP). Please take a couple of minutes to answer these four questions. The results will be reported in the next issue of BAP.

1. **Do you practice in an area where holder's interest or something similar is generally required in a divorce case?**
   - ○ Yes
   - ○ No
2. **Are you generally required to value at least a portion of goodwill as part of a divorce action or is all goodwill excluded?**
   - ○ Goodwill is included
   - ○ Goodwill is excluded
3. **In your opinion, should all the assets of the business, including all of the goodwill, be included in the valuation of a business for divorce purposes?**
   - ○ Yes
   - ○ No
4. **Is there anything specifically you would like to add to this discussion?**

Shawn M. Hyde, CBA, CVA, CMEA, is the business valuation manager at Yeo & Yeo CPAs, a top 200 certified public accounting and business consulting firm with offices throughout Michigan. He has over 15 years of valuation and appraisal experience in numerous industries. He is a Certified Business Appraiser, Certified Valuation Analyst, and a Certified Machinery/Equipment Appraiser. He has written and taught courses for the Institute of Business Appraisers (IBA) and for the National Association of Certified Valuators and Analysts(NACVA) for 10 years. He has served on the IBA's Education Board and the Board of Governors and is the editor in chief of IBA's Business Appraisal Practice *journal.*

Valuation Adjustment for Built-In Capital Gains in a C Corporation

Robert P. Schweihs, ASA, CBA, CVA

Income taxes that will be due on the appreciation in the value of assets owned by a business can affect the value of an ownership interest in the business. In most cases, the form of the business has an impact on its value, especially when the appraiser is analyzing the value of a minority interest in the business. For example, a business can operate as a sole proprietorship, partnership, limited liability company, S corporation, or a C corporation. Of these, the C corporation is the one in which the gain on the sale of appreciated assets is likely to be taxed twice. This discussion demonstrates that under most circumstances every dollar of built in gains taxes in a C corporation (even though payment of those taxes is not due until the asset is sold in the future) reduces the value of the C corporation by one dollar.

Introduction

Prior to the Tax Reform Act of 1986, taxpayers were allowed an election to treat the acquisition of the equity of a C corporation as if it was an acquisition of the assets of the C corporation. The asset-acquisition tax treatment allowed the C corporation buyer to depreciate the acquisition date fair market value (i.e., the "stepped-up basis") of the acquired assets. In addition, the asset-acquisition tax treatment allows the seller to recognize the gain on the sale of the C corporation assets at the amount of the purchase price for the transaction. This federal income tax treatment was referred to as the General Utilities Doctrine, named after a tax case. The General Utilities Doctrine allowed the selling shareholders to avoid double taxation on the "deemed" liquidation of the C corporation assets. The General Utilities Doctrine was abolished by the Tax Reform Act of 1986.

As a result of the discontinuation of the General Utilities Doctrine, when all of the stock of a C corporation is acquired, normally[1] the income tax basis of the acquired assets is carried forward and no step-up in the basis of the acquired assets is recognized by the buyer.

When an asset with unrecognized appreciation is held by a C corporation, a built-in gains (BIG) tax obligation exists. The BIG tax is not paid by the C corporation until that asset is sold. A BIG tax obligation is common whether the subject C corporation[2] is an (1) operating company, or (2) investment or holding company.

When valuing C corporations after 1986, the issue of how to treat the BIG tax obligation is frequently encountered by the valuation analyst. The issue presents itself when the valuation analyst conducts an assignment for purposes such as: merger and acquisition pricing, transaction fairness analysis, shareholder disputes, estate and gift tax planning and compliance, shareholder buy/sell agreements, ESOP formation, etc.

In federal estate and gift tax matters, this issue has been the subject of litigation. Recently, federal courts have increasingly allowed a valuation adjustment to reflect the BIG tax obligation when determining the business value of a C corporation. However, not all courts have allowed a valuation adjustment equal to 100 percent of the estimated current built-in gains tax liability.

This discussion dispels various myths that surround the valuation of a C corporation that owns/operates appreciated (i.e., BIG) assets.

Illustration

Candy Company (Candy), a C corporation, owns one asset: a single marketable security. Based on the public trading price on the valuation date, that marketable security is worth $52 million. There are no Candy liabilities other than the obligation to pay the BIG tax whenever the marketable security is sold. For simplicity, let's assume that (1) Candy's tax basis in the underlying security is $0, and (2) the BIG tax rate for a C corporation is 40 percent.

Suzy, Candy's current owner (and the hypothetical willing seller), expects the

1 Under certain circumstances, it makes economic sense for the buyer and seller to agree to a Section 338(h)(10) election, which allows for the basis of the acquired assets to be stepped up. For example, if the C corporation has sufficient net operating losses (NOL) to shield the tax on the gain of the sale of the assets (if those NOLs would not be available in the future to the buyer).

2 Other legal entities treat the BIG tax liability differently than C corporations. For example, when a non-controlling (i.e., LP) interest in a partnership is acquired, the GP will often allow for a Section 754 election to be made, which allows the partnership to account for the acquisition of that interest at its purchase price, thus allowing that partner to avoid the double taxation up to the amount of the purchase price when assets are eventually sold.

underlying security to increase in value over time.

As an alternative to buying Candy, Benny (a hypothetical willing buyer) could acquire the identical underlying marketable security at that same market price, i.e., $52 million.

If Benny paid $52 million for a 100 percent ownership interest in the Candy stock and then liquidated the corporation, the marketable proceeds after paying the BIG tax would be $31.2 million (i.e., $52 million times [1 - 40 percent]).

Of course, Benny can buy the Candy stock and defer the payment of the $20.8 million BIG tax liability indefinitely. If Benny acquires Candy, from that point forward, Benny will earn investment returns on the total asset value of Candy (i.e., $52 million).

Suzy tells Benny that this scenario has the same effect as an interest free loan from the government of $20.8 million.

Suzy wants Benny to share with her the economic benefit of the deferral attribute of the C corporation that Benny will be enjoying. That is, Suzy expects Benny to pay some amount greater than $31.2 million for the stock of Candy.

Let's assume that Benny negotiates an even split of the amount of the deferred BIG tax with Suzy by paying Suzy $41.6 million (i.e., $31.2 million plus the BIG tax is split of $10.4 million each). In that case, Benny can still defer the payment of the full $20.8 million BIG tax liability indefinitely while earning a return on the full $52 million marketable security value.

Benny pays Suzy $41.6 million cash for the Candy stock. Benny holds on to the Candy stock for many years while enjoying (1) investment returns on the $52.0 million security value, and (2) an *interest-free* loan on the $20.8 million BIG tax liability.

Table 1: Table of Illustrative Example Assumptions

Candy income tax basis in the underlying security	$ 0
C corporation income tax rate on built-in capital gains = personal ordinary income tax rate	40%
Personal capital gains tax rate	20%
Expected holding period (years)	10
Expected annual rate of return on underlying single security (cost of equity)	10%
Future value factor for equity[3]	2.59374
Expected cost of debt	10%
Future value factor for debt[4]	2.59374

Who Made the Better Deal?

Should Benny have acquired the value of the underlying marketable security by buying the Candy stock or by making a direct investment in the underlying security? Let's examine that investment decision by analyzing Benny's investment and Suzy's investment.

For purposes of this analysis, let's assume that Suzy (1) takes all of the cash received from Benny (i.e., this example will not adjust for the personal income taxes that Suzy would have to pay on the capital gains above her outside basis in the Candy stock), and (2) enters into an interest-bearing loan.

If the after-tax gain on investment is greater for Benny than for Suzy, then acquiring the Candy stock after splitting the amount of the built-in gain with Suzy (and enjoying the "interest-free loan" on the unpaid BIG tax) is a better investment than buying the security directly.

In order to analyze which is the better deal, let's assume that Suzy (1) takes the $41.6 million in cash that Benny paid, (2) borrows $10.4 million from a lender, (3) buys $52.0 million of that identical security, and (4) holds that security for the same period of time that Benny holds the Candy stock. Let's assume Suzy (1) can borrow at the same interest rate that the underlying security is expected to appreciate, and (2) can accumulate and defer the principal and interest payments on the debt for the entire holding period.

Let's assume an expected holding period of 10 years and an annual rate of return on the underlying security of 10 percent. And, let's assume (1) an income tax rate of 40 percent for corporate income and for ordinary (personal) income, and (2) a personal capital gains tax rate of 20 percent. Finally, let's assume that the underlying security pays no dividends during the entire holding period.

Later, we'll relax these assumptions.

After buying the security for $52 million and holding it for 10 years, let's assume that Suzy sells her interest for $134.87 million. Let's assume that Suzy pays off the loan, recognizes a tax benefit for the interest expense on the loan, and pays all of the personal income taxes on the investment. Suzy's interest is a direct investment and, therefore, Suzy has no BIG tax to pay.

Benny also sells the security for $134.87 million after 10 years. Benny pays $53.95 million in BIG tax ($20.8 million of which existed on the date of acquisition and was deferred: the "tax free loan"). And, then Benny liquidates the Candy corporation.

Let's assume that Benny pays his personal income tax on the gain from the proceeds from the liquidation of Candy.

Table 2 presents a comparison of the after-tax proceeds from Benny's and Suzy's investment.

In this situation, Suzy clearly made the better deal. Making the direct investment generated a better after-tax benefit than buying the Candy stock

3 $1 held for expected holding period of 10 years at expected rate of increase of 10 percent (cost of equity).

4 $1 held for expected holding period at expected cost of debt of 10 percent. The interest is accumulated and unpaid."

Table 2: Benny and Suzy Evenly Split the BIG Tax	Line	Benny	Suzy
Estimated asset value at the end of the expected holding period[5]	22	$134.87	$134.87
Less: C corporation income tax on the built-in gain ("inside")[6]	23	53.95	
Equals: Sale proceeds available to the owner[7]	24	80.92	134.87
Less: Total investment basis[8]	25	41.60	52.00
Equals: Taxable gain on investment (i.e., personal taxable gain)[9]	26	39.32	82.87
Less: Personal capital gains tax ("outside")[10]	27	7.86	16.57
Equals: Pre-Debt After-Tax Sales Proceeds available to the Owner[11]	28	73.06	118.30
Less: Original amount of the debt[12]	29		10.40
Less: Accrued and unpaid interest expense during expected holding period[13]	30		16.57
Plus: Income tax benefit from interest expense at personal ordinary income tax rate[14]	31		6.63
Equals: After-tax (and after-debt expense) proceeds[15]	32	$73.06	$97.95

5. $52 million times 2.59374, the future value factor for equity (held for 10 years at 10 percent per year).
6. For Benny, $134.87 million minus $0 basis times 40 percent, the BIG income tax rate on the "inside" basis.
7. Line 22 minus Line 23.
8. Purchase price for the underlying security.
9. Line 24 minus Line 25.
10. Gain on investment times the BIG income tax rate on the "outside" basis.
11. Line 26 minus Line 27.
12. Original amount borrowed.
13. $10.4 million debt times 2.59374, the future value factor for debt (held for 10 years at 10% per year) minus $10.4 million (from Line 29).
14. Line 30 times 40 percent, the ordinary income tax rate.
15. Line 28 minus Line 29 minus Line 30 plus Line 31.

Table 3: Benny Subtracts All of the BIG Tax	Line	Benny	Suzy
Estimated asset value at the end of the expected holding period	22	$134.87	$134.87
Less: C corporation income tax on the built-in gain ("inside")	23	53.95	
Equals: Sale proceeds available to the owner	24	80.92	134.87
Less: Total investment basis	25	31.20	52.00
Equals: Taxable gain on investment (i.e., personal taxable gain)	26	49.72	82.87
Less: Personal capital gains tax ("outside")	27	9.94	16.57
Equals: Pre-Debt After-Tax Sales Proceeds available to the Owner	28	70.98	118.30
Less: Original amount of the debt	29		20.80
Less: Accrued and unpaid interest expense during expected holding period	30		33.15
Plus: Income tax benefit from interest expense at personal ordinary income tax rate	31		13.26
Equals: After-tax (and after-debt expense) proceeds	32	$70.98	$77.61

and enjoying the interest-free loan. The conclusion of this analysis is that Benny paid too much for the stock of Candy.

How Much Should Benny Have Paid for the Candy Stock?

Benny decides that it would be fair to pay Suzy no more than the amount that would put them both in the same after-tax economic position.

Benny makes the same analysis based upon Benny's decision to pay no more than $31.2 million for the Candy stock. The amount of $31.2 million is the proceeds Benny would receive if he bought the Candy stock and immediately sold the security and liquidated the C corporation. In other words, Benny assigns a 100 percent, dollar-for-dollar discount for the BIG tax liability.

There is no reason for Suzy to agree to a price less than that amount. This is because Suzy could sell the security and liquidate the C corporation herself.

As before, let's assume that Suzy takes the $31.2 million in cash that Benny paid, borrows $20.8 million from a lender under the same terms as previously described, buys $52.0 million of

that identical security, and holds that security for 10 years.

Table 3 presents a comparison of the Benny and Suzy after-tax proceeds after liquidating their investments after ten years.

The conclusion of this analysis is as follows: the difference narrowed, but making the direct investment generated a better after-tax benefit than buying the Candy stock and enjoying the interest-free loan. Even at a 100 percent BIG tax discount, buying the Candy stock and holding it is a bad deal for Benny.

Comparing these two scenarios, Benny earned a $2.08 million greater after tax return ($73.06 minus $70.98) by paying Suzy $10.4 million more for the Candy stock in the first scenario. Obviously, Benny would have generated a greater return by investing that $10.4 million directly in the underlying security.

The willing buyer would not pay a price greater than the amount after subtracting a 100 percent valuation discount for the BIG tax. And, the willing seller would never accept a price lower than the amount after subtracting a 100 percent valuation discount for the BIG tax.

Let's Relax the Analysis Assumptions

How would this basic analysis conclusion change if a different analysis assumption is applied?

First, if the underlying security pays dividends during the holding period, the owner of the C corporation will be subject to double taxation on those dividends, if those dividends are distributed, compared to the direct investment scenario. Therefore, if the underlying security generates cash flow during the holding period, making the direct investment would generate a better after-tax benefit than buying the Candy stock after (1) applying a 100 percent BIG tax discount and enjoying the interest-free loan.

Let's return to the Table 1 analysis assumptions. Let's apply other reasonable assumptions or even a combination of reasonable assumptions. The analysis conclusion that making the direct investment generated a better after-tax benefit than buying the Candy stock after applying a 100 percent BIG tax discount and enjoying the interest-free loan does not change whenever there is a BIG in the security held by Candy.

In other words, the analysis conclusion doesn't change whenever (1) the holding period is greater than zero, (2) the cost of equity is greater than the cost of debt, or (3) the corporate tax rate is greater than the personal capital gains tax rate. When those factors are set equal to each other, then making the direct investment generates an economic benefit that is equal to buying the Candy stock after applying a 100 percent BIG tax discount and enjoying the interest-free loan.

If the underlying asset of Candy was something other than a single marketable security, the analysis is slightly more complicated. This is because, during the holding period, (1) most other types of assets produce taxable income (similar to dividends), and (2) the original amount invested in most other types of assets is eligible for depreciation or amortization tax deductions.

The taxable income generated during the holding period is taxed twice inside of a C corporation (when compared to a direct investment).

When those other assets are liquidated inside the C corporation, the amount of the depreciation deductions may be subject to depreciation recapture.

A Non-Controlling Interest in Candy

As demonstrated in this illustration, buying a controlling ownership interest in a C corporation after applying a 100 percent BIG tax discount is not an attractive investment compared to a direct investment in the underlying assets. This statement is true regardless of the period of time that the assets are held prior to liquidation.

The controlling ownership interest holder in a C corporation is in a position to exercise the prerogatives of control. One of these rights is to decide if and when to liquidate any or all of the assets of the C corporation.

Based on the foregoing, on any valuation date before the date the underlying security is liquidated, the fair market value of a non-controlling interest in Candy is less than a pro rata percentage of the net asset value of Candy. That is the value of the underlying security is less the application of a 100 percent BIG tax discount.

From the perspective of a hypothetical willing seller of a non-controlling ownership interest in Candy, the "tax-free loan" argument is not justifiable.

The tax attributes of a non-controlling ownership interest in Candy are not particularly attractive to a hypothetical willing buyer. Any cash flow from Candy during the holding period will be subject to double taxation compared to the direct investment alternative. Upon the sale of the Candy equity (at a point other than after liquidation of the underlying assets), the "outside" basis is taxed at the same personal capital gains rate to which the direct investment is subject.

However, the amount of the 100 percent BIG tax liability will have increased during the holding period at a higher rate than the direct investment rate. Therefore, the non-controlling ownership interest in Candy becomes less valuable (than the direct investment alternative) as time goes on.

Besides deciding the length of the holding period prior to liquidation of the assets, there are many other prerogatives of control that the owner of the non-controlling ownership interest in Candy may not enjoy. For instance, the owner (i.e., from the perspective of either the hypothetical willing seller or the hypothetical willing buyer) will not be in a position to unilaterally (1) influence the investment philosophy of Candy, (2) decide with whom Candy will conduct business, or (3) challenge the compensation paid to the management of Candy.

During the holding period of the in-

vestment in a non-controlling ownership interest in Candy, the owner (i.e., from the perspective of either the hypothetical willing seller or the hypothetical willing buyer) will not be able to redeploy the funds used to buy the non-controlling ownership interest.

In contrast to an investment in a non-controlling ownership interest in Candy, an investor who made a direct investment in the single marketable security owns and controls the investment. That investor can freely change the investment decision as a result of changing market conditions. That investor can sell all or a portion of the security at any time. That investor can change the investment philosophy. In sum, the investor who makes a direct investment in single marketable security has full control over a readily marketable security.

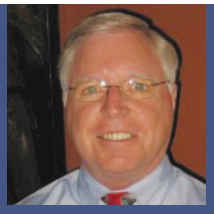
Conclusion

This discussion presented an illustrative example that addressed various myths that surround the valuation of a C corporation with appreciated underlying assets.

Based on the illustrative example, buying a controlling interest in a C corporation after recognizing 100 percent of the built-in gains tax liability is not an attractive investment compared to making a direct investment in the C corporation's underlying assets. The ability to defer the built-in gains tax liability does not have the same economic effect as an "interest free" loan from the government.

In addition, on any valuation date before the date the underlying security is liquidated, the fair market value of a non-controlling interest in a C corporation is less than a pro rata percentage of the net asset value of the C corporation (i.e., the value of the underlying security less the application of a 100 percent percent BIG tax discount). This is because a non-controlling ownership interest holder in a C corporation, even after fully recognizing 100 percent of the built-in gains tax liability, suffers from both a lack of control and a lack of marketability.

Robert P. Schweihs, ASA, CBA, CVA, is a managing director of Willamette Management Associates and is located in their Chicago office. He can be reached at (773) 399-4320 or at rpschweihs@willamette.com.



Discount for Lack of Marketability for Controlling Interests

Dennis Bingham, MCBA, ASA

A discount for lack of marketability (DLOM) for controlling ownership interests is controversial.[1] Some appraisers believe controlling interests are marketable and no DLOM is necessary. Other appraisers would consider a DLOM on a case-by-case basis.

I believe the inability to readily sell a controlling interest, within 3–5 business days, increases an investor's exposure to changing market conditions and increase the risk of ownership; therefore, a DLOM should be considered. The U.S. Tax Court has recognized DLOMs for controlling interests are appropriate:

Even controlling shares in a nonpublic corporation suffer from lack of marketability because of the absence of a ready private placement market and the fact that flotation costs would have to be incurred if the corporation were to publicly offer its stock.[2]

Empirical studies of marketability discounts relate only to minority ownership interests in closely held companies. There is no direct evidence available regarding the magnitude of a DLOM for a controlling interest. To estimate a DLOM for a controlling interest, flotation costs are frequently used.

Flotation Costs

Flotation costs are the expenses involved in going public. Since flotation costs are associated with going public, they only apply to the analysis of controlling interests.

Flotation costs are comprised of two components: compensation earned by the investment bankers and out of pocket expenses. Compensation expense is the difference between the price paid to the issuer and the public offering price (underwriting spread). The spread is calculated as a discount from the price of the shares sold.

Out of pocket costs typically involved in going public include:

1. **Legal Costs:** Preparation of the registration statement, negotiation of the underwriting agreement, and sale of the securities to the underwriters.
2. **Accounting and Auditing Fees:** Auditing of financial statements, review of the registration statement, and preparation and delivery of comfort letters.
3. **Printing Costs:** Cost to print the underwriting documents, registration statement, prospectus, and the stock certificates.
4. **Administrative Costs:** Securities and Exchange Commission (SEC) and National Association of Securities Dealers (NASD) filing fees, registrar and transfer agent fees, blue sky fees, and exchange fees.

Flotation Cost Model

The flotation cost model estimates a DLOM by measuring the cost of creating marketability. The primary sources of flotation cost data include three studies: the SEC study; the Jay Ritter study; and the Christopher Kaserer and Dirk Schiereck study.

SEC Study

The first of these studies, performed by the SEC, covered 1,599 initial public offerings in 1974.[3] Observed total expenses, compensation and other expenses, ranged from 3.19 to 23.59 percent. The average total expense over all offerings was 12.43 percent.

As shown in Exhibit 1, total expenses were inversely related to offering size. The larger the offering size the lower the total expenses, as a percentage of the offering, associated with going public.

Jay Ritter Study

Jay Ritter performed a study of flotation costs over the period 1977–1982.[4] The Ritter study analyzed the direct ex-

1 "Controlling interest is the ownership of more than 50 percent of a corporation's voting shares. It means to have control of a large enough block of voting stock shares in a company such that no one stock holder or coalition of stock holders can successfully oppose a motion," http://uslegal.com.

2 *Estate of Andrews v. Commissioner,* 79 T.C. 938 (1982).

3 United States Securities and Exchange Commission, *Cost of Flotation of Registered Issues*, 1971-72 (1974).

4 Jay R. Ritter, "The Cost of Going Public," *Journal of Financial Economics,* 19, no.2 (December 1987): 269-281.

Exhibit 1: SEC Study of Costs of Flotation

Offering Size in Millions	Number	Compensation	Other Expenses	Total Expenses
Under .5	43	13.24%	10.35%	23.59%
.5 - .99	227	12.48%	8.26%	20.74%
1.0 - 1.99	271	10.50%	5.87%	16.37%
2.0 - 4.99	450	8.19%	3.71%	11.90%
5.0 - 9.99	287	6.70%	2.03%	8.73%
10.0 - 19.99	170	5.52%	1.11%	6.63%
20.0 - 49.99	109	4.41%	0.62%	5.03%
50.0 - 99.99	30	3.94%	0.31%	4.25%
100.0 - 499.99	12	3.03%	0.16%	3.19%
Over 500.00	0	0.00%	0.00%	0.00%
Total / Average	1,599	8.41%	4.02%	12.43%

Exhibit 2: Direct Expenses of Going Public

Gross Proceeds	Number of Offers	Underwriting Discount	Other Expenses	Total Expenses
Firm Commitment Offers				
100,000 -1,999,999	68	9.84%	9.64%	19.48%
2,000,000 -3,999,999	165	9.83%	7.60%	17.43%
4,000,000 - 5,999,999	133	9.10%	5.67%	14.77%
6,000,000 - 9,999,999	122	8.03%	4.31%	12.34%
10,000,000 - 120,174,195	176	7.24%	2.10%	9.34%
All Offers	664	8.67%	5.36%	14.03%
Best- Efforts Offers				
100,000 -1,999,999	175	10.63%	9.52%	20.15%
2,000,000 -3,999,999	146	10.00%	6.21%	16.21%
4,000,000 - 5,999,999	23	9.86%	3.71%	13.57%
6,000,000 - 9,999,999	15	9.80%	3.42%	13.22%
10,000,000 - 120,174,195	5	8.03%	2.40%	10.43%
All Offers	364	10.26%	7.48%	17.74%

pense associated with going public for 654 firm commitment offers and 364 best-effort offers (See Exhibit 2).

Firm commitment offers involve the underwriters buying the shares at a discount and then selling those shares to institutional and individual investors at their full price. A best-efforts offering involves the underwriter selling the offering to the public, but there is no guarantee as to how much money the issue will raise.

- **Firm Commitment Offers:** Large public offerings have lower total expenses relative to gross proceeds than offerings with lower gross proceeds. Observed total expenses ranged from 9.34 to 19.48 percent. The average total expense over all offerings was 14.03 percent.
- **Best-Efforts Offers**: Once again, large public offerings had lower total expenses relative to gross proceeds than offerings with lower gross proceeds. Observed total expenses ranged from 10.43 to 20.15 percent. The average total expense over all offerings was 17.74 percent.

Kaserer and Schiereck Study

The most recent study, by Christopher Kaserer and Dirk Schiereck, was done in 2007 and covers the period 1999–2007. This study investigated the direct and indirect costs related to the decision of going and being publicly traded. For purposes of this study, six of the eight largest stock exchanges in the world were studied, including: Deutsche Borse, Euronext, Hong-Kong Stock Exchange, London Stock Exchange, NASDAQ, and NYSE.[5]

As shown in Exhibit 3, the average total initial public offering (IPO) flotation cost for all offerings, at the NYSE, was 7.72 percent. The range of costs was from 5.53 to 10.05 percent. Costs varied by offering size, as the offering size (reported in Euros) increased IPO flotation costs declined.

The average total IPO flotation cost for all offerings, at the NASDAQ, was 9.54 percent. The range of costs was 6.63 to 17.63 percent. As with the NYSE, costs varied by offering size, as the offering size (reported in Euros) increased IPO flotation costs, as a percentage, declined.

One-third of all issues on the NYSE were equal to 7 percent. Eighty-seven percent of the issues on the NASDAQ were exactly 7 percent. According to the authors, "This once again confirms the 7%-rule prevalent in the US investment banking industry."[6]

Underwriting expenses (gross spread) declined as offering size increased; however, the decline was significantly less pronounced than for other expenses. The range of underwriting expenses was from 5.95 to 7.08 percent, while the range of other expenses was from 0.68 to 10.55 percent.

Trend in Flotation Costs

It is difficult to make a comparison between these three studies, as each study analyzed different offering sizes during different time periods. However,

5 Christopher Kaserer and Dirk Schiereck. *A Global Comparison of the Impact of the Listing Decision on the Cost of Capital,* November, 2007.

6 Ibid, 22.

Exhibit 3: IPO Flotation Costs in Percent of Gross Proceeds

Offering Size (1)	Number of New Issues	NYSE	Number of New Issues	NASDAQ
All offerings	342	7.72%	1,069	9.54%
0-100 million	44	10.05%	784	10.10%
Over 100 million	298	7.37%	285	8.02%
0-20 million			31	17.63%
20-50 million			305	10.54%
50-100 million			448	9.27%
100 to 250 million	153	8.36%	241	8.27%
250 to 500 million	79	7.02%	44	6.63%
Over 500 million	66	5.53%		
(1) Offering size is in Euros				
Period Studied 1999 to 2007				

Note: The approximate exchange rate, in 2007, was 1 Euro = 1.47 USD.
The authors also analyzed the extent gross spread and other expenses were affected by size (See Exhibit 4).

Exhibit 4: NASDQ Gross Spread and Other Expenses

Offering Size (1)	Number of New Issues	Gross Spread	Other Expenses	Total Expenses
All offerings	1,069	6.91%	2.63%	9.54%
0-100 million	784	6.99%	3.11%	10.10%
Over 100 million	285	6.69%	1.32%	8.01%
0-20 million	31	7.08%	10.55%	17.63%
20-50 million	305	6.97%	3.56%	10.53%
50-100 million	448	6.99%	2.29%	9.28%
100 to 250 million	24	6.83%	1.44%	8.27%
250 to 500 million	44	5.95%	0.68%	6.63%
(1) Offering size is in Euros				
Period Studied 1999 to 2007				

Note: The approximate exchange rate, in 2007, was 1 Euro = 1.47 USD.

Kaserer and Schiereck note, "Interestingly it turns out that non-underwriting fees have increased significantly in the US since 2004. This might be a consequence of the new legislation enacted with the Sarbanes Oxley Act."[7]

Conclusion

A DLOM for controlling interests should be considered if the control value was determined based on public market data (e.g., Duff & Phelps, Morningstar). Based on the three flotation studies discussed above, DLOM for controlling interests are significantly smaller (3–23 percent) than DLOM for minority interests (25–45 percent).

When considering a DLOM for a controlling interest, there is no automatic discount to be applied. The unique circumstances for each situation must be considered.

Dennis Bingham, MCBA, ASA, is president of Bingham Business Valuation in Minneapolis, MN.

7 Ibid, 8.

The Divorce Valuation Expert—What You Bring to the Lineup

Heather Tullar, ASA, CPA/ABV/CFF

Being retained as a valuation expert in a divorce proceeding often presents a confounding mire of issues and an array of challenges that can be difficult and demanding. The business appraiser finds himself or herself part of a team comprised of the client, the attorney, and perhaps another expert, such as a forensic analyst. While the overall "team" goal is to assist the client in navigating and surviving the divorce proceeding, each player on the team has very different individual roles, goals, tasks, and constraints. Providing a high level of service and adding to the lineup requires that a professional appraiser comprehends his or her role and is prepared to work with clients who are likely not at their emotional best. At issue is what skills the expert appraiser brings to that table and what he or she can bring to the lineup on that particular playing field.

The Role of the Expert

Before commencing the analysis, before cracking open a spreadsheet, before doing *anything*, one should consider the roles of each player on the team. The client needs the support of the team to get through the divorce. The attorney provides the client a voice in the court system and is charged with advocating for the client's needs. The business valuation expert offers an independent, third-party opinion of value on a business or other financial asset that is part of the marital estate.

While that may seem simple, consider the importance of being independent in the midst of advocacy and the specialized knowledge required to do the job, knowledge that is likely very different from the education and experience of the other players on the team. At its core, the role of the expert demands independence and know how. In a nutshell, I believe the expert's role comes down to the following: only advocate your opinion, know your business, and teach what you know.

1. Only Advocate Your Opinion

The lawyer is there to take a stand for the client, to be sure the client's voice is heard, and to seek out the best outcome for the client. That is not the appraiser's or the expert's job. The attorney is the client's advocate, and on his or her shoulders rests the task of putting forth the good fight for the client. As an expert, the task at hand is to develop and present an independent opinion. And that opinion should be based on facts, circumstances, experience, education, and sound judgment, not on the retaining party. It may be helpful to ask the question, "How would I see this if the other party had retained me?" The expert appraiser needs to avoid allowing the client's or the attorney's potential bias to become his or her own.

This task may seem easier said than done. The in-spouse, the one who owns the business, may present a forlorn tale of a business on the edge of ruin while the out-spouse, who often has little understanding of the business, but is well-versed in the lifestyle, might offer a story of the most profoundly beneficent cash cow ever to be milked. When the occasion arises for joint retention, the noise and dissonance of dueling narratives becomes a sticky mess leaving you in the midst of what best resembles a taffy pull.

Beating down a value for the in-spouse or inflating value for the out-spouse is not in the client's best interest. Choosing unsupportable assumptions and inputs that skew results over assumptions and inputs that are well-reasoned and supportable may tilt the numbers in the client's favor. However, there are strings attached to that posture. First is the loss of the independence of your opinion. Second is that an unreasonable and unsupportable value sets expectations in the minds of the client and the attorney. It drags out the process, heaps on the fees, provides ripe opportunities for critique from the opposing side, and frustrates everyone involved. It also erodes an appraiser's most marketable asset—integrity. The lawyer is the client's advocate, and they advocate for the client. The only thing an appraiser should advocate for is his or her opinion.

It is not the appraiser's job to go for the highest or lowest value possible for the business. Why, you may ask? Picture the scenario where Expert A opines on a value of $3 million, while Expert

B contends that the value is $6 million. If each of these experts incorporates assumptions departing from reason, much jockeying for position ensues, the process drags out, the fees mount up, and ultimately some judge is once again faced with the challenge of trying to find the fairness in a sea of advocacy. We have all seen the expert as advocate who takes a no-holds-barred approach to ratcheting down the value of the business for the benefit of their client as much as we have seen amazing and lofty valuations resulting in the family business becoming the next IPO darling. Neither of these stances provides any meaningful benefit to the client, to the resolution of the case, or to the appraiser's reputation. While the likelihood of two appraisers reaching identical conclusions is slim, vastly dissimilar results certainly beg the question of either bias or two experts ultimately seeking to solve two different problems. An expert appraiser should consider stepping into the shoes of the opposing side and asking whether his or her conclusion would have been vastly different. Let the attorneys do their job and be the client's advocate. An important part of the appraiser's job is to remain independent.

2. Know Your Business

Divorce proceedings vary by state. Know the rules of the state where the divorce is filed. This can have profound implications on the standard of value (fair market value, fair value, or equitable distribution?), how to address issues like professional goodwill, and even how to structure your analysis. In Massachusetts, two fairly recent cases, *Bernier* and *Adams*, rippled sea changes in analysis throughout the valuation community. So, understand the standard of value in the state where the divorce is being litigated. Be current in case law. Don't just read it, really understand it. Do not expect that the attorney will necessarily fully grasp how the case law applies to business valuation. Just as it is not your job to be a lawyer, it is not the lawyer's job to be an appraiser.

Also manage the engagement professionally. Explain to the client and the attorney directly and clearly what your role *is* and what it is *not*. The engagement letter needs to be explicit regarding the appraiser's role. From time to time, the facts of any particular valuation assignment may dictate the need to present an analysis that is new or different. The fact is that we live in an ever changing world. However, if an expert appraiser finds it necessary to take a tack in that is a bit outside the norm or controversial, let the client and the attorney know of the plan and the risk involved.

Stay on top of billing and keep the client and the attorney informed. Nobody likes an unpleasant billing surprise. If you find that the analysis requires more time than anticipated, let the client and the attorney know in a timely basis. Be prepared to articulate the issues clearly. In some instances, you may have a client or attorney who requires more time than is typical for calls, meetings and filings. Other instances may require extra efforts on your part to handle complexities revealed once documents are obtained. The bottom line is, be a professional. It not only provides a better framework for the engagement, it also instills confidence in your abilities by both the client and the attorney.

3. Teach What You Know

Unlike financial reporting valuations where the appraiser works through a review by another valuation specialist or some valuation assignments for tax purposes where one may interact with estate attorneys with years of experience in reviewing valuations, many divorce attorneys have a more limited field of experience to draw upon concerning business valuations. The expert appraiser's work is but one aspect of a complex set of issues that the attorney must juggle. Further, few clients have ever hired an appraiser to value their business and tend to have little or no experience with basic valuation concepts. The clients must face an unknown process, the outcome of which may ultimately impact his or her life profoundly. Even if the client has some understanding of business valuations, the way things are viewed for a divorce differs from valuations for other purposes. Be knowledgeable and be prepared to explain.

Explain what drives a valuation and how changes in assumptions might change a result. The concept of capitalized cash flows may be old hat to an appraiser, but the understanding of how normalized cash flow, long-term growth and risk impact a valuation conclusion is likely news to the client. Practice explaining the basics and become proficient in sharing the knowledge without talking down to the client or pontificating over the client's head.

At the end of the day, the expert appraiser needs to bring professionalism to the team, explain his or her opinion clearly and understand the task at hand. The next important concern is the fact of the emotional context of the assignment.

Working with Clients Who are Going Through a Difficult Time

In the more than 15 years I have been an appraiser and prepared valuations, both in litigation environments and for other purposes, I have found the divorce assignments to be the most emotional.

The clients, universally not at their best, oscillate among a vast array of feelings: anger, dismay, hurt, stress, fear, shock, disgust, fatigue, worry, sorrow. The attorneys must advocate for their client and deal with many issues beyond the scope of the value of the family business. The clients, who may be in crisis,

must decide on matters that will impact their lives and quite often, the lives of their children. Nothing will be the same—for better or for worse. As much as removing the emotional component from the situation would simplify matters, this desire amounts to nothing more than wishful thinking. As nice as it would be to only explain your analysis to someone with a good background to understand it, that's not going to happen either. The playing field is not particularly conducive to the goal of working through the case as expeditiously and humanely as possible.

The expert appraiser needs to expect that conversations may turn awkward and that the client may articulate things to you that you really do not want or need to hear, in order to value the business. Be prepared to handle such emotion. Just as the client finds himself or herself dealing with valuation theory and other things well beyond anything studied or practiced, the valuation expert in a divorce may also wind up in unfamiliar territory.

Camille Adams, LPC, a professional therapist in Virginia, noted a few pointers on professional interaction with clients going through a divorce:

1. Acknowledge and be Respectful of the Client's Situation

Clients going through a divorce are in the process of losing an attachment. Loss of attachment in a family structure, whether that family is two people or several, comes with messy emotions that can get directed and misdirected toward others. For those not trained or prepared for this, coping with or diffusing highly charged emotional situations may prove daunting and leave the unprepared wondering: Why is this my problem? Why is my client so difficult? Why am I thinking about my own parents' divorce so much? Or any number of reactions that therapists refer to as "countertransference," or the therapists' emotional reaction to the client. In the context of the role of the business valuation expert, be certain to check in with your own responses, whether they take the form of remembrance of personal issues, frustration or surprise.

2. Use Empathy

Empathy is different from sympathy. Sympathy is when you look at your client and say internally, "Oh, that's bad. Glad that isn't happening to me. There, there." Empathy is the ability to imagine another's situation and feeling with them. One can empathize with another person's situation and not sympathize. For example, it is possible to empathize with a client's discomfort in going through the process of dividing up the marital estate while not sympathizing with whatever actions may have transpired to disrupt the relationship. Empathy also provides a superior tool for communication.

3. Use your Social Engagement System

The social engagement system is the head, voice, upper torso. This system is how we convey to others safety or level of threat. If your client is emotionally charged, connect with empathy, lower your voice, lean in slightly from the waist for a minute. Ask if now is the best time for the discussion to take place. Take a minute and reflect on how mothers often interact with upset children to diffuse the situation—lower voice, head tilted, and leaning in from the waist. Body language speaks volumes. If you are on the phone, take a breath and speak a bit more softly.

4. Know your Limits

Some clients have issues and push boundaries. Remember that your role is valuation expert and not confidant or dumping ground. Sometimes it may be necessary to find a way to gently nudge a discussion back to the pertinent topic or remind a client of what you may and may not do. Be prepared to redirect, and to do so with care and candor.

In conclusion, I find valuation work for divorces to be both intriguing and challenging. It can be a tightrope act at times and can throw curve balls beyond even the best pinch hitter's formidable swing. However, helping someone through a difficult situation so that he or she can get along with the business of life is extremely rewarding.

Heather Tullar, ASA, CPA/ABV/CFF, is a director with Delphi Valuation Advisors, Inc. in Norwood, Massachusetts. Ms. Tullar has 25 years of business experience and 15 years of experience in business valuation, economic damages, and litigation consulting. Ms. Tullar may be reached at ht@delphivaluation.com or (781) 551-8258.

Accounting for the Decline in Market Value Multipliers

C. Fred Hall, MBA, CBA, CVA

After reading Toby Tatum's article from the third quarter's BAP regarding declining multipliers used in the Market Approach, I realized we are now confronted with having to deal with what we have suspected all along: the recession appears to have caused cash flow multipliers to decline significantly. I sent Toby's article to several business brokerage offices that I work with and invited their comments. All the brokers responded that the article confirmed their suspicions that there has been significant multiplier compression in recent years.

I decided to do some research into the Pratt's Stats database to see whether or not the results were similar to what Toby found in the BIZCOMPS® database. Pratt's Stats had far more transactional data in 2012 and 2013 that I thought might reveal whether or not BIZCOMPS' small sample size was a statistical fluke. Exhibit 2 clearly shows it was not. The recession has indeed produced a significant amount of volatility in transactional multipliers during the last five to seven years. However, the decline was mostly felt in the smaller sized companies and was only observed in the cash flow multipliers, not the revenue multipliers.

The question raised by Toby is whether or not this decline will skew one's results when employing the Market Approach and, if so, how does one factor in the decline into the market approach? Toby suggested an indexing approach to adjust multipliers of a sample to the current levels. I wish to suggest a second approach that may be more accurate.

Exhibit 1: Transactional Multipliers Over the Last 15 Years

Date Range		Count	Median Revenue Multipliers	Median Cash Flow Multipliers	Median SDE% (SDE/Rev)
From	To				
1-1-1999	12-31-1999	334	0.467	2.449	19.1%
1-1-2000	12-31-2000	320	0.482	2.584	18.6%
1-1-2001	12-31-2001	413	0.461	2.352	20.8%
1-1-2002	12-31-2002	533	0.469	2.359	20.0%
1-1-2003	12-31-2003	493	0.455	2.497	19.2%
1-1-2004	12-31-2004	662	0.488	2.587	20.5%
1-1-2005	12-31-2005	723	0.482	2.576	20.3%
1-1-2006	12-31-2006	711	0.496	2.668	19.2%
1-1-2007	12-31-2007	823	0.497	2.439	21.2%
1-1-2008	12-31-2008	1137	0.472	2.136	22.8%
1-1-2009	12-31-2009	791	0.469	2.032	23.4%
1-1-2010	12-31-2010	898	0.451	1.827	24.6%
1-1-2011	12-31-2011	812	0.472	2.066	22.7%
1-1-2012	12-31-2012	839	0.434	1.992	22.7%
1-1-2013	12-31-2013	265	0.455	1.898	22.9%
	Average		**0.470**	**2.297**	**21.2%**
	Lower Quartile		**0.458**	**2.05**	**19.6%**
	Upper Quartile		**0.482**	**2.54**	**22.7%**

Source: 9,723 Transactions taken from Pratt's Stats Database

First, I assembled a sample of transactions obtained from the Pratt's Stats database. The sample was filtered for all transactions between 1999 through 2013 with revenues under $3 million. Stock sale transactions were eliminated as were companies with break-even or negative cash flow. The filtered sample had 9,723 transactions spread out over 15 years.

The revenue multipliers and cash flow multipliers were calculated from each transaction's revenues, seller's discretionary earnings (SDE or cash flow), and selling price. The data was sorted by the year in which the sale took place and the resulting median value for the multipliers from each year was determined. The resulting sample of 9,723 transactions is listed on the table in Exhibit 1.

From Exhibit 1 we observe that the average revenue multiplier over the last 15 years was .47. The lower quartile was .458 and the upper quartile was .482. Thus, revenue multipliers fluctuate within a fairly narrow range from year to year. Much of the fluctuations can be attributed to the fact that the companies that

Exhibit 2: Declining Cash Flow Multipliers

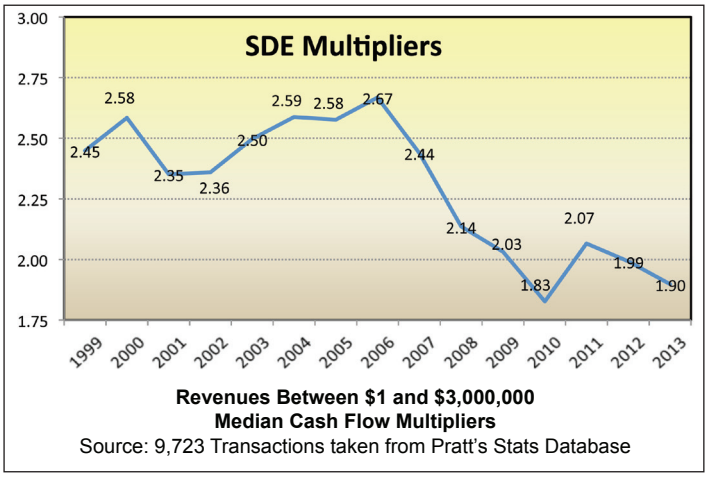
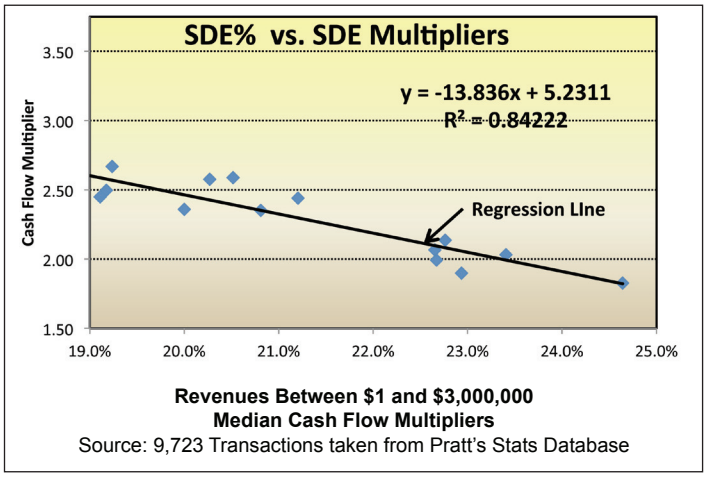


Exhibit 3: Regressing SDE% with Cash Flow Multipliers



are sold each year may be concentrated in different industries or are of varying revenue sizes than were found in prior years. Thus, we would expect their multipliers to be different. Since appraisers typically select a sample of transactions from one specific SIC code, that would effectively eliminate some of the yearly fluctuations due to changing industry concentrations. As a result, using comparables that are several years old should not inappropriately skew the results when calculating revenue multipliers.

Cash flow multipliers, however, have fluctuated significantly over the years. Exhibit 2 is a visual presentation of the data from the table. The graph clearly shows that cash flow multipliers (SDE multipliers) have declined significantly since the start of the recession. One's initial reaction is that appraisers should only use multipliers exhibited during the most recent years to account for this attrition. Toby Tatum's suggestion was to create an index that reflects the current level of the multiplier with respect to its long-term average. The index would then be applied to the subject's calculated multiplier to adjust it to the current trend. A third alternative involves the use of regression analysis which will allow us to use transactions over the last 15 years regardless of the level of multipliers in any one year.

As I discussed in my article, "Using Regression Analysis in the Market Approach," published in the Second Quarter issue of the 2012 BAP, there is a strong correlation between a company's cash flow multiplier and its operating profit margin. (The operating profit margin is calculated by dividing a company's SDE [cash flow] by its total revenues.) By using regression analysis, we can plot the above sample's median operating profit margins (SDE%) against the corresponding cash flow multipliers for each year. Exhibit 3 gives a visual presentation of the resulting regression analysis.

The regression line in Exhibit 3 shows that the level of a company's profitability, as measured by SDE%, closely tracks its cash flow multiplier. This fact is underscored by the regression analysis' very high R squared factor of 0.842. (An R squared of 1.0 would mean there is a perfect correlation between Cash Flow Multipliers and SDE% whereas an R squared of 0.0 would mean there is no correlation.)

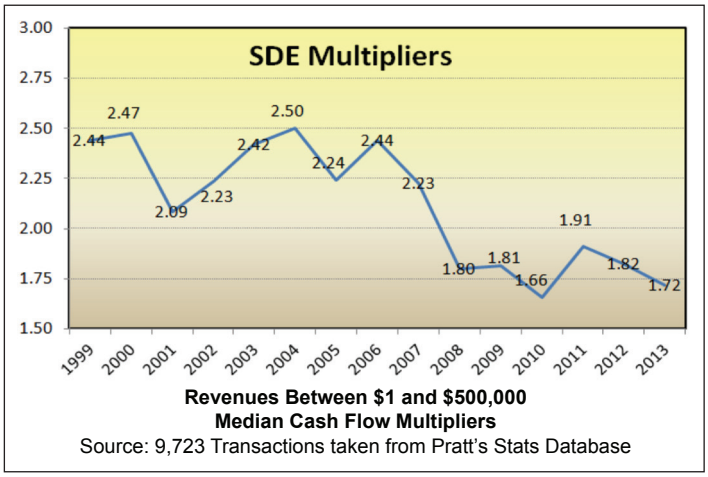
The regression analysis also gives us a formula for the regression line, which can be used to predict the median multiplier in any given year regardless of whether it is a recession year or a boom year. For example, from Exhibit 1 we find that the median SDE% for the recession year 2010 was 24.6 percent. From Exhibit 3, the regression formula of $y = -13.83x + 5.23$ can solve for the 2010 multiplier by inputting that year's known SDE%: $y = -13.83 \times .246 + 5.23 = 1.828$. The 1.828 predicted cash flow multiplier for 2010 is very close to that year's actual multiplier of 1.827. The multiplier for the boom year 2006 is also predicted by inputting that year's SDE% of 19.2% into the same regression equation: $y = -13.83 \times .192 + 5.23 = 2.57$. Again, by using SDE%, the predicted cash flow multiplier for the boom year of 2006 was very close to the actual value of 2.668.

Thus, when we build a sample of transactions to calculate our Subject's cash flow multiplier, we *should* include all transactions that closed throughout the last 15 years. By regressing the comparables' cash flow multipliers or revenue multipliers against their SDE%, we will produce a regression formula that will predict the appropriate multiplier for the subject and that will reflect the operating realities of today's market. A discussion on using regression in the Market Approach follows the section below.

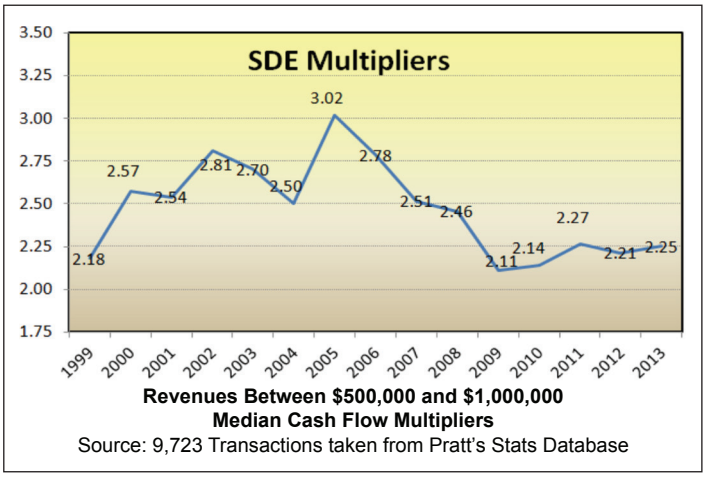
Multipliers by the Size of the Companies

Another point of observation that I found interesting is that the decline in cash flow multipliers affected smaller sized companies far more than larger sized ones. In Exhibit 4 below, I sorted the Pratt's Stats database into four groups to track multipliers for the last 15 years: 1) companies with less than $500,000 in revenue; 2) companies between $500,000 and $1 million; 3)

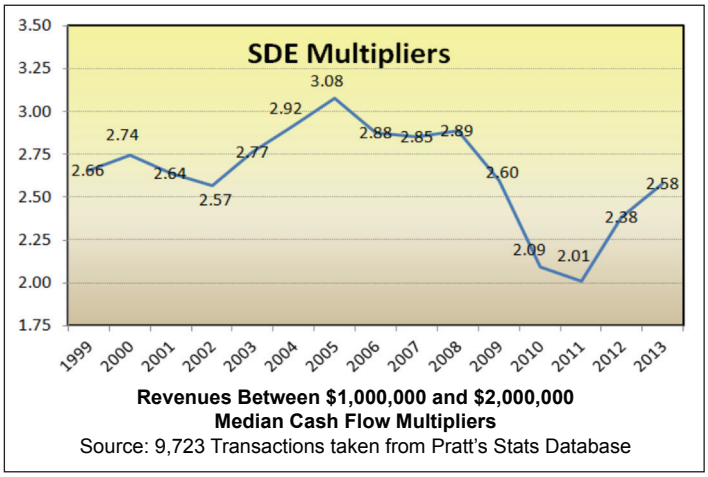
Exhibit 4: The Effect of Company Size on Cash Flow Multipliers



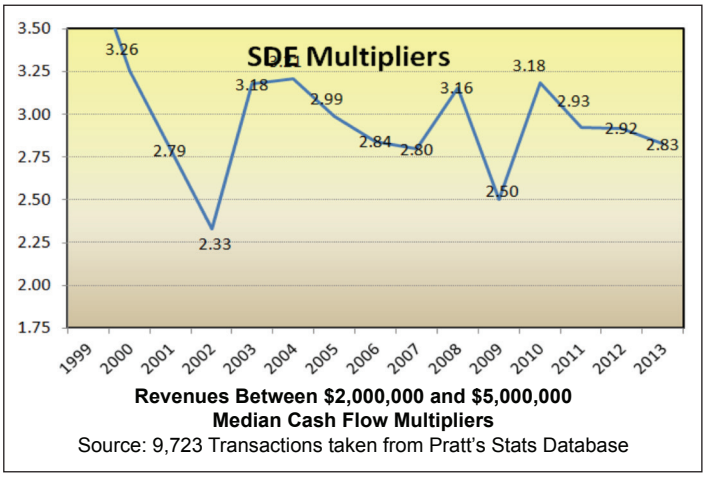
Revenues Between $1 and $500,000
Median Cash Flow Multipliers
Source: 9,723 Transactions taken from Pratt's Stats Database



Revenues Between $500,000 and $1,000,000
Median Cash Flow Multipliers
Source: 9,723 Transactions taken from Pratt's Stats Database



Revenues Between $1,000,000 and $2,000,000
Median Cash Flow Multipliers
Source: 9,723 Transactions taken from Pratt's Stats Database



Revenues Between $2,000,000 and $5,000,000
Median Cash Flow Multipliers
Source: 9,723 Transactions taken from Pratt's Stats Database

companies between $1 million and $2 million; and, 4) companies between $2 million and $5 million.

Companies under $500,000 have been hit the hardest by the recession. Not only have cash flow multipliers dropped 30 percent since 2006, but also they have not rebounded after the economy began improving in 2011. A possible explanation for this decline may be the fact that these smaller companies can no longer produce a high enough living wage at today's inflated cost of living. Thus, demand for these companies has declined and probably will continue to decline. The observed decline in multipliers for this group of small companies, then, may be more demand-driven rather than the result of the recession.

Companies with revenues between $500,000 and $1 million saw their cash flow multipliers drop 20 percent since 2006. However, there has been a modest 6 percent rebound since 2009. Companies with revenues between $1 million and $2 million had multipliers decline 10 percent since 2006, but have rebounded a solid 23 percent since 2009. Their multipliers for 2013 are just 2 percent below the 15-year average. Companies over $2 million have a cash flow multiplier in 2013 that is the same as it was in 2006 and is the same as the average for the last 14 years (1999's multiplier was inordinately high due to a small sample size).

Thus, if you are is using conventional methodologies (median or harmonic mean of a sample) to estimate multipliers for smaller companies, the decline in multipliers since 2006 can cause a significant distortion in your results. You may want to select comparables that are less than six years old or use the indexing method suggested by Toby Tatum. For those companies with revenues greater than $1 million, you should select comparables from over the last 15 years with no single year having too much weight.

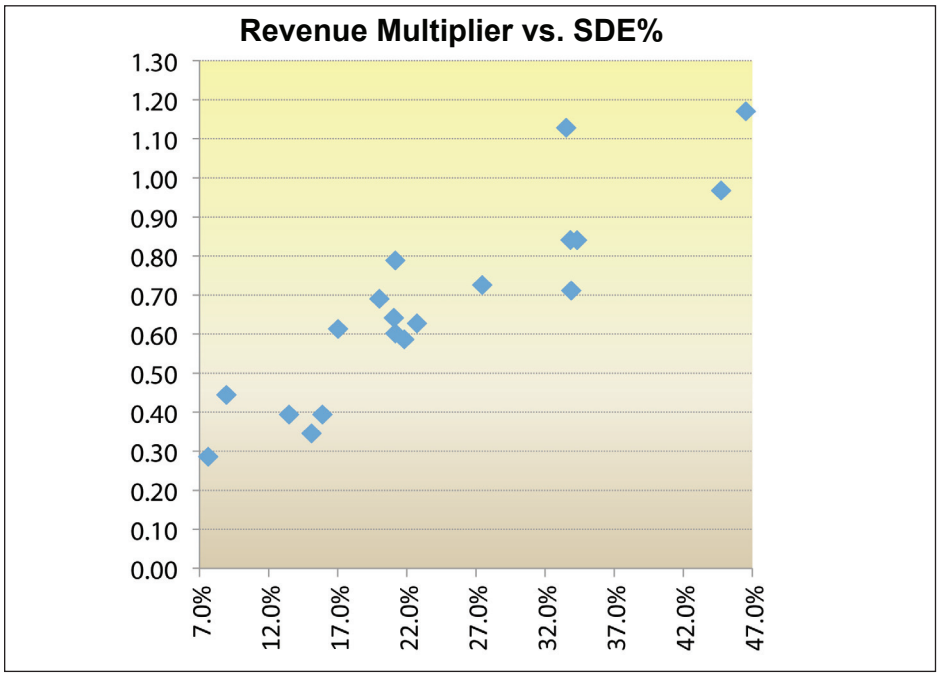
Using Regression Analysis to Predict Multipliers

As we observed above, the use of regression analysis eliminates the need to adjust multipliers for the effects of the timing of the sale. The following discussion on using regression to predict multipliers is considerably abbreviated in this article due to space constraints. I encourage the reader to go to the "Pricing Services" page on my website, www.affordablebusinessvaluations.com, for a complete article on the subject. Included in the article under Appendix A is a step-by-step primer on how to use Excel's regression utilities with this methodology.

Exhibit 5: Sample of Comparables

Obsvn.	Selling Price (a)	Gross Revenue (b)	Cash Flow (c)	Revenue Multiplier a ÷ b	SDE% c ÷ b	Cash Flow Multiplier a ÷ c
1	300,000	1,050,000	80,000	0.29	7.6%	3.75
2	422,000	950,000	85,000	0.44	8.9%	4.96
3	305,000	774,000	104,000	0.39	13.5%	2.92
4	515,000	1,490,000	225,000	0.35	15.1%	2.29
5	305,000	774,000	123,000	0.39	15.9%	2.48
6	600,000	979,000	167,000	0.61	17.0%	3.60
7	768,000	1,113,000	223,000	0.69	20.0%	3.45
8	725,000	1,205,000	255,000	0.60	21.2%	2.84
9	750,000	1,279,000	279,000	0.59	21.8%	2.69
10	950,000	1,205,000	255,000	0.79	21.2%	3.73
11	850,000	1,325,000	279,000	0.64	21.1%	3.05
12	345,000	550,000	125,000	0.63	22.7%	2.76
13	415,000	572,000	157,000	0.73	27.4%	2.64
14	570,000	505,000	169,000	1.13	33.5%	3.37
15	971,000	1,156,000	391,000	0.84	33.8%	2.48
16	682,000	959,000	325,000	0.71	33.9%	2.10
17	600,000	714,000	245,000	0.84	34.3%	2.45
18	1,182,000	1,222,000	547,000	0.97	44.7%	2.16
19	1,195,000	1,021,000	475,000	1.17	46.5%	2.52
Avg:	746,000	962,000	241,000			
			Lowest 16% =	0.43	13.2%	
			Lower Quartile =	0.52	16.5%	
			Median =	0.64	21.2%	
			Harmonic Mean =	0.77	21.2%	
			Upper Quartile =	0.81	33.7%	
			Highest 16% =	0.92	35.2%	

Exhibit 6: Revenue Multiplier vs. SDE%



The first step in understanding regression is a visual example of the relationship between a company's cash flow profit margin (SDE%) and its revenue multipliers. Exhibit 5 is a typical list of comparables that an appraiser would assemble showing each observation's selling price, revenue, cash flow and the resulting Revenue Multiplier and Cash Flow Multipliers. What every appraiser also should do is add a column to the list showing each comparable's calculated cash flow profit margin (SDE ÷ revenues). After completing one's sample table, sort the data by the cash flow profit margin (SDE%) from the smallest value to the largest (see the column highlighted in yellow).

You will notice that companies with the lowest cash flow and SDE% also tend to have the lowest revenue multipliers and, those with the highest cash flow and SDE% tend to have the highest revenue multipliers. For example, the lower quartile of companies had an SDE% of 16.5 percent and a revenue multiplier of only .52, whereas the upper quartile had an SDE% of 33.7 percent and a revenue multiplier of .81. *This, of course, makes perfect sense—companies that are more profitable just sell for higher prices.*

The revenue multiplier and the SDE% for each observation in Exhibit V is plotted on a scatter chart shown in Exhibit VI. You will notice that the blue dots representing each comparable trend upward from left to right. Basically the dots are telling us that the higher the company's profitability (moving from left to the right on the horizontal x-axis), the higher the revenue multiplier is (moving upward on the vertical y-axis). *Visually we can see that the profitability of a company is a driver to its potential revenue multiplier.*

Regression analysis very simply translates the relationship that we can see into a numeric equation. That equation is for a straight line that represents the closest fit to all the blue dots on the scatter chart.

Exhibit 7: Regression Market Line

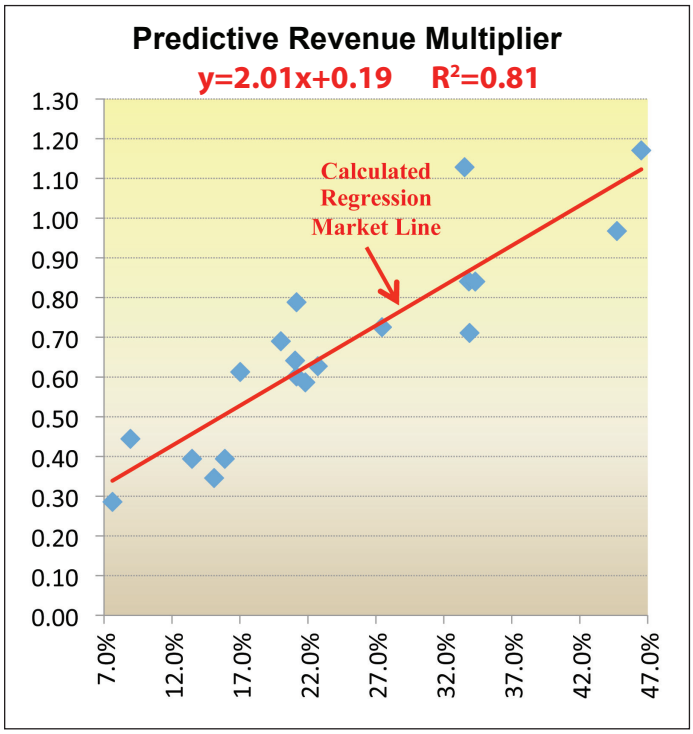
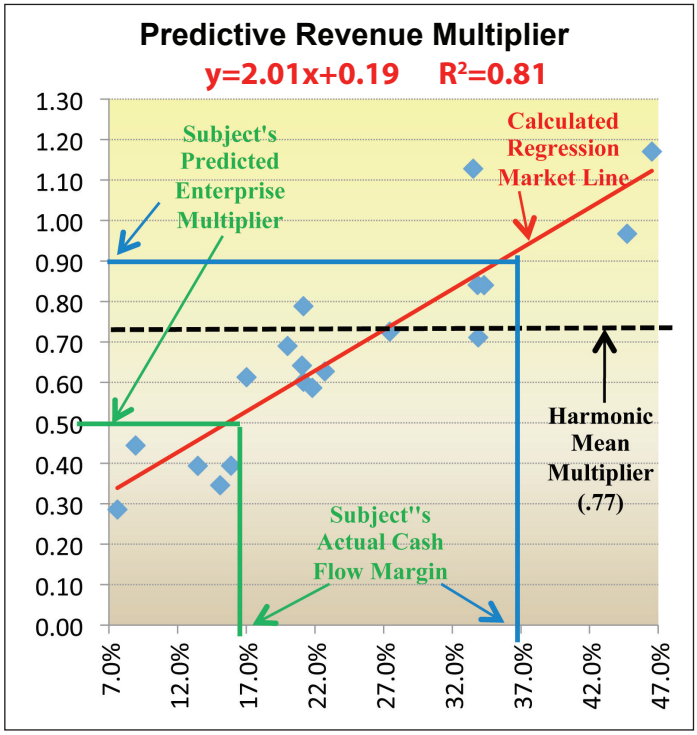


Exhibit 8: Predictive Revenue Multiplier



In other words, the regression line best describes where the market is. We could certainly have taken a ruler and manually drawn a line through the middle of the blue dots and made a good estimate of the market trend line. However, regression does it with exact precision.

Using Excel's regression utility, we can calculate the regression line by identifying the SDE% as the independent variable in the equation and the revenue multiplier as the dependent variable. The regression utility will produce a chart similar to the one on the left. (I again refer you to Appendix A of the article on my website to learn how to use Excel's regression utility).

In Exhibit 7, we have added the regression market line (in red) that was plotted using the calculated regression equation shown at the top of the chart in red (y = 2.01x + 0.19). This line represents the closest fit to all the blue dots.

For demonstration purposes, in Exhibit 8, I have also added a black dotted line that represents the harmonic mean that was calculated for the sample in Exhibit 5. What we notice immediately is that the harmonic mean suggests that regardless of the level of the subject's cash flow, it will always earn the same revenue multiplier—.77; whereas the regression line suggests that as a company becomes more profitable it will earn a higher multiplier.

For example, Exhibit 8 shows the scenarios of two possible transactions. The green lines on the chart represents a company with a low-level of profitability. The 17 percent SDE% suggests that the appropriate revenue multiplier for this company is .53, whereas, the harmonic mean predicts .77. The second company (shown in blue) is highly profitable with an SDE% of 37 percent. The regression equation would suggest a multiplier of .93 (y = 2.01 x .37 + .19). Again the harmonic mean would suggest .77. Logically we can assume that an underperforming company with a 17 percent operating margin is worth less than a highly profitable company with an operating margin of 37 percent. However, the harmonic mean would suggest they are both worth the same.

Regression analysis properly incorporates profitability into determining multipliers, whereas harmonic mean and median do not. Revenue Ruling 59-60, after all, directs us to use methodologies that are based on a company's profitability.

[Note: The discussion on the relationship of a company's SDE% and its cash flow multiplier is considerably more complicated. The reader is directed to article 2 posted on my website www.affordablebusinessvaluations.com on the "Pricing Services" page for an in depth discussion.]

C. Fred Hall, MBA, CBA, CVA, is the CEO of Affordable Business Valuations. He received his bachelor's degree in business from UC Berkeley and his MBA from San Diego State University. He can be reached at cfredhall@att.net or (209) 256-1371.

Valuing a Business via the CAPM and Monte Carlo Simulation

Toby Tatum, MBA, CVA, CBA

Although the Capital Asset Pricing Model (CAPM)[1] is among the most widely used methodologies for the valuation of privately owned businesses among professional business appraisers, it nevertheless receives constant criticism for a variety of drawbacks. When employed in the valuation of small and medium sized privately owned businesses, it is possible to develop a range of value opinions where the highest value is double that of the lowest value, yet where all of the opinions are reasonably supportable based on published data and various experts' opinions on acceptable application of the CAPM. Indeed, it is possible to find published opinions that discredit the CAPM altogether as being an entirely inappropriate methodology for the valuation of privately owned businesses. To wit:

Although the inventors of the CAPM never claimed that it could be used to develop a required rate of return for valuing individual companies, and despite the fact that it has been repudiated for such use by prominent academics and theoreticians, appraisers have nevertheless doggedly persisted in their attempts to adapt it to business valuation.[2]

On the one hand, these criticisms of the CAPM are not without merit. On the other hand, however, the fact remains that for a variety of purposes, an estimate of the value for a privately owned business must be made. This means that unless and until the valuation profession agrees to abandon the CAPM methodology, flawed as it may be, it will likely remain one of the principal tools used to value privately owned businesses via the Income Approach.

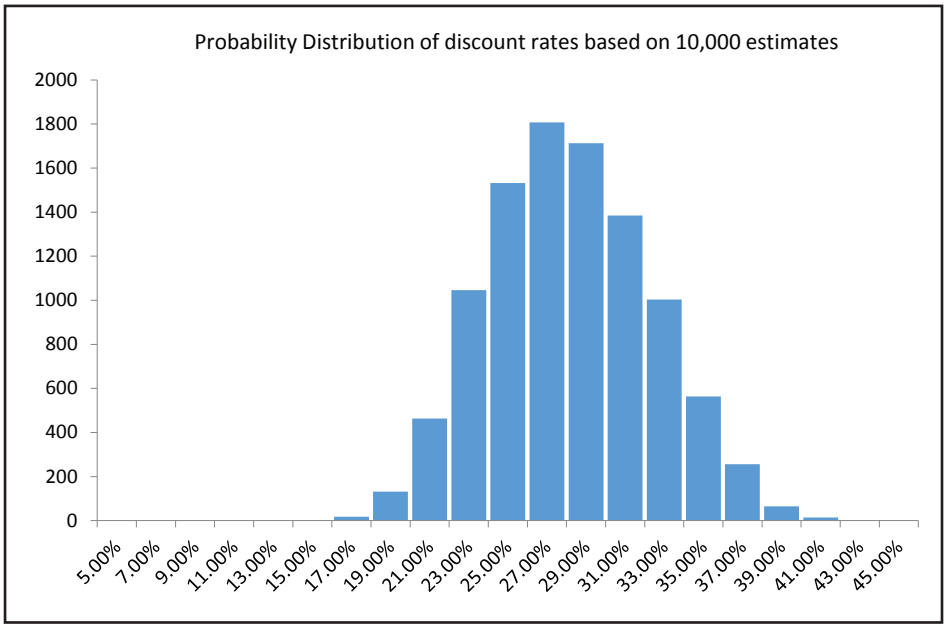
Considering the legitimate criticisms of the CAPM together with the continuing need to rely on it for the valuation of small and medium size businesses via the Income Approach, one way to assess the merits of divergent value opinions is via Monte Carlo simulation modeling.

Monte Carlo modeling is based on the fundamental premise that an uncertain number is a shape. In other words, the best way to express the value of an uncertain number—e.g., the appropriate rate by which to discount expected future cash flow to present value is via an array of possible values referred to as a probability distribution like the one we see in Figure 1. "The only way to avoid the 'flaw of averages' is to stop thinking of uncertain-

1 Actually a modified version of the original or "pure" CAPM is employed in the valuation of privately owned businesses. This is because it is necessary to make a few adjustments to the basic model in order to adapt it to the valuation of a privately owned company. For this reason, the valuation literature and business appraisers will often refer to this modified version of the CAPM as the MCAPM (for "modified") or ACAPM (for "adjusted") or the "BUM" for "build up method." So, whenever the acronym CAPM appears in this article it can be interpreted to mean either MCAPM, ACAPM, or BUM.

2 Eric W. Nath, ASA, "The Biggest Business Valuation Myth, *Business Valuation Review*, 30, No. 3, (Fall 2011):91.

Figure 1



ties as single numbers and begin thinking of them as shapes or distributions."[3] Monte Carlo simulation is a method of analysis based on artificially recreating a chance process (usually with a computer), running it many times, and directly observing the results. It is now used routinely in many diverse fields, from simulation of complex physical phenomena such as radiation transport in the earth's atmosphere and the simulation of the esoteric subnuclear processes in high energy physics experiments, to the mundane, such as the simulation of a Bingo game or the outcome of Monty Hall's vexing offer to the contestant in "Let's Make a Deal."[4] Monte Carlo simulation is ideally suited to the task of estimating a company's value via the CAPM. Through the power of simulation, we can get the answer to the question, "What is the most likely value of this company?" In short, Monte Carlo simulation is a preeminent tool for decision makers. However, via Monte Carlo simulation, the estimated value of a business is expressed in the metrics of a range—i.e., the average value, median value, the probability of the value being between a user defined upper and lower boundary or the probability of a value being less than or greater than a user specified value.

The first task of Monte Carlo modeling is to express unknown values as shapes—or in Monte Carlo parlance as "assumptions"—rather than selecting a single value. Of course, this task is easier said than done. But in most cases it is doable to a reasonable degree. To begin this presentation, let's express the CAPM's beta coefficient (β) as a shape. The first step in this process is to obtain the current beta coefficients from a sample of guideline public companies most representative of our subject company's industry and, ideally, the niche within that industry. Figure 2 presents our selection.

3 Sam L. Savage, *The Flaw of Averages,* (New York: John Wiley & Sons, Inc., 2009), 59.

4 Humberto Barreto and Frank M. Howland, *Introductory Econometrics: Using Monte Carlo Simulation with Microsoft Excel,* (New York: Cambridge University Press, 2006), 216.

Figure 2

Name	Ticker	Description	BETA
Nathans Famous	NATH	Nathans Famous, Inc. is engaged in the marketing of the 'Nathan's Famous' brand and the sale of products bearing the 'Nathan's Famous' trademarks through several different channels of distribution.	0.57
Kona Grill	KONA	Kona Grill, Inc. owns and operates upscale casual dining restaurants in the United States. Its restaurants offer prepared food items and alcoholic beverages.	0.16
Famous Dave's of America	DAVE	Famous Dave's of America, Inc., develops, owns, and operates restaurants in the United States. The Company offers smoked, barbeque, grilled meat, and entre items using prepared proprietary seasonings, sauces, and mixes.	0.65
Frisch's Restaurants	FRS	Frisch's Restaurants, Inc., operates full service family-style restaurants under the name Frisch's Big Boy. The Company also operates grill buffet style restaurants under the name 'Golden Corral' pursuant to certain licensing agreements.	0.53
Luby's	LUB	Luby's, Inc., through its subsidiaries are engaged in the ownership and operation of restaurants in the United States.	1.62
Noble Roman's	NROM	Noble Roman's, Inc. sells and services franchises and licenses for non-traditional foodservice operations under the Noble Roman's Pizza, Noble Roman's Take-N-Bake and Tuscano's Italian Style Subs trade name.	0.88
Pizza Inn Holdings	PZZI	Pizza Inn Holdings Inc and its subsidiaries operate and franchise pizza buffet, delivery and express restaurants domestically and internationally under the trademark 'Pizza Inn' and operate domestic fast casual restaurants.	1.13
Ruth's Hospitality	RUTH	Ruth's Hospitality Group, Inc., is a restaurant company focused on the upscale dining segment. It owns the Ruth's Chris Steak House, Mitchell's Fish Market, Columbus Fish Market, Mitchell's Steakhouse and Cameron's Steakhouse concepts.	0.97
Denny's	DENN	Denny's Corporation operates as a family-style restaurant chain. Denny's, through its wholly-owned subsidiary, Denny's, Inc., owns and operates the Denny's restaurant brand.	0.71
Carrols Restaurant Group	TAST	Carrols Restaurant Group, Inc. operates as a restaurant company in the United States operating three restaurant brands in the quick-casual and quick-service restaurant segments with approximately 559 restaurants located in 17 states.	-0.46
BJ's Restaurants	BJRI	BJ's Restaurants, Inc. is involved in the business of owning and operating restaurants.	0.92
DineEquity	DIN	DineEquity, Inc. owns and operates two restaurant concepts: Applebee's in the bar and grill segment of the casual dining category of the restaurant industry, and IHOP in the family dining category of the restaurant industry.	1.2
Red Robin Gourmet Burge	RRGB	Red Robin Gourmet Burgers, Inc., together with its subsidiaries is a casual dining restaurant chain focused on serving an imaginative selection of high quality gourmet burgers in a family-friendly atmosphere.	1.06
Texas Roadhouse	TXRH	Texas Roadhouse, Inc is a growing, moderately priced, full-service, casual dining restaurant chain. It operates approximately 365 restaurants in 47 states.	0.6
Chanticleer Holdings	HOTR	Chanticleer Holdings, Inc. is an international franchiser of Hooters restaurants with rights to develop and operate Hooters restaurants in South Africa, Hungary, and parts of Brazil.	-0.74
		Average	0.65

Figure 3

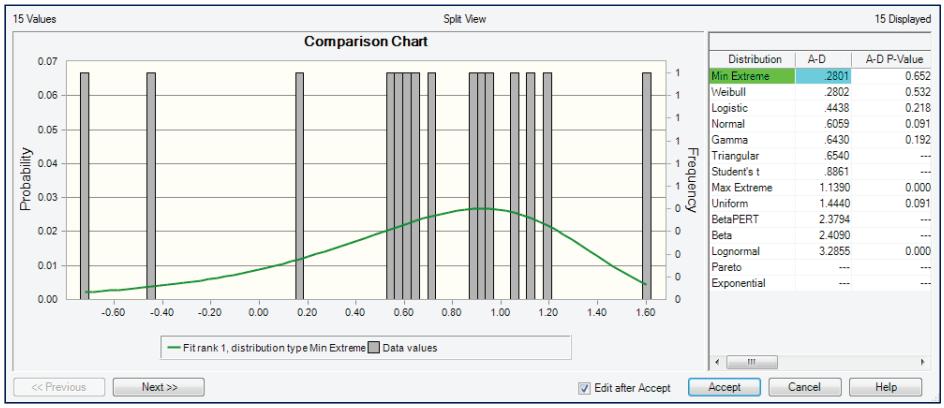


Figure 4

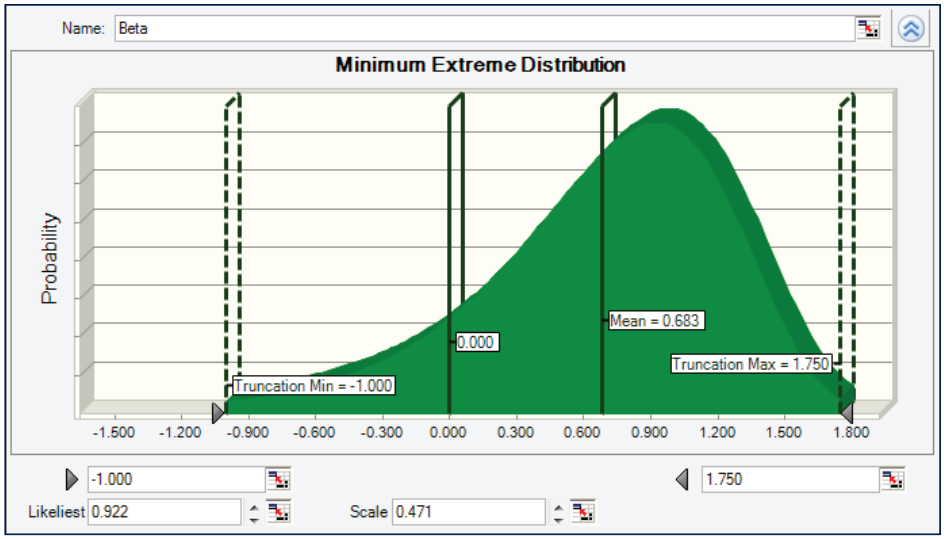


Figure 2 presents a summary of fifteen beta coefficients from guideline companies we will use as representative of Billy Bob's Barbecue's industry. In this case, I elected to have the software automatically apply the best fitting shape—i.e., frequency distribution—to the data. This first example will be the only one where this will be possible in this demonstration because the software requires a minimum of fifteen data points in order to engage its automatic shape fitting capabilities.

Figure 3 shows the actual distribution of the beta coefficients in Figure 2 with the best fitting shape superimposed over it. Figure 4 presents the actual shape that will be employed in the analysis which is the shape presented in Figure 3 with my subjectively selected cutoff points for the distribution's tails at -1.0 and 1.75.

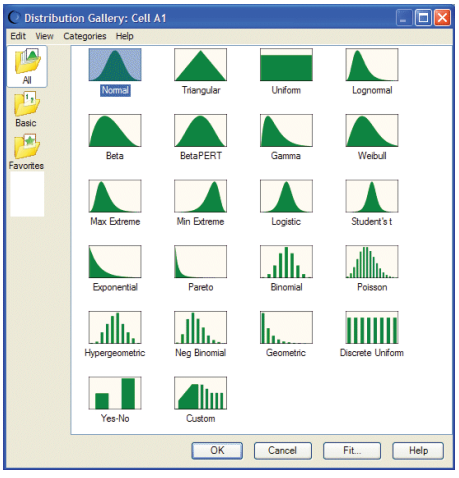
There are several Monte Carlo simulation software packages available and presumably they all come with a variety of commonly used frequency distributions. The Crystal Ball™ Monte Carlo software employed in this presentation includes instruction on which of the shapes included within the software's gallery of choices is most appropriate for specified circumstances plus the capability to automatically select the best shape to represent a user defined column or row of existing data. Crystal Ball's gallery of shapes is presented in Figure 5.

Clearly, determining the best shaped frequency distribution to employ plus minimum, most likely and maximum values is central to the effective application of Monte Carlo simulation.

That being said, this is a good place to segue to the possibility for an entirely new line of discourse among business appraisers. That would be a departure from arguing over the propriety of this or that specific ERP (or any component of the CAPM) to the quest for a consensus on the range and shape of reasonable possibilities. As John Charnes suggests, "quite often *Subject Matter Experts* (SMEs) who know nothing about probability distributions will be able to help you choose the parameters of the distribution simply by your asking for the highest and lowest possible values they think will occur."[5] Pursuing such a line of discourse could, at a very minimum, severely challenge the ability of the so called "hired gun" to argue for an absurdly high or low value; a proposition that will become more evident a little later.

The way Monte Carlo simulation works is to randomly select a value within each independent variables' defined frequency distribution and insert it into the response variable equation—known as the "forecast" equation. The demonstration presented here is comprised of seven independent variables: 1) the risk free rate, 2) beta, 3) the equity risk premium, 4) the lack of liquidity adjustment, 5) the

Figure 5



5 John Charnes, *Financial Modeling with Crystal Ball and Excel* (New York: John Wiley & Sons, Inc., 2007), 62.

Figure 6

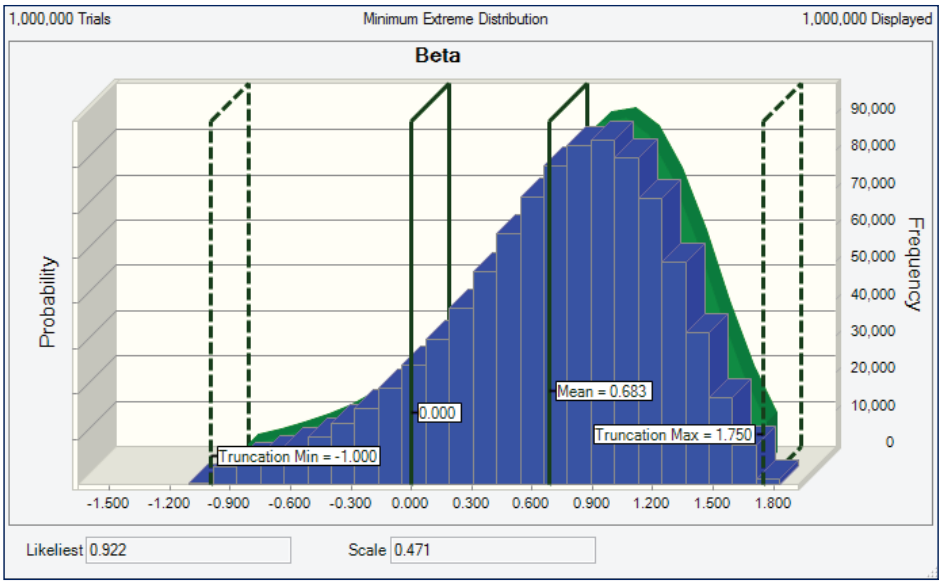
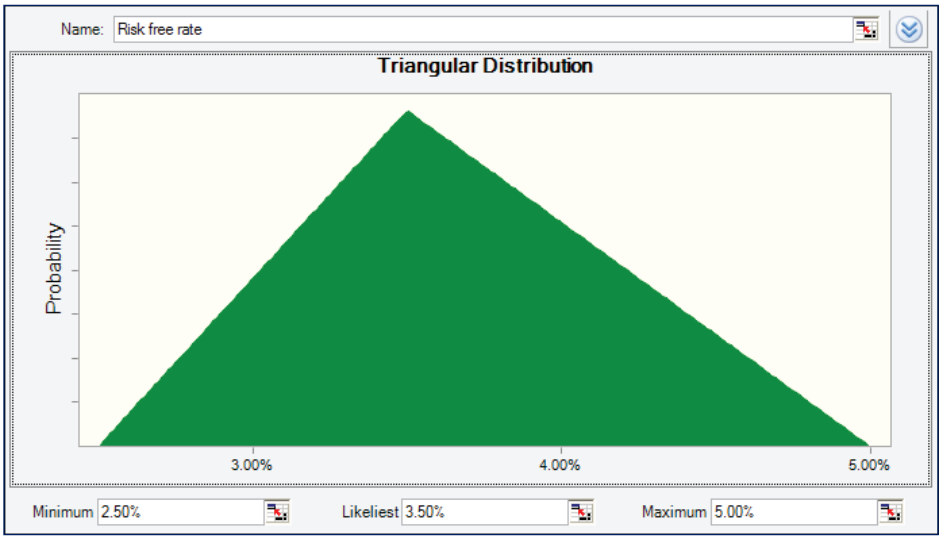


Figure 7



C to S corporation tax-affecting adjustment, 6) the company specific risk premium, and 7) the net cash flow expected annual growth rate. Four forecasts will be produced 1) the discount rate, 2) the capitalization rate, 3) after-tax net cash flow in future year 1, and 4) the equity value of the subject company.

In this presentation, the randomly selected values from each independent variable's frequency distribution will be inserted into each forecast equation one million times and therewith we will end up with one million independent estimates for each forecast. However, the random selection of values from each frequency distribution is done so via stratified random sampling such that the frequency distribution of the number of picks from each stratum will reflect the selected shape for that independent variable. You can see this is Figure 6. Each vertical band reflects the number of random picks from each value range. In this first example, you can see that the random picks perfectly mimic the frequency distribution we selected for this independent variable.

Now, just as there are more ways to roll a value of seven than any other number between two and 12 when rolling two dice, the variability of the shapes for our seven independent variables means that there will be more ways to get some value indications than others. Thus, the result of recalculating each of the four forecasts one million times is that we will end up with four frequency distributions similar to Figure 1.

At this juncture, let's select the shapes for the rest of our independent variables. We will start with the risk free rate presented as Figure 7.

Given the significant drop in the risk free rate following the 2008 financial crisis and the concomitant investors' "flight to quality," discussion has ensued about employing an expected average risk free rate rather than the actual risk free rate on the date of the valuation.[6] Therefore, for the purpose of demonstrating Monte Carlo simulation, we will employ a range of possible risk free rates. In this case, I selected a triangular shape as presented in Figure 7 because, "the triangular distribution is appropriate for use when you have little or no data available but you know the minimum, maximum and most likely values of a random variable."[7]

Figure 7 presents the shape of our risk free rate with an assumed minimum of 2.5 percent, most likely of 3.5 percent, and maximum of 5.0 percent.

Figure 8 displays the results of one million randomly selected values for the risk free rate that were inserted into our forecast equations.

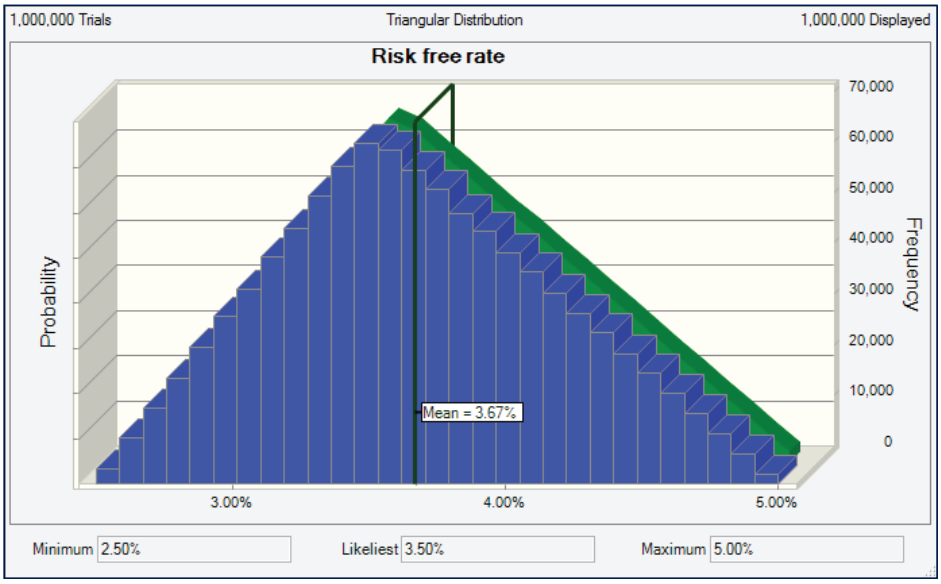
Next, let's consider the equity risk premium (ERP). In this case, five different estimates of the ERP were obtained:

- Aswath Damodaran's Implied Equity Risk Premiums for U.S. Market 2012: FCFE 5.78 percent
- Duff & Phelps: 2012: 5.50 percent
- *SBBI Valuation Yearbook* 2013

6 See Shannon Pratt and Roger Grabowski, *Cost of Capital, Applications and Examples,* 4th ed. (New York: John Wiley & Sons, Inc., 2010), 90-93.

7 John Charnes, *Financial Modeling with Crystal Ball and Excel,* 45.

Figure 8



Edition: Historical Long-Term Average: 6.70 percent

- *SBBI Valuation Yearbook* 2013 Edition: Supply-Side ERP: 6.11 percent
- Pepperdine University Private Market Report: Average of 159 appraisers per survey: 6.3 percent

As with all other components of the CAPM discount rate, there are divergent views on the appropriate equity risk premium (ERP). Be that as it may there are a couple of alternative shapes that could be used to capture the most likely range of possibilities for the actual forward-looking ERP. Employment of the normal curve in this instance is not at all unreasonable. However, if an analyst feels strongly regarding the most likely value for the ERP leaning toward the low end or high end of the continuum presented in Figure 9 then the normal curve won't do. In this case, or any case for that matter, where there is a felt need to impart some subjective weighting to the distribution of possible values then the PERT distribution, also known as the BetaPERT distribution will be the shape of choice. "The PERT distribution is used exclusively for modeling expert estimates, where one is given the expert's minimum, most likely and maximum guesses."[8]

This means that there are an infinite number of alternative custom shapes an analyst may employ to give expression to the data presented in Figure 9. With that thought in mind, Figures 10 and 11 present two examples of the shape

8 VOSE Software, "PERT Distribution," http://www.vosesoftware.com/ModelRiskHelp/index.htm#Distributions/Continuous_distributions/PERT_distribution.htm

Figure 9

	ERP
Duff & Phelps	5.50%
Aswarth Damordaran	5.78%
SBBI Supply Side	6.11%
Pepperdine University survey	6.30%
SBBI Long-term Average	6.70%
Mean	6.08%
Std dev	0.41%

Figure 10

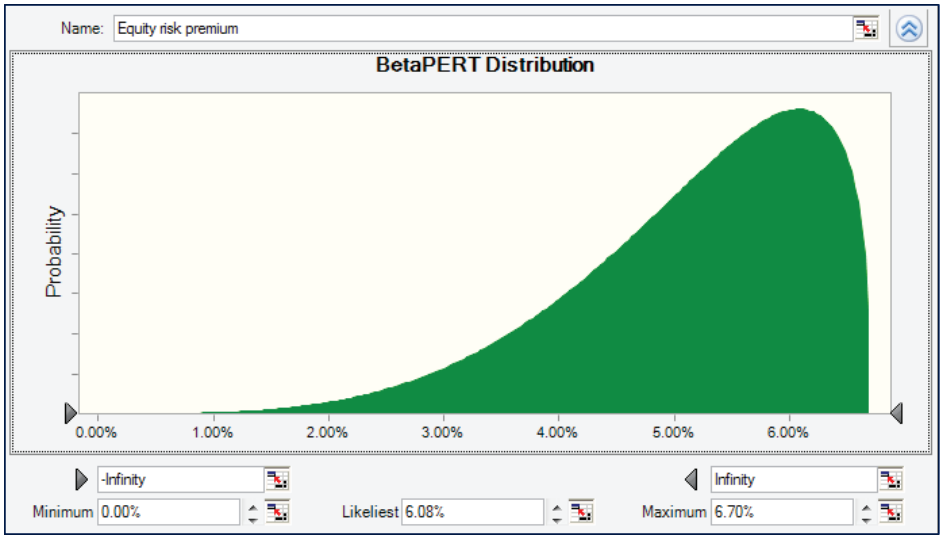


Figure 11

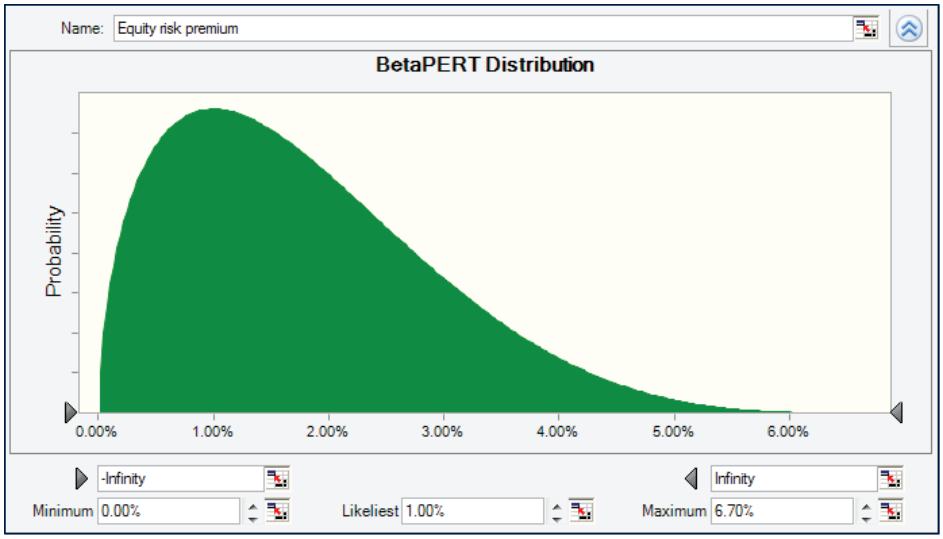


Figure 12

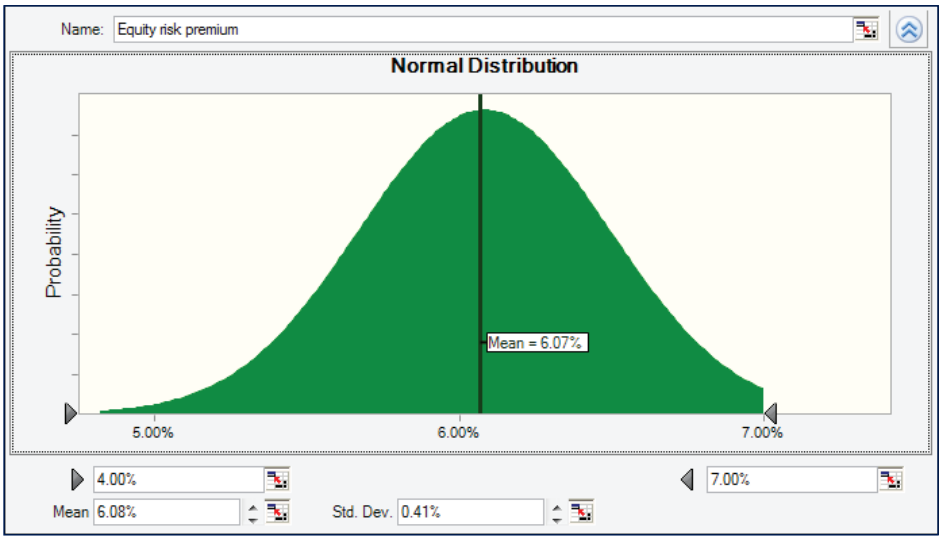


Figure 13

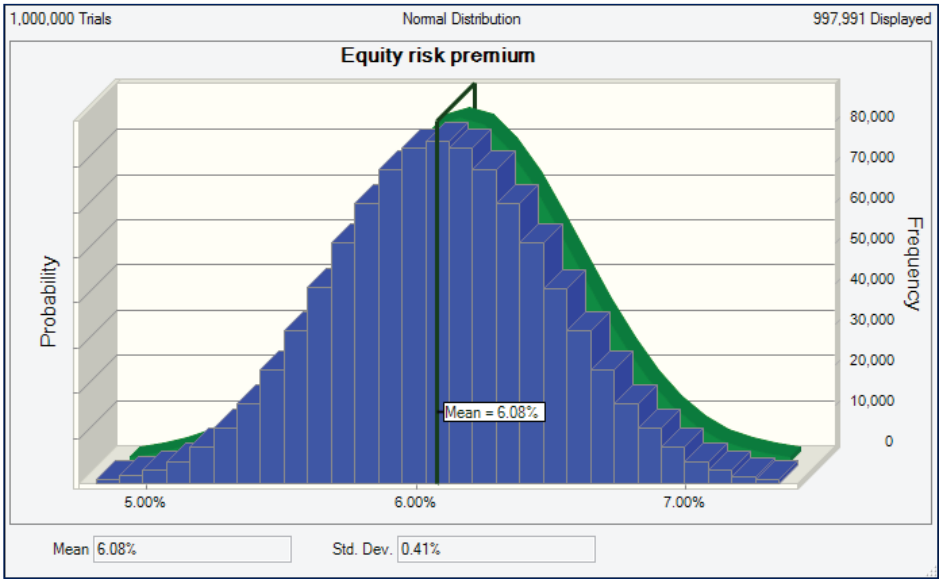
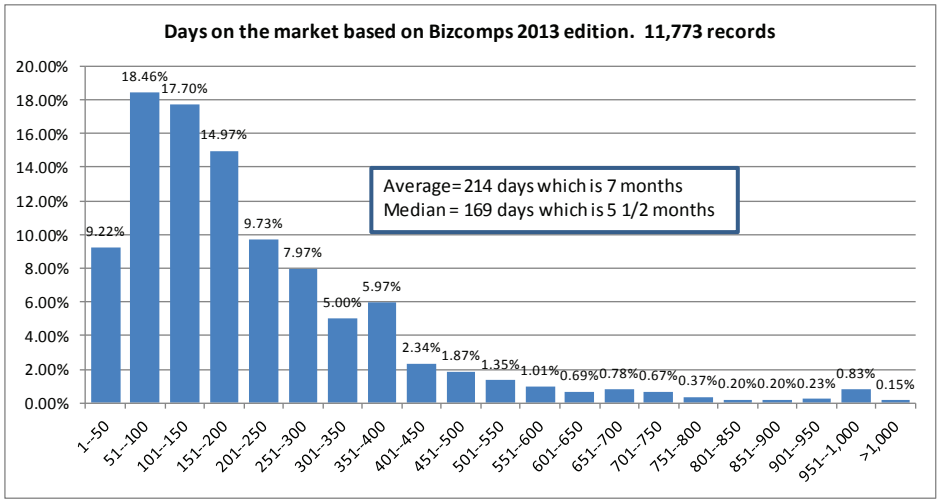


Figure 14



an analyst could select as best representing his or her opinion of the most likely possibilities for the ERP based on a BetaPERT distribution.

These two alternative BetaPERT distributions notwithstanding, for the purpose of this presentation, I have incorporated the normal distribution as presented in Figure 12. However, in this case, I have truncated this distribution by setting a minimum value of 4 percent and a maximum value of 7 percent, because, according to Jim Hitchner, "for the ERP, if an analyst chooses greater than 7 percent or lower than 4 percent, we would call them out on that."[9] There are four more independent variables we need to consider incorporating into our discount rate model, the lack of liquidity adjustment, the size effect, the C to S corporation tax-affect adjustment, and the company specific risk premium. Each of these adjustments should be thoroughly supported with report narrative.

Considering the lack of liquidity adjustment, Z. Christopher Mercer maintains that no discount for lack of 'marketability' should be applied to a baseline value derived from publicly traded stocks for a non-public controlling interest but concedes that a "holding period premium" is appropriate.[10] In 1997 the Securities and Exchange Commission (SEC) reduced the minimum holding period for restricted stocks to one year. Subsequent to that change, Columbia Financial Advisors, Inc. conducted a study to compare the trading prices of restricted and non-restricted stock. This study found that the average discount for lack of liquidity was 13 percent and the median was 9 percent.[11] This study provides a reasonably ap-

9 Jim Hitchner, "How to 'Rig' a Valuation: The Discount Rate," *Financial Valuation and Litigation Expert*, (February/March 2013): 3.

10 Z. Christopher Mercer and Travis W. Harms, *Business Valuation: An Integrated Theory*, 2nd ed. (New York: John Wiley & Sons, Inc., 2008), 90-93.

11 James R. Hitcher, *Financial Valuation: Applications and Models*, 2nd ed. (New York: John Wiley & Sons, Inc., 2006), 417.

Figure 15

Table 7-19: Size and Liquidity Quartiles of the NYSE/AMEX/NASDAQ Stocks Independently Sorted Each Year: Compound Annual Returns (%)					
	Liquidity				Low-High
Size	1-Low	2	3	4-High	Liquidity
1-Small	16.22	17.24	10.71	2.57	***13.65***
2	15.86	14.26	12.25	6.44	9.42
3	14.05	13.19	12.40	8.43	5.62
4-Large	11.61	11.33	11.06	9.09	2.52
Small-Large	4.61	5.91	-0.35	-6.52	
Data from	1972	to	2011		

Figure 16

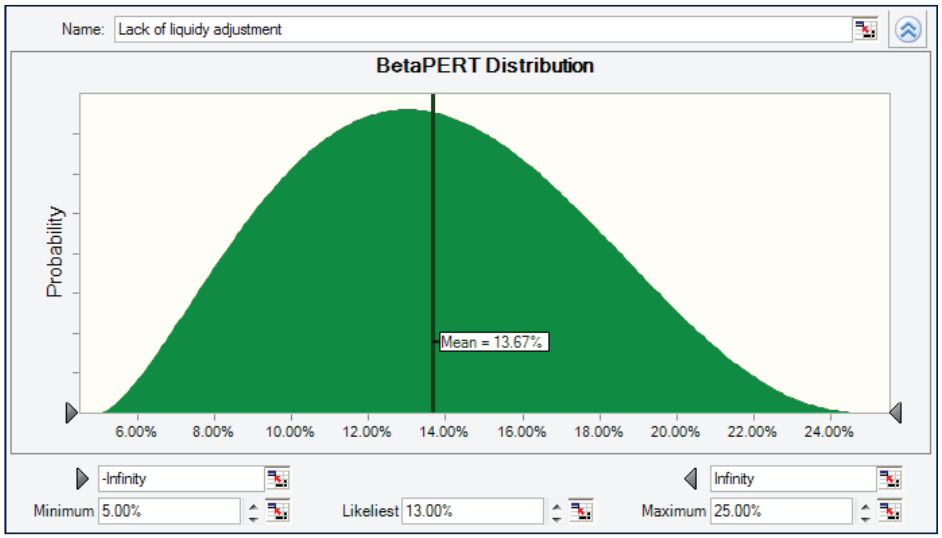
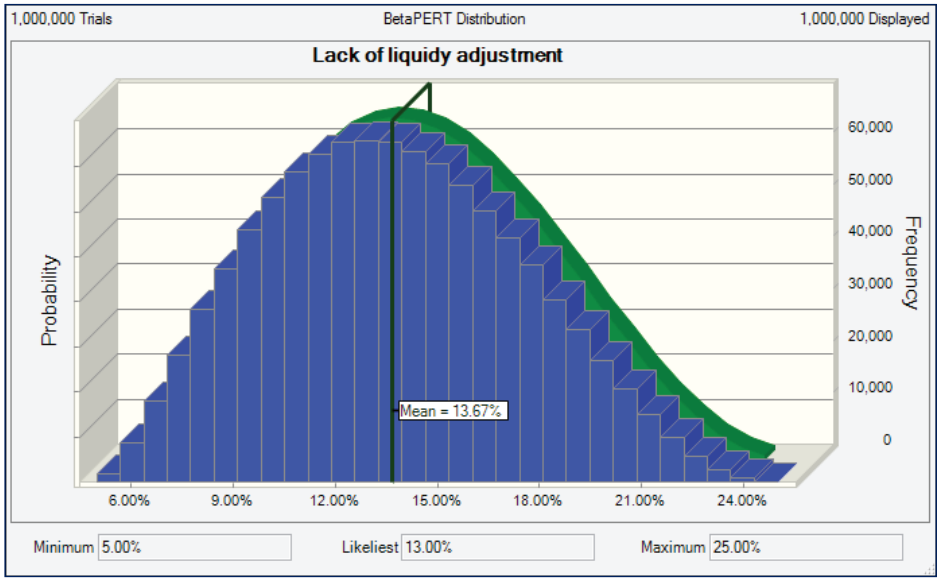


Figure 17



propriate "holding period premium" or "discount for lack of liquidity" premium considering that the average time on the market for small business based on the 2013 edition of BIZCOMPS is seven months.

According to Shannon Pratt:

The case for discounts for lack of marketability for controlling interest transactions is not as clear as for minority interests. A controlling interest holder [in a privately owned business] cannot merely call a stockbroker, execute a transaction in seconds, and have cash in hand within three business days." It generally takes months for the owner of a privately owned business to liquidate his or her ownership interest. Therefore, "courts frequently have recognized discounts for lack of marketability for controlling stock interests held in estates [often referred to as 'lack of liquidity']. Discounts for lack of liquidity for controlling ownership interests in closely held firms…are often in the range of 10% to 25%...[12]

Identical advice is presented in Ibbotson's *SBBI Yearbook*, the very source of data employed in the income approach via the CAPM:

Size premiums presented in this book are measured from publicly traded companies of various sizes and therefore do not represent the full cost of capital for non-traded companies. The valuation of a non-publicly traded company should also reflect a discount for the very fact that it is not traded. This would be a liquidity discount and could be applied to the valuation directly, or alternatively reflected as a liquidity premium in the cost of capital.[13]

Empirical support for a discount for lack of liquidity appears in Ibbotson's

12 Shannon Pratt and Roger J. Grabowski, *Cost of Capital*, 3rd ed., 429.

13 *Ibbotson 2011 Stocks, Bonds, Bills and Inflation Valuation Yearbook* (Chicago: Morningstar, 2011), 83.

Figure 18

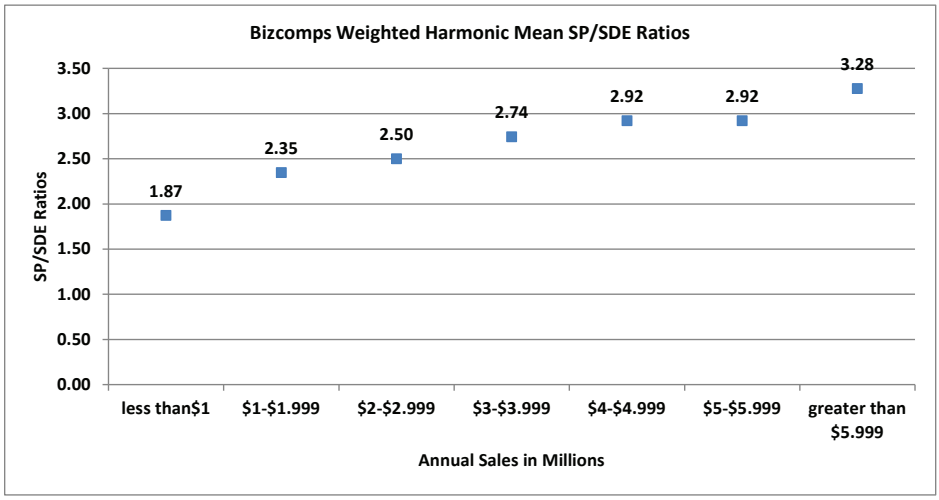
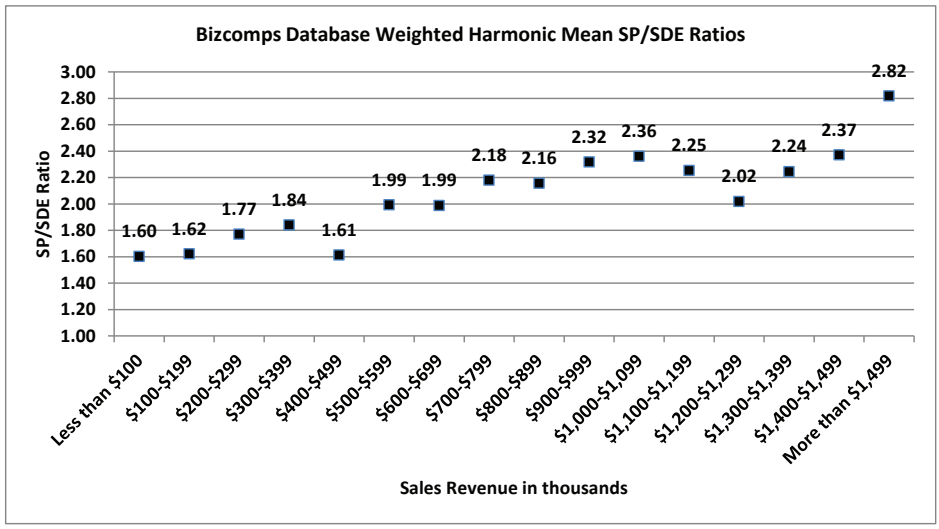


Figure 19



2012 *Stocks, Bonds, Bills and Inflation Valuation Yearbook.* As a way to demonstrate that the market does indeed seek a higher return for less liquid stocks, they split the universe of NYSE, NYSE Amex, and NASDAQ stocks into four quartiles based on their share turnover rates. The stocks were segmented into four size quartiles and four liquidity quartiles as reproduced in Figure 15.[14]

For the purpose at hand, the most telling metric in this analysis is the difference between the most and least liquid small stocks of 13.65. This is a substantial spread—and keep in mind that all of the stocks in this study are traded on the major stock exchanges. The logical conclusion can only be that if there is a substantial difference between high and low liquidity publicly traded stocks that the market most certainly perceives a higher value in publicly traded stocks over controlling ownership interests in companies that are not publicly traded. Unfortunately this study does not provide us with a precise percentage discount to apply to an as-though-publicly-traded value indication in order to arrive at a non-publicly traded value indication. However it certainly provides support for the need to apply a discount of some amount and something in the neighborhood of 13.65 percent does not seem unreasonable—especially because it is nearly identical to the average discount revealed in the Columbia Financial Advisors study.

Based on the preceding narrative, Figure 16 presents a BetaPERT distribution for the lack of liquidity adjustment in the range of 5 percent to 25 percent with a most likely value of 13 percent.

The next independent variable adjustment to the CAPM discount rate to be considered is the size effect adjustment. In my view, the size affect and company specific risk premium are the most problematic of all the adjustments because of the potentially significant diverse opinions regarding their reasonable size ranges and the potential for double-counting.

The size adjustment for decile 10 in the 2013 *SBBI Valuation Yearbook* is 6.03 percent. This adjustment reflects the long-term average size effect risk adjustment for the smallest decile stocks publicly traded on the major exchanges. Keep in mind that this size affect adjustment is based on a fully diversified portfolio of stocks within this size category. Moreover, this size category is comprised of 1,212 companies with market values ranging from $206,795,000 (Table 7-2) down to $1,028,000 (Table 7-3) with a median value of $91,612,393. Now, juxtapose this company size range and average value with the fact that the size effect continues to operate on privately owned businesses all the way down to the smallest of small businesses—to wit:

Analysis of the size differentials relating to cost of capital on the Pratt's Stats, Bizcomps, and IBA Market Database all show that the size effect continues to carry on down to smaller companies.[15]

This phenomenon is illustrated in Figures 18[16] and 19 employing market

14 *Ibbotoson 2012 Stocks, Bonds, Bills and Inflation Yearbook* (Chicago: Morningstar, 2012), 105.

15 Shannon Pratt and Anita Niculita, *Valuing A Business: The Analysis and Appraisal of Closely Held Companies,* 5th ed. (New York: McGraw Hill Companies, Inc., 2008), 108.

16 For detailed discussion of this topic, see the Institute of Business Appraisers' quarterly journal, *Business Appraisal Practice,* First Quarter 2012, "Revisiting the Size Effect Phenomenon among Small Businesses" by Toby Tatum.

Figure 20

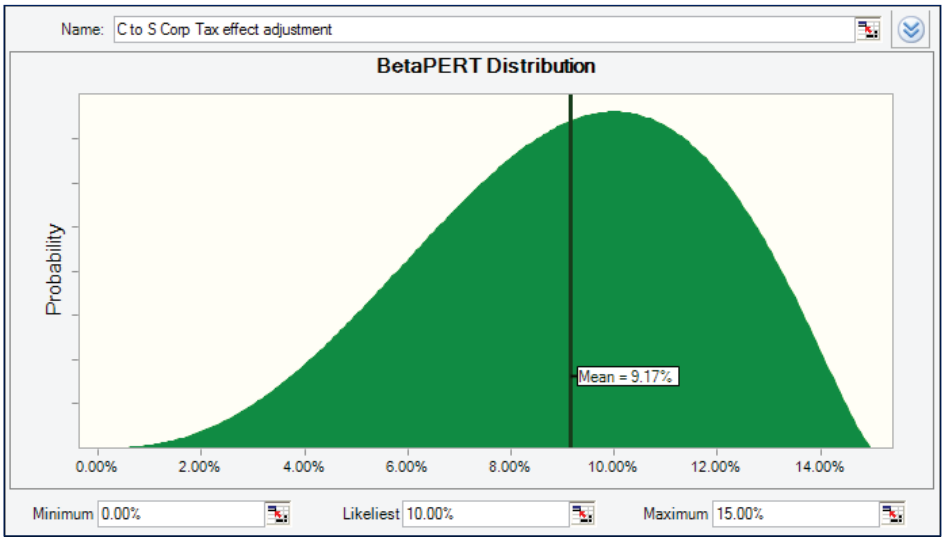
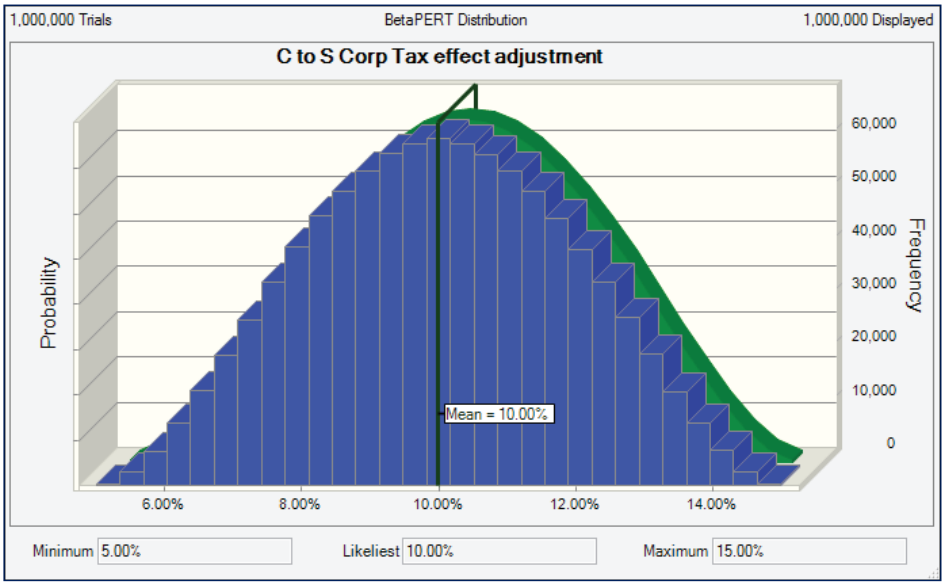


Figure 21



transaction data drawn from the BIZCOMPS database.

In Figure 17, all of the transactions in the BIZCOMPS database were segmented into seven size categories in increments of one million dollars. In this case, it is clearly evident that as businesses become larger, with size based on annual gross sales, the central tendency in the SP/SDE ratios increases.

Figure 19 is an identical analysis focused on the smallest of the small businesses with size categories in thousands.

Although there is some random variation in the data when analyzed in $100,000 increments, it is nevertheless evident that the size effect phenomenon does indeed continue to operate across the entire spectrum of privately owned businesses all the way down to the very smallest of the small.[17]

The clear implication from the above statements is that the size effect adjustment for publicly traded companies in the above cited range with an average value of $103,911,500 understates what the appropriate size effect adjustment should be for very small privately owned businesses. This fact poses a serious challenge to the efficacy of the CAPM valuation model for the purpose of valuing small privately owned businesses and this fact is well recognized in the valuation literature. According to Jay B. Abrams, "…many appraisers seriously overvalue small companies using discount rates appropriate for large firms only." [i.e., small companies with market values below the ranges described above].[18]

The way that I deal with this issue is to add the SBBI 10th decile size premium to the discount rate and leave it at that. However, when I address the company specific risk premium, I make it clear that this adjustment is intended to incorporate consideration for both a reasonable increase in the size premium above the SBBI 10th decile appropriate to apply to any business with sales revenue and earnings in the same neighborhood as the subject company together with increases and/or decreases for truly company-specific strengths and/or weaknesses relative to the 'normal' range for comparable companies. So, for the purpose of this presentation, the discount rate equation will be developed with SBBI's 10th decile value of 6.03 percent for the size effect.

Next is the matter of tax-affecting the discount rate. According to Jim Hitchner:

> The valuation of S corporations and other pass-through entities has been one of the most controversial issues in business valuation. [However] today, most valuation analysts agree that the starting point for valuing a pass-through entity is to tax-affect the income....[19]

The challenge here is determining how much to downwardly adjust the "C Corporation" discount rate to transform it into a "pass-through entity" discount rate. In my case, I downwardly adjust the rate by 10 percent, and this adjust-

17 Toby Tatum, "Revisiting The Size Effect Phenomenon Among Small Businesses," *Business Appraisal Practice*, (First Quarter 2012): 7.

18 Jay B. Abrams, *Quantitative Business Valuation*, (New York: McGraw-Hill, 2001), 154.

19 Jim Hitchner, *Financial Valuation*, 3rd ed. (New York: John Wiley & Sons, Inc., 2011), 1220.

ment is thoroughly supported in the DCF valuation section of my report. However for our purpose here, I am assigning a range of 0.00 percent to 15.00 percent with the most likely value being 10.00 percent. The frequency distribution for this element of the CAPM discount rate is presented as Figure 20.

And finally, let's consider the company specific risk premium (CSRP). This adjustment is typically incorporated into the CAPM discount rate for small and medium size businesses. Virtually all published text books on business valuation note that the selection of the value for the CSRP is entirely the subjective opinion of the appraiser. Understandably, as a result, there are likely to be some pretty divergent views on the appropriate value to ascribe to the CSRP for a subject company. In this case, there are two different shapes that can perhaps best serve to support the inclusion of a CSRP; the BetaPER*T* or the uniform distribution. "The uniform distribution is sometimes called the 'distribution of maximum ignorance,' and should be replaced with a better estimate if one becomes available in later stages of the modeling process."[20] Figure 22 presents a uniform distribution for the CSRP. This shape requires an estimate only for the lowest and highest values in this case 14.0 percent and 19.0 percent.[21] Here again, in the DCF section of my report, I provide thorough support for the value of the CSRP I have incorporated into the analysis and this value varies depending on the size of the company I am valuing. The mean value of the range depicted in Figure 22 is the value I employed in the DCF section of my report.

Figure 22

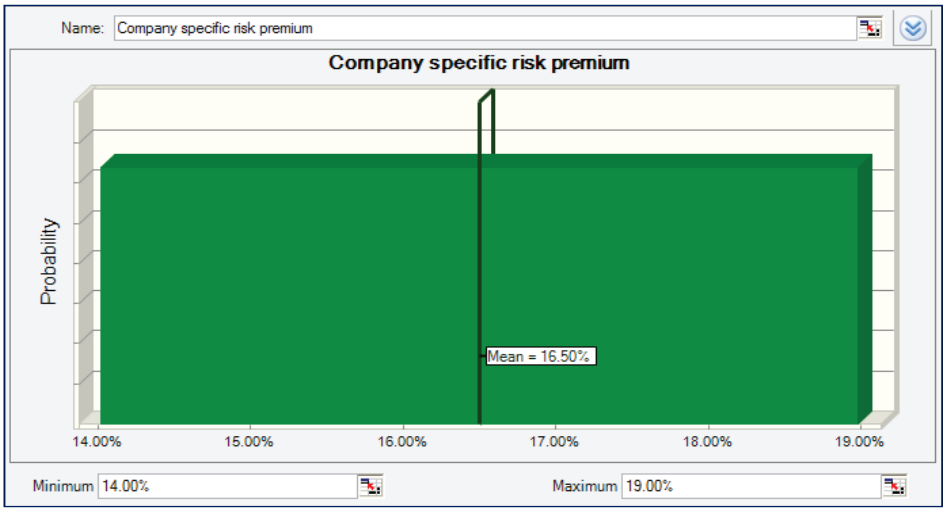
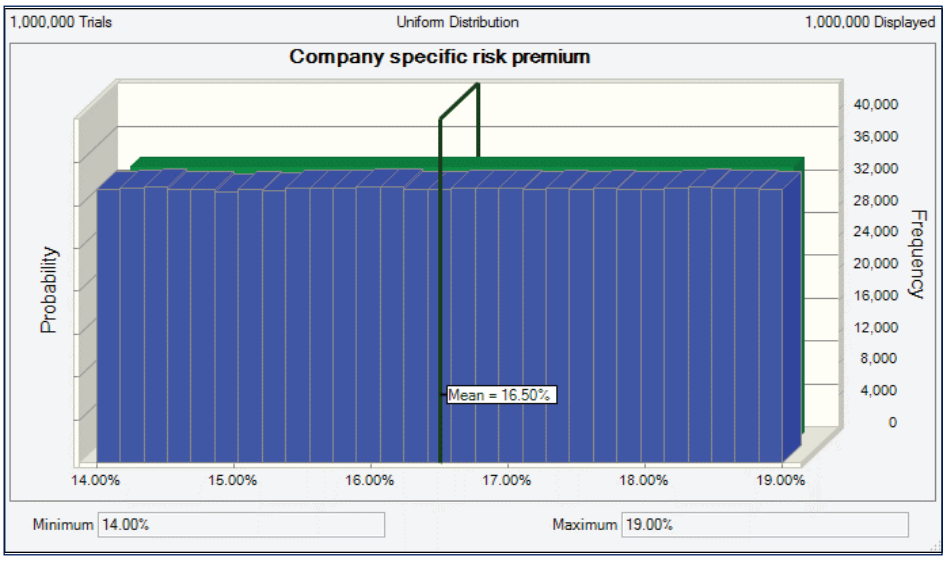


Figure 23



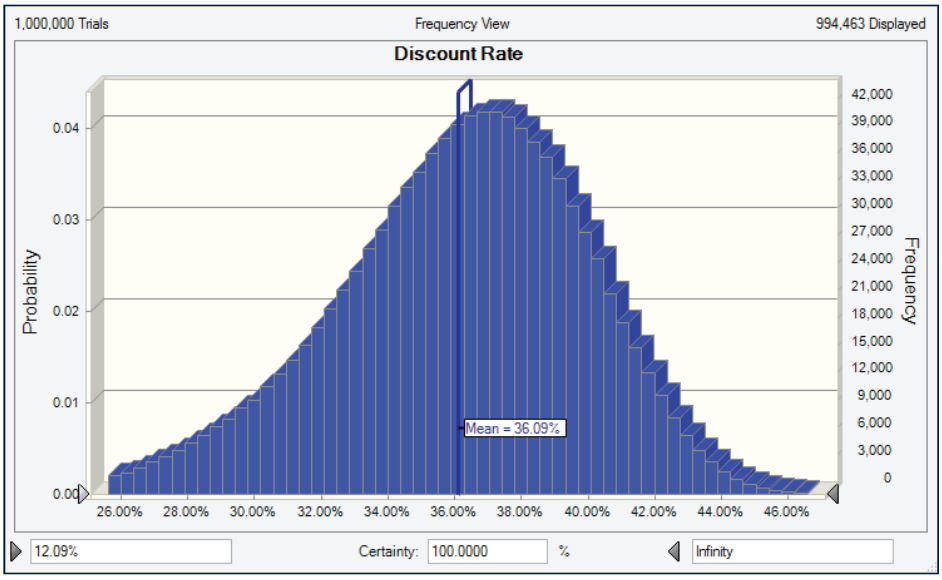
So far we have defined six different shapes for the possible values for the CAPM discount rate components. These are by no means the only shapes possible. Indeed statisticians have identified a multitude of different possible probability distributions. As mentioned previously, Crystal Ball™, one of the higher-end Monte Carlo simulation Excel Add-ins, includes 20 distributions combined with the capability to automatically "fit" historical data to the probability distribution that best synchronizes with that data. Of course, employing this technique presupposes the availability of sufficient historical data to enable the identification of a best fit and the propriety of employing historical data.

We have now arrived at the point where the rubber meets the road. That is, to calculate the discount rate via the CAPM for our subject privately owned company. However, all of the heretofore discrete variables employed in the equation with the exception of the size affect will be replaced with shapes.

20 John Charnes, *Financial Modeling with Crystal Ball and Excel*, 44.

21 I suspect that my employment of a 14 percent to 19 percent range for the company specific risk premium centered on 16.50 percent may seem somewhat high to some. In my opinion, the reasonable discount rate for after-tax net cash flow to equity for small businesses should generally be north of 30 percent. This means that either a size effect adjustment or CSRP adjustment (or both) to the basic CAPM is required to get to that point. For more detail on my view of this matter see "An New Method For Building A Discount Rate For Small Businesses" in the Third Quarter 2010 edition of *Business Appraisal Practice* or look for my forthcoming article titled "A New Income Approach Valuation Method for Small and Very Small Businesses."

Figure 24



In this demonstration, calculating the CAPM will conform to the following build-up method:

[Risk Free Rate + Beta times the Equity Risk Premium + Lack of Liquidity Adjustment + Size Effect Adjustment of 6.03%] all of which is downwardly adjusted by 1 minus the tax affect % + Company Specific Risk Premium:

$$=[R_f + (\beta * ERP) + [LoL * (R_f + (\beta * ERP)] + Size\ Effect]*(1\text{-}Tax\ Affect\ \%) + CSRP$$

Now it's time to engage the power of Monte Carlo simulation. That is, to calculate a large number of alternative discount rates by repeatedly selecting a single value within the each shape at random and inserting that value into our build-up equation.

For example the first iteration of this process could select 2.85% as the risk free rate, 3.75% as the equity risk premium, 1.24 for Beta, a Lack of Liquidity adjustment of 13.27%, a Size Effect adjustment of 7.1%, a C Corp to S Corp tax affect discount of 10% (applied to all the foregoing) plus a Company Specific Risk Premium of 16.38%. Inserting these values into our discount rate equation equals:

$$((2.85\% + (1.24 * 3.75\%) + (.1327 * [2.50\% + (1.24 * 3.75\%)] + 7.10\%)*(1\text{-}10\%) + 16.38\% = \underline{\boldsymbol{30.37\%}}$$

The object of this exercise is to repeat it a large number of times. For this demonstration, the random selection process was repeated one million times.[22]

In Figure 24, we see the frequency distribution of the discount rate following one million random matches among the components of the CAPM. The average value is 36.09 percent. All of the random selections among the six shapes were mixed and matched independently. In other words, the selection of any particular value from one shape had no influence on which value it was matched up with among any of the other shapes. This means that with one million repetitions of this process the most likely central tendency among all possible combinations will emerge. This is the entire purpose of Monte Carlo simulation modeling. Figures 24, 25, and 26 show the results of this process. Figure 25 presents all the outcome statistics for this distribution.

22 There is absolutely no danger in using too many iterations in a Monte Carlo simulation while too few could lead to a flawed forecast—i.e., a flawed indication of the shape, central tendency and related parameters of the frequency distribution. For this reason I think it best to err to the high side and one million is a nice round number. It takes Crystal Ball less than 15 minutes to accomplish this task.

Figure 25

Forecast: Discount Rate	
Statistic	Forecast values
Trials	1,000,000
Mean	36.09%
Median	36.41%
Standard Deviation	3.74%
Skewness	-0.3983
Kurtosis	2.99
Coeff. of Variation	0.1035
Minimum	21.70%
Maximum	49.63%
Mean Std. Error	0.00%

Figure 26 depicts another enormously beneficial aspect of Monte Carlo simulation. Here we see the relative sensitivity of the six independent variables. The sensitivity chart shows the influence of each independent variable or model assumptions as they are called on their respective forecasts.

During a simulation, Crystal Ball ranks the assumptions according to their importance to each forecast. The sensitivity chart displays these rankings as a bar chart, indicating which assumptions are the most important or least important in the model.

Sensitivity charts provide these key benefits:

- You can find out which assumptions are influencing the forecasts the most, reducing the amount of time needed to refine estimates.

Figure 26

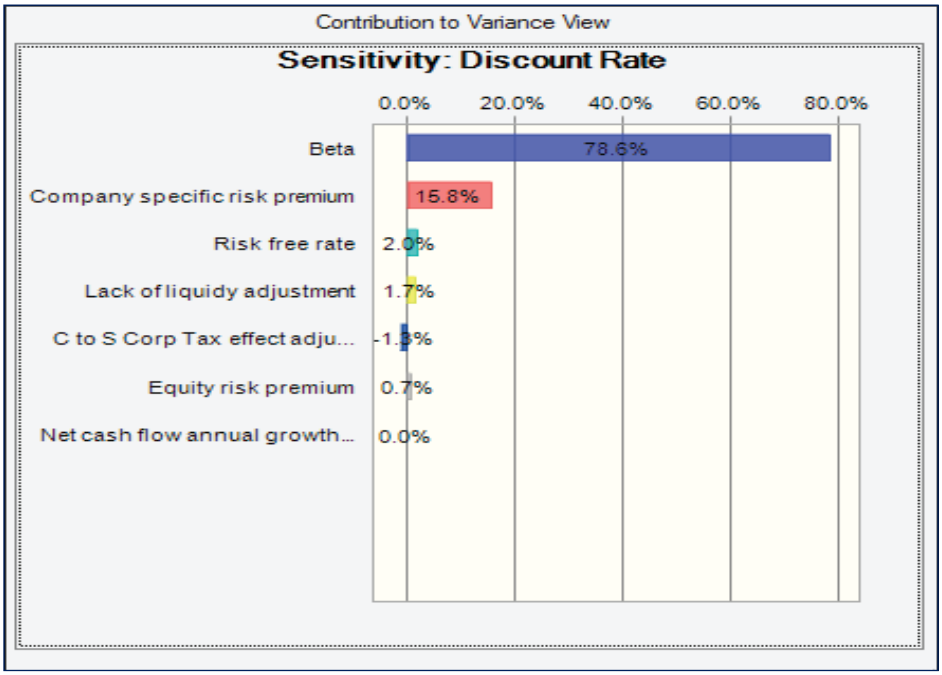


Figure 27

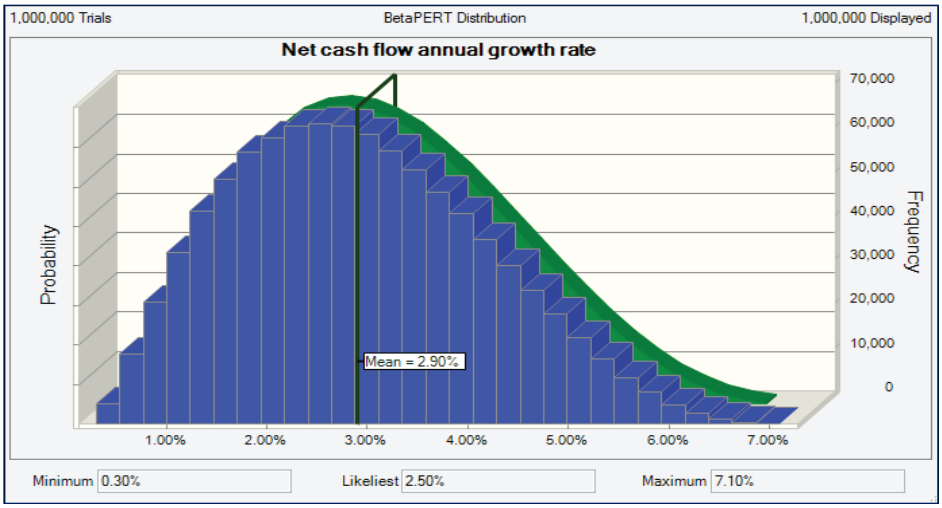
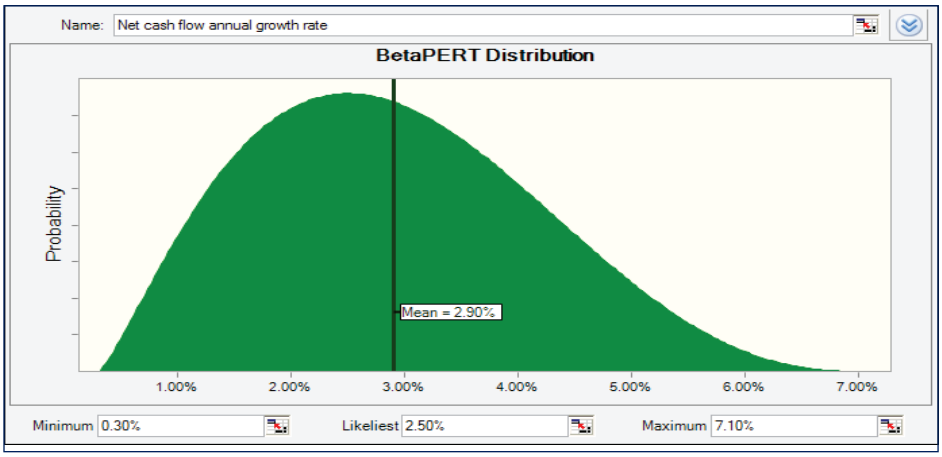


Figure 28



- You can find out which assumptions are influencing the forecasts the least, so that they can be ignored or discarded altogether.
- As a result, you can construct more realistic spreadsheet models and greatly increase the accuracy of the results because you know how the assumptions affect the model.

Clearly in this demonstration, the beta coefficient has the most influence on the development of the discount rate. This chart is telling me that I had better revisit this aspect of the analysis. Exactly what I should do remains to be seen, but clearly I must take another close look at this analytical assumption. And herein lies an important object lesson regarding Monte Carlo simulation modeling which is that the first pass on defining the shape and parameters of the independent variables should not be the last. Model refinement is a necessary step and the sensitivity charts serve a central role in this process.[23]

Our ultimate purpose in this presentation is to estimate the value of Billy Bob's Barbecue. At this point, we have an estimate for the discount rate and now our task segues to estimating the expected future earnings for the first future year. This necessitates estimating the expected earnings growth rate by which to increase our selection of a baseline historical earnings value.

My guess is that there are a multitude of means by which valuators estimate an earnings growth rate. However, in most cases, I suspect that the point of departure in making such a projection is the growth rate in the company's prior cash flows because "they are usually the most reliable guide as to future expectancy."[24] It is important to emphasize that expected future cash flow does not mean "hoped for" or "maximum potential" future cash flow. A statement of expected future cash flow is a theoretical concept. "The calculation of an expected future cash flow re-

23 Running one million trials took 14 minutes.
24 Revenue Ruling 59-60.

Figure 29

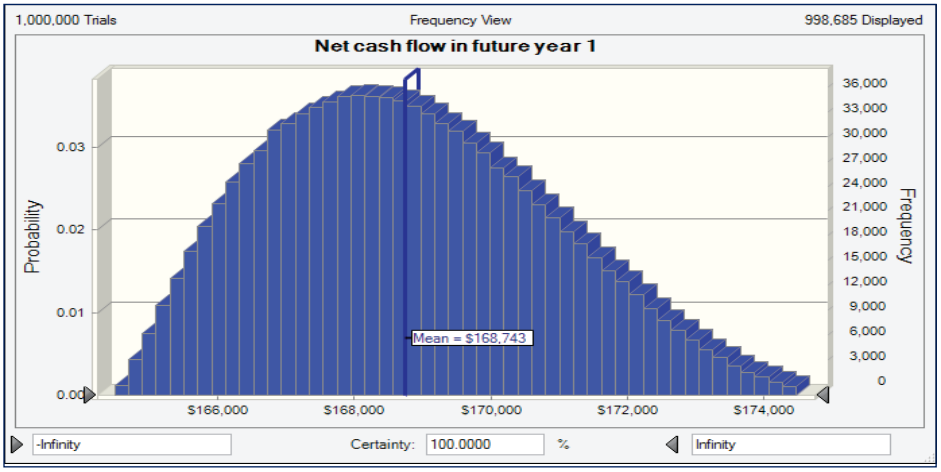


Figure 30

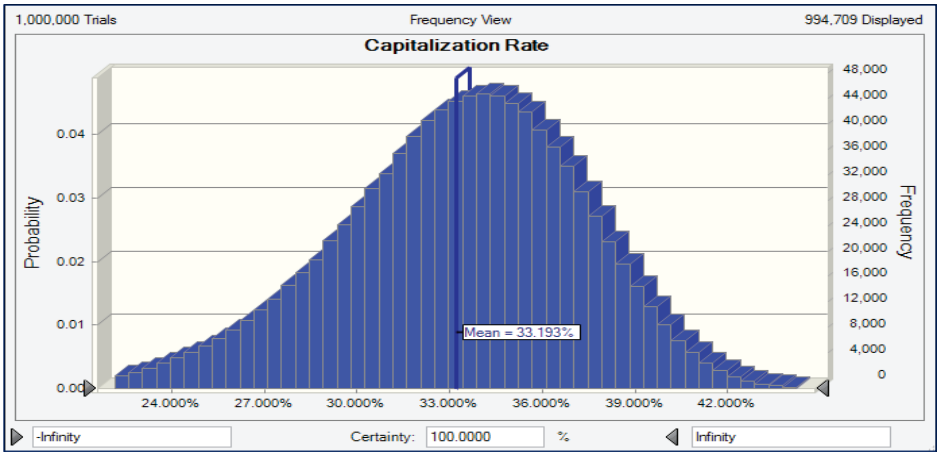
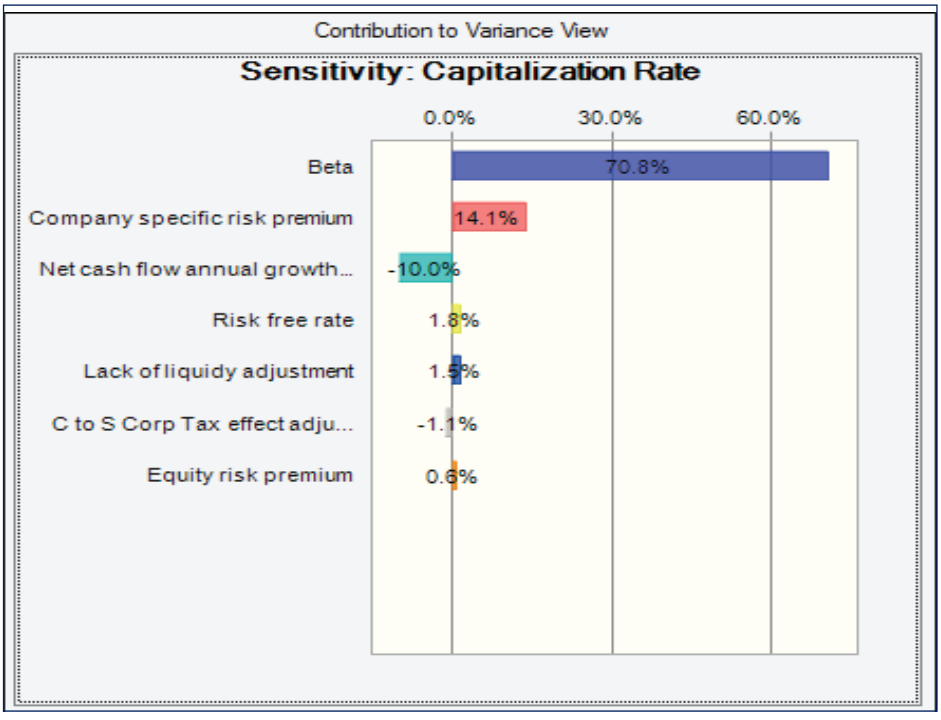


Figure 31



quires the estimation of potential future cash flows under different scenarios, to which probabilities are then attached."[25] My approach to this task is to apply subjective probabilities of occurrence to the subject company's five-year average compound growth rate, its three-year average compound growth rate, its industry average five-year average compound growth rate and industry average three-year average compound growth rate.

For our purpose here, I have selected the BetaPERT distribution and selected the lowest of the four growth rates as the minimum value, the highest of the four for the maximum and my subjective choice for the most likely rate as presented in Figure 27. I used the subject company's most recently completed twelve months after-tax net cash flow of $163,989 as the historical baseline.

Given this frequency distribution for possible after-tax net cash flow growth rates, Figures 29 illustrates the estimates for net cash flow in future year 1.

We have now reached the moment of truth: calculating the company's value via the Gordon Growth Model. However, I have modified it to calculate the value in accordance with the midyear capitalization convention so the equation employed is[26]

$$PV = \frac{NCF_1 (1+k)^{0.5}}{k-g}$$

Here we can see that the beta coefficient has the greatest influence on the capitalization rate however we can also see that the company specific risk premium and our estimated growth rate for net cash flow are having a significant effect as well.

And finally, what we have all been waiting for, the calculated frequency distribution for the value of the company's equity.

25 *Ibbotoson 2012 Stocks, Bonds, Bills and Inflation Yearbook*, 16. See also, Shannon Pratt, *Business Valuation Body of Knowledge*, (New York: John Wiley & Sons, Inc., 1998), 110.

26 This equation is from Shannon Pratt and Roger Grabowski, *Cost of Capital: Applications and Examples*, 4th ed., 36.

We will look at several variations of this distribution starting with Figure 32.

Based on one million trials, our simulation model results in an average of $585,641 for the value of the owner's equity. Momentarily we will look at some summary statistics for this frequency distribution and some value probability ranges. But before we do that I want to make a sidebar discussion to illustrate the significance of our findings.

An excellent book on the subject of simulation modeling is *The Flaw of Averages* by Sam L. Savage, with a foreword by Harry Markowitz, one of the developers of the CAPM. In the foreword, Mr. Markowitz capsulizes the theme of this book when he notes that:

Dr. Savage shows that when we use single numbers to estimate uncertain future economic outcomes that we are not just usually wrong, but are consistently wrong. He provides numerous examples of what he calls the Flaw of Averages, in which plans based on average assumptions are wrong on average. This is summarized in the Seven Deadly Sins of Averaging, in which it is apparent just how widespread these problems are in today's society. [27]

With that said, let's look at the average or central tendency in all of the independent variables employed in this demonstration and the resulting present value calculation in Figure 33.

As is evident, there is a significant difference between the value indications derived via simulation analysis and employment of the average values from the ranges. Indeed, based on our simulation model there is an 89.30 percent probability that the most probable value of the subject company is less than $691,277 or 10.7 percent probability that the value will be equal to or greater than $691,277.

27 Sam L. Savage, The Flaw of Averages, xv.

Figure 32

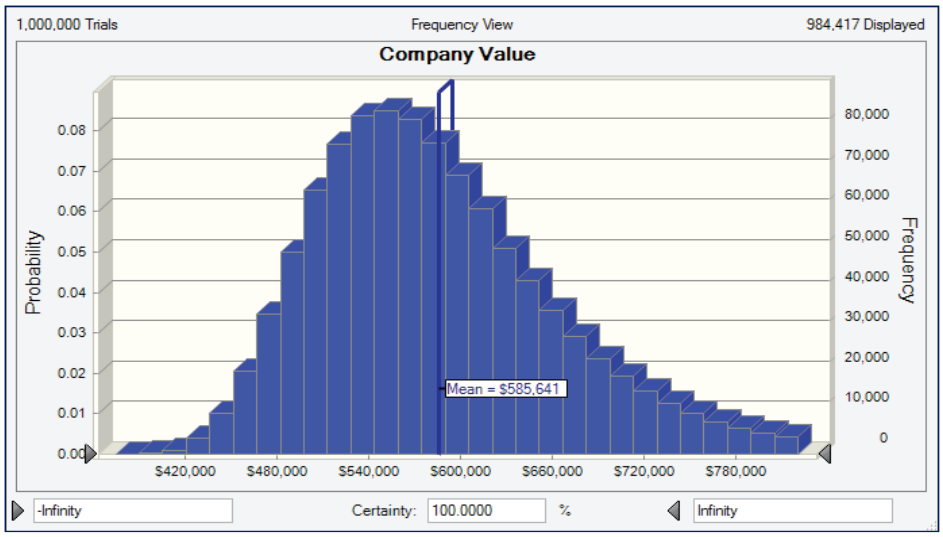


Figure 33

Equity risk premium	6.08%	Figure 9
Beta	0.650	Figure 2
Lack of liquidity adjustment	13.00%	Figure 16
Size effect adjustment	6.03%	
C to S corp adjustment	10.00%	Figure 19
Company specific risk premium	16.50%	Figure 22
Discount rate =	30.25%	
Growth rate	2.50%	Figure 27
Capitalization rate =	27.75%	
Baseline net cash flow	$163,989	
Cash flow in future year 1	$168,089	
Present value of owners equity using the midyear capitalization convention	**$691,277**	

Figure 34

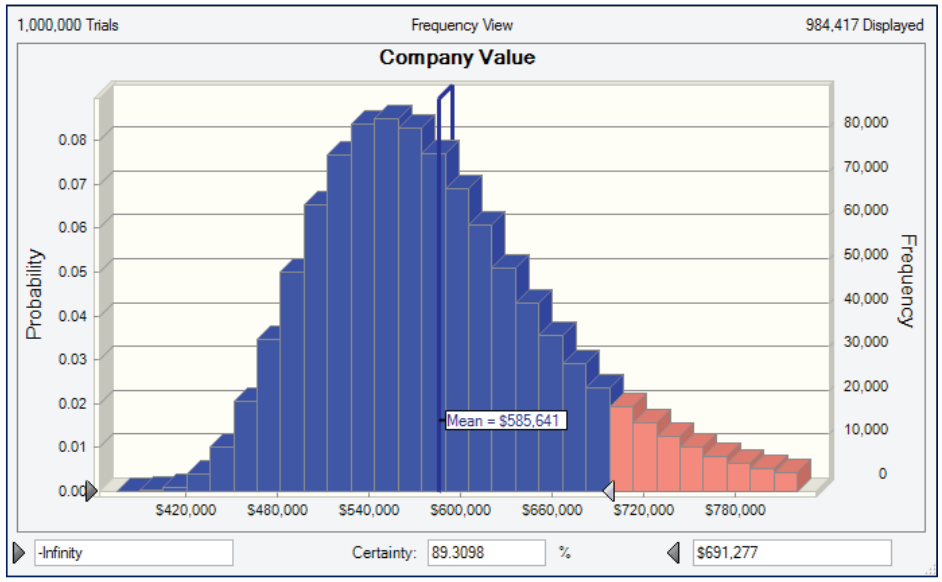


Figure 35

Forecast: Company Value
Percentile Forecast values

0%	$375,093
10%	$492,338
20%	$516,481
30%	$535,860
40%	$553,857
50%	$572,293
60%	$592,216
70%	$615,599
80%	$646,352
90%	$695,977
100%	$1,269,206

These are the probabilities that the value of the company is equal to or less than the indicated amount

Figure 36

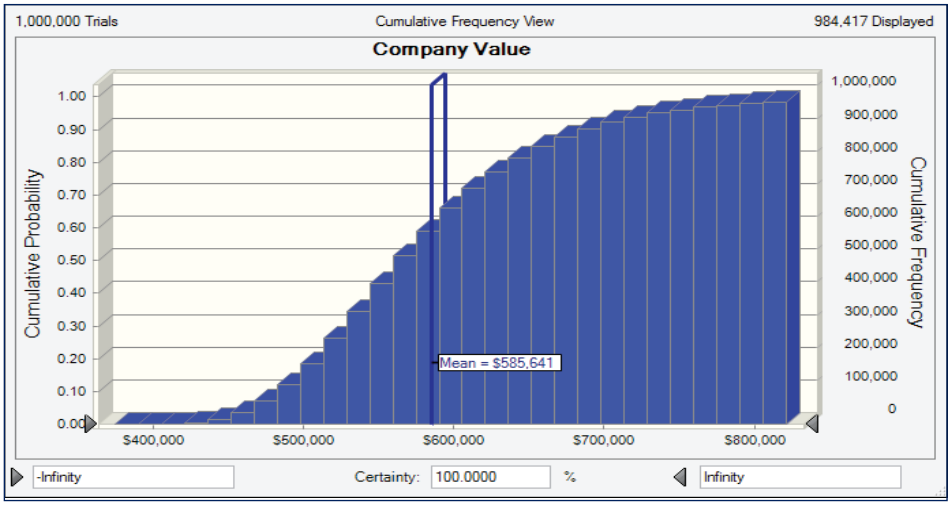


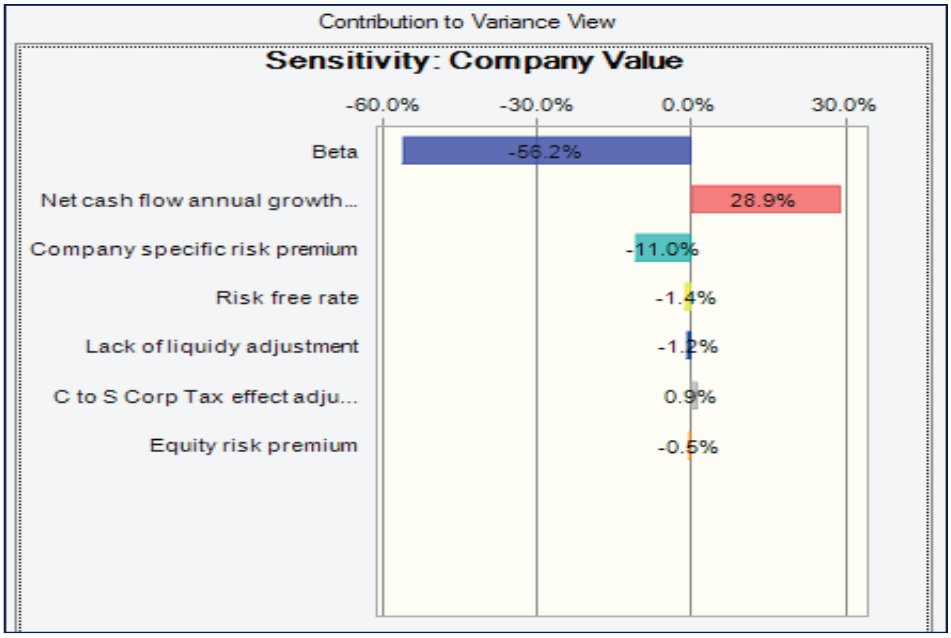
Figure 36 is a graphic depiction of Figure 35.

Figure 37

Forecast: Company Value
Statistic Forecast values

Trials	1,000,000
Mean	$585,641
Median	$572,294
Standard Deviation	$84,005
Skewness	1.06
Kurtosis	4.85
Coeff. of Variation	0.1434
Minimum	$375,093
Maximum	$1,269,206
Mean Std. Error	$84

Figure 38



The summary statistics in Figure 37 are also revealing. Note the minimum and maximum values. Here we see that if the metric selected from each of the independent variable ranges was done with the intention of calculating the lowest value possible, it would be possible to get a low value of $375,093 which is off the chart in Figures 32 and 34 because that value is greater than 2.5 standard deviations from the mean which is this software's cutoff value for the displayed tails of the distributions. The highest value possible based on our ranges is $1,269,206 which is 3.4 times greater than the lowest possible value calculation!

Figure 38 continues to reveal that our beta coefficient is exerting far more influence on our estimate than any other variable.

Figure 39 gives us the range within which we can be 80 percent certain of the most probable value of the company.

Of course, this entire process is not foolproof, but there is some good news regarding the potential for error in the selection and design of the shapes for two reasons. First of all, although it is unlikely that opinions among appraisers will all converge on the "ideal" dimensions of a shape, I believe that there is a good chance that the divergence in opinions can coalesce around agreement on approximate dimensions of the shape.

Secondly, according to John Charnes:

The results of most models often depend on the mean and the variance of inputs more than the specific probability distributions used. If you find yourself in a situation where potential users of your model are questioning the appropriateness of the input distributions, you may find it helpful to try different distribu-

Figure 39

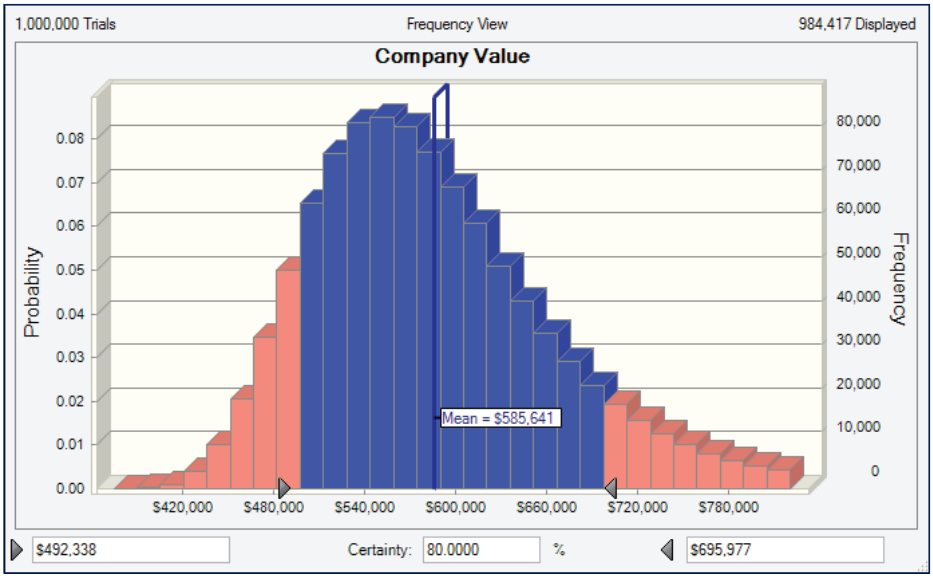
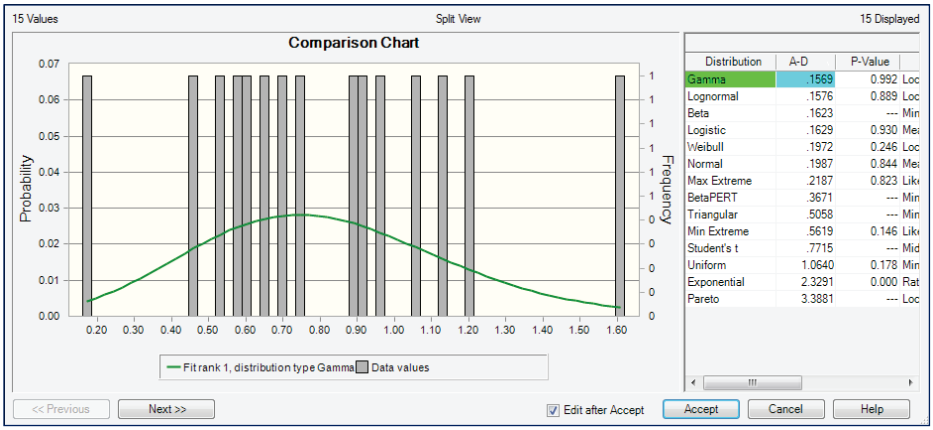


Figure 40



tions. As long as the different distributions have the same mean and variance, the central limit effect will apply to most realistic models and the forecast distributions will be relatively insensitive to the choices of the distribution families of assumptions.

Paradoxically, while good empirical data are the best source for helping to determine which assumptions to choose from the distribution gallery [i.e., the distributions included in a particular brand of Monte Carlo software], you should not rely on them too much. Subject matter knowledge and good judgment are also necessary ingredients for the constructing good models.[28]

28 Ibid, 81

Conclusion

Hopefully this presentation speaks for itself. At the very least, Monte Carlo simulation can be helpful building confidence in the value indications developed via the more conventional CAPM methodologies even if the simulation analysis per se is not included in the valuation report. Beyond that, I can see a role for this methodology when trying to discredit a clearly biased value opinion. However, I can also see how this methodology could become an important section of a valuator's report. To quote Z. Christopher Mercer, "There is no such thing as 'the value' of anything. Valuation is a 'range' concept tied to another concept, that of 'reasonableness.' Experience will probably tend to narrow your personal concept of 'reasonable range.'"[29]

I think that Monte Carlo simulation has the potential to greatly leverage one's valuation experience by enabling the valuator to define the ranges and shapes for each independent variable in the valuation process and therewith have much greater confidence in the final value opinion.

Epilogue

Beta revisited

In the preceding demonstration, Figures 31 and 38 revealed that the beta coefficient in the analysis was exerting an inordinate amount of influence on our value estimate and therewith suggested that this problematic issue should be addressed. The underlying problem with our initial shape for the beta coefficient was the inclusion of two *negative* betas of -.74 for Hooters restaurants (go figure) and -.46 for Carrols Restaurant Group. The problem is that in this analytical methodology a negative beta will impart an upward push on the value calculation. This is like saying that a negative beta represents *value enhancing* unpredictability to an investment which is absurd on its face. All volatility is bad. There is no such thing as good volatility. Therefore, I have taken the position that the absolute value of the beta coefficient for a guideline public company be incorporated into the analysis. Hence the revised frequency distribution for the beta coefficient assumes values of +.74 for Hooters and +.46 for Carrols.

Figure 40 presents Crystal Ball's automatic shape fitting process to our revised frequency distribution for the 15 guideline betas.

Figure 41 presents the revised shape for the beta coefficient to be employed in the analysis; in this case the software selected the Gamma Distribution as the best fit.

29 Z. Christopher Mercer, *Business Valuation: An Integrated Theory*, 2nd ed. (New York: John Wiley & Sons, Inc., 2008), 53.

Figure 41

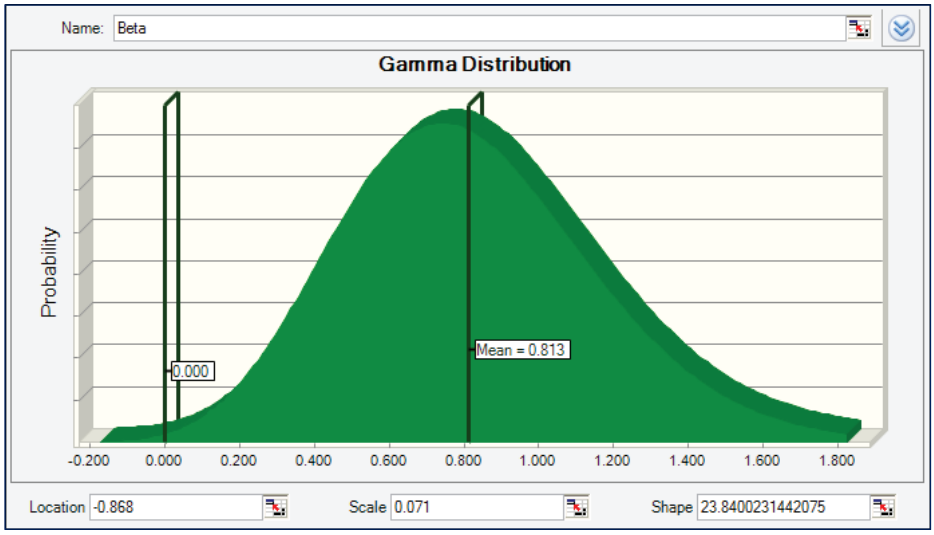


Figure 42

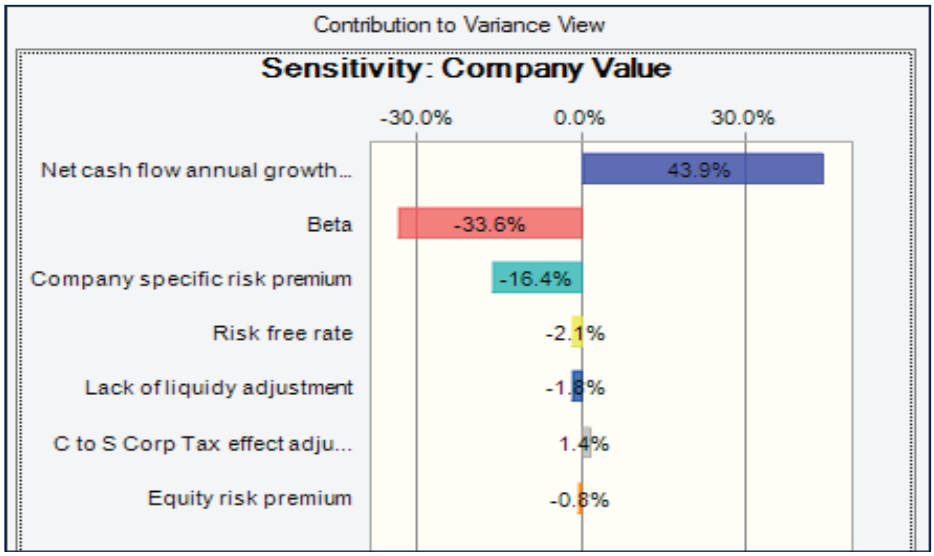


Figure 43

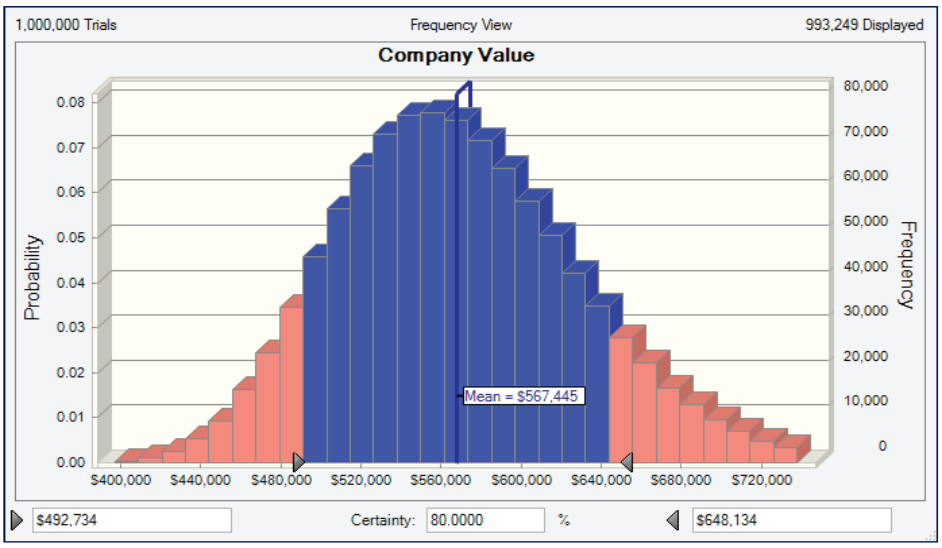


Figure 42 presents the revised Sensitivity chart with an improved degree of balance in the influence among the assumptions.

Figure 43 presents a revised value indication which is lower than our first estimate as expected and Figure 44 presents our revised value distribution statistics.

Figure 44

Forecast: Company Value
Statistic Forecast values

Trials	1,000,000
Mean	$567,445
Median	$563,009
Standard Deviation	$60,890
Skewness	0.4091
Kurtosis	3.19
Coeff. of Variation	0.1073
Minimum	$358,693
Maximum	$937,548
Mean Std. Error	$61

The revised statistics indicate that the frequency distribution for our value estimate is nearly normal and that both the standard deviation and standard error of the mean estimate are significantly lower. In other words our revised shape for the beta coefficient has resulted in a marked improvement in the confidence we can place on our value estimate.

Toby Tatum, MBA, CBA, CVA, MAFF, is the owner of Alliance Business Appraisal in Reno, Nevada. He is both a practicing business appraiser and business broker. He is the author of Anatomy of A Business Purchase Offer: Step-by-Step Procedures for Preparing a Successful Offer, *2nd edition;* Transaction Patterns: Obtaining Maximum Knowledge from the Bizcomps Database; *and* Pricing A Small Business For Sale: A Practical Guide for Business Owners, Business Brokers, Buyers and Their Advisors.

Estate of *Helen P. Richmond*— A Multi-Faceted Opinion Covering a Variety of Business Valuation Issues

Heather Tullar, ASA, CPA/ABV/CFF

Note from the Editor: The following article summarizes a recent tax court decision that addresses many different issues that may be of interest to valuation analysts. Please keep in mind that valuation analysts should not rely on any particular judicial decision in their valuation practice. Each decision is based on the facts and circumstances that are specific to that matter and the way those facts and circumstances are presented to and understood by the court. A judicial decision that makes good legal sense may not be based on sound valuation principles. Federal judges are not trained valuation analysts.

The recent United States Tax Court ruling on the *Estate of Helen P. Richmond*[1] (the estate) covers a breadth of issues including: selection of valuation methodology, treatment of built in capital gains (BICG) tax liability, discount for lack of control (DLOC), discount for lack of marketability (DLOM), application of valuation discounts, and appraiser qualification.

The Tax Court's opinion in this matter (the opinion), filed on February 11, 2014, found that the reported fair market value (FMV) for the estate's interest in a personal holding company, Pearson Holding Co. (PHC), to be significantly under reported. The estate reported the FMV of the interest to be $3,149,767. Ultimately, the FMV was found to be $6,503,804, resulting in a deficiency of $2,854,729 in federal estate tax as well as an accuracy-related penalty of $1,141,892.

Both sides retained experts at court[2], who proffered valuation opinions using different approaches and assumptions. The estate's expert concluded upon a value of $4.7 million, based upon a Dividend Discount Method, while the commissioner's expert concluded that the value was $7.3 million, based upon an Adjusted asset Method.

Based on deficiencies found by the court in both experts' analyses, the court took its own path in its final opinion of value. The myriad of issues the court addressed in reaching its conclusion provides insights into many aspects of business valuation.

Background

The deceased owned a 23.44 percent interest in PHC (the interest), which was reported on her estate tax return at a FMV of $3,149,767 (as of December 2005). The estate's executors filed the estate return on the basis of a draft and unsigned report issued by a CPA with limited valuation experience (10-20 reports and some testimony) and no valuation credential or certification.

PHC, a C Corporation incorporated in 1928, was formed to preserve and grow capital while maximizing dividend income for the family. Blue chip stocks formed the majority of PHC's assets. In December 2005, the net asset value (NAV) of PHC had grown to $52.1 million. Of that amount, $45.6 million (87.5 percent) was unrealized appreciation, resulting in a BICG tax liability at the time of $18.1 million[3].

There were 25 shareholders, with the largest holding a 23.61 percent interest and the top three shareholders holding a cumulative interest of 59.2 percent. Wilmington Trust Co., the PHC's financial adviser, suggested that the holdings be diversified. However, PHC "preferred not to incur that tax liability, the payment of which would diminish its total assets and therefore its ability to generate dividends"[4] and did not follow this advice. Annual dividends to shareholders ranged from $835,578 to $1,077,000 from 1999 to 2005. Asset turnover was extremely low (1.4 percent annually), resulting in a complete turnover term of 70 years.

The opinion notes that over time, the ownership of PHC had become more diffuse and an investor in PHC would no longer have expected the founder's mindset to prevail. Rather, the broader base of ownership would have been more likely to follow the advice to di-

1 *Estate of Helen P. Richmond, Deceased, Amanda Zerbey, Executrix, Petitioner v. Commissioner of Internal Revenue, Respondent*. United States Tax Court, T.C. Memo 2014-26. Docket No. 21448-09, filed February 11, 2014. Noted as *Richmond Opinion* in following cites.

2 The Commissioner offered John A. Thompson as an expert in business valuation and the Estate offered Robert Schweihs.

3 Neither the NAV of PHC nor the amount of BICG tax liability was contested between the Estate and the Commissioner.

4 *Richmond Opinion*, page 9.

versify holdings. At trial, the commissioner's expert noted a more reasonable expected asset turnover of 20-30 years, which was not contested.

From 1971 to 1993, there were nine transactions involving the sale or redemption of shares of PHC as well as one estate filing in 1999. All of these were valued using a dividend discount model, a path followed by the estate in filing the return.

In 2009, the IRS filed a notice of deficiency based upon a valuation of the interest of $9,223,658 and claimed penalties for unpaid estate taxes as well as for a 40 percent gross valuation misstatement. Ultimately the IRS's expert valued the interest at $7,330,000 based upon the NAV of PHC and combined control, BICG tax liability and liquidity discounts of 40 percent. The estate's expert used a dividend growth model and concluded upon a value of $5,048,724 for the interest. The judge found fault with both experts and wove a path combining aspects of each expert's analysis, ultimately concluding upon a FMV of $6,503,804 for the interest. This resulted in the levy of a 20 percent accuracy-related penalty as well as underpayment of estate taxes.

Approach Followed by the Commissioner's Expert

The commissioner's expert used an asset approach and started with the NAV of $52.1 million for PHC and applied the decedent's 23.44 percent interest, resulting in an unadjusted value of the interest of $12.2 million. He then subtracted a 6 percent DLOC based upon an analysis of closed-end funds data, resulting in a value of the interest, before consideration of the BICG and lack marketability, of $11.5 million. Finally, he applied a combined discount for BICG liability and lack of marketability of 36 percent and concluded upon a FMV of the interest of $7,033,000.

DLOC

The commissioner's expert supported his selected DLOC by using the empirical data derived from the closed-end fund markets. He measured the discounts of the NAVs from the trading prices of the funds based on a set of 59 closed-end fund data points. He selected the mean (average) of the data, 6.7 percent, and adjusted this downward to 6 percent to account for the block size of the interest relative to other holdings, "dispersion" of other interests in PHC and the presence of a professional manager for the company.

BICG Liability

The commissioner's expert incorporated the BICG tax liability discount into the total DLOM. However, a distinction was made between the marketability and BICG aspects of the discount.

The commissioner's expert cited data on closed-end funds wherein unrealized appreciation in the fund accounted for between 11 percent to 46 percent of the NAV. He observed sales of seven funds and noted no statistical correlation between the observed BIGC discount upon a sale and the amount of unrealized appreciation in the fund. From this analysis, he concluded that when there is up to 50 percent of a fund's value comprised of unrealized appreciation, a buyer is indifferent to the BICG tax liability in the fund.

Given that the unrealized appreciation in PHC was 87.5 percent of NAV, the commissioner's expert concluded that 50 percent of the appreciation would not incite a buyer to require a discount to the NAV for BICG tax liability. However, a buyer would require a dollar-for-dollar discount for the BICG tax liability on the remaining 37.5 percent of unrealized appreciation. He multiplied the 37.5 percent excess unrealized appreciation by the assumed tax rate of 39.74 percent, resulting in a discount of 14.9 percent for the BICG tax liability, rounded to 15 percent.

DLOM

The DLOM of 21 percent was based upon 7 restricted stock studies. The commissioner's expert also examined but did not rely on pre-IPO studies, which was criticized by the estate's expert. Based upon the Tax Court's ruling in *Estate of Davis v. Commissioner*, more weight was given to pre-initial public offering (IPO) studies over restricted stock studies. However, the judge noted in the Richmond opinion that "there is no absolute rule that, for purposes of determining a marketability discount, IPO studies are superior to restricted stock studies, since in other circumstances we have preferred the latter." The proffered restricted stock studies indicated a range of discounts from 26.4 percent to 35.6 percent, with an average of 32.1 percent. The commissioner's expert took the bottom of the range, citing the lower risk of PHC as a holding company over the operating companies comprising the basis for most of the companies in the studies. He further reduced this discount to 21 percent for consistency of dividends, low debt and professional management.

Approach Followed by the Estate's Expert

Primary Approach—Dividend Growth Model

The estate's expert took a completely different approach from the commissioner's expert and used a dividend growth model to value the interest. However, this was a variant of the method used for the estate's original filing and consistent with valuations used for transfers of other PHC interests over the past several years.

Using a classic Gordon Growth Model, the estate's expert started with the $252,436 of dividends the decedent received from PHC in 2005. The observed growth rate of dividends over a 35-year term was about 5 percent annually. The prior year dividend was grown

by this rate and divided by a capitalization rate of 5.25 percent. This capitalization rate was the expected return on similar assets of 10.25 percent less the growth rate. The 10.25 percent rate of return was from Ibbotson data for 1926–2004.

The resulting FMV of the interest was $5,048,724. The commissioner criticized the discount rate and noted that the Ibbotson data for 1970–2004, the same period used to determine the long-term growth rate, resulted in a discount rate of 9.414 percent. The judge noted that the matching period would have been a more likely assumption for a potential investor and corrected the computation, which resulted in a value of $6,005,000.

Secondary Approach—Asset Approach

The estate's expert also offered an asset approach as a secondary method of valuing the interest. To apply this approach, he subtracted the entire BICG tax liability of $18.1 million from the NAV of PHC $52.1 million, resulting in a value of PHC, net of the BICG tax liability, of $34.0 million. He then applied a DLOC of 8 percent based upon the median observed for closed end fund data presented by the commissioner's expert, relying upon the data set used by the other expert over conducting an independent review. The value of PHC net of the DLOC was $31.3 million. Also relying upon the data provided by the commissioner's expert, the estate's expert applied a DLOM. His concluded DLOM of 35.6 percent was based on the upper value of the range of the data. After multiplying the adjusted value of PHC of $20.1 million by the decedent's interest of 23.44 percent, the resulting FMV was $4,721,962.

The Tax Court—No Thank You, Sirs, We Shall Find Our Own Value

In its 51-page memorandum, the Tax Court found exception with many aspects of both experts' analyses and struck out on its own. The issues addressed are numerous and the opinion offers many insights into the understanding of the Tax Court, or at least this particular judge, regarding business valuation. The table below summarizes the valuation of the Interest based upon the asset approach[5] as employed by each of the experts and ultimately as concluded upon by the Tax Court (See Figure 1).

Figure 1

Commissioner's Expert		Estate's Expert		Tax Court	
NAV	$52,114,041	NAV	$52,114,041	NAV	$52,114,041
Interest	23.44%	BICG	18,113,083	BICG	7,817,106
	12,215,531		34,000,958		44,296,935
DLOC	6.00%	DLOC	8.00%	DLOC	7.75%
	11,482,599		31,280,881		40,863,923
DLOM and BICG	36.00%	DLOM	35.60%	DLOM	32.10%
		Adjusted value of PHC	20,144,888	Adjusted value of PHC	27,746,603
		Interest	23.44%	Interest	23.44%
Concluded FMV	$7,348,864	Concluded FMV	$4,721,962	Concluded FMV	$6,503,804

Note: Commissioner's expert analysis as presented varies immaterially from the values presented in the Richmond Opinion due to rounding or immaterial variances in the data.

The Tax Court's Selection of Valuation Methodology

Adjusted Asset Approach Preferred Over Dividend Discounting

The court concluded that the Asset Approach (also referred to as the "Adjusted Asset Method," or in the Richmond opinion, as the "Net-Asset-Method") was a superior determinant of value for the interest over the dividend discount method, concluding that "courts are overwhelmingly inclined to use the NAV method for holding companies whose assets are marketable securities."[6] The court acknowledged that there are inherent difficulties in determining the discounts to NAV. However, it notes that "the NAV method does begin by standing on firm ground—stock values that one can simply look up."[7] The court further referenced Shannon Pratt, Robert F. Reilly, and Robert P. Schweihs, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies* (fourth edition, 2000), wherein the sensitivity of the Gordon Growth Model is noted such that "changes in the growth rate projected, sometimes seemingly small, can result in striking changes".[8] The court succinctly summarizes its opinion with the following:

> Of course, the net-asset-value method comes with its own difficulties and uncertainties (in this case, determining the amounts of the discounts discussed below), but the NAV method does begin by standing on firm ground—stock values that one can simply look up."[9]

If You Must Use a Dividend Discount, Be Wary of Sensitivity

The court noted that capitalization of dividends may be "entirely appropriate" where the assets are difficult to value. However, that method is subject to the underlying assumptions for growth and the discount rate, as illustrated by digging deeper into the estate's expert's choice of a discount rate. The Tax Court noted that the estate's expert considered a 35-year analysis of dividend payment history to determine its growth rate. However, when selecting data to support the discount rate, the

5 As noted, the estate's expert relied upon a dividend growth model as his primary valuation method and only offered an adjusted assets approach as a secondary methodology. The table reflects the asset approach as presented by each expert. There were slight variances noted in the *Richmond Opinion* in the commissioner's expert's computations.

6 *Richmond Opinion*, page 26.

7 *Richmond Opinion*, page 24.

8 *Richmond Opinion*, page 24, footnote 14, quoting the above referenced text at page 208.

9 *Richmond Opinion*, page 24.

chosen data extended for a much longer period (1926–2004). Following up on criticism from the commissioner's expert, the court independently recomputed the discount using data from 1970–2004, matching the 35-year term of the analysis supporting the selected growth rate. This resulted in a discount rate of 9.414 percent and ultimately and a value of the interest of $6,005,000 (rounded), roughly $1,000,000 higher than the estate expert's concluded value, neatly illustrating the sensitivity of the computation.

Discount for BICG Liability, Facts and Circumstances as Well as Geography

In his secondary method presentation, the estate's expert applied 100 percent of the BICG tax liability as a discount to the NAV. This is the method supported by the decisions in the Fifth and Eleventh Circuit Courts of Appeals for opinions rendered in the matters of *Jelke*, *Dunn,* and *Jameson*. The underlying assumption is that the Asset Approach assumes that the assets are sold, which contrasts from an income approach wherein it is assumed that the assets are retained. Upon a sale of the underlying assets, the BICG tax liability would become due and payable.

The commissioner's expert took a different tack, reducing the discount for the BICG tax liability based upon his analysis of market behavior in closed-end funds and effectively taking $7.8 million of the total liability of $18.2 million, 43 percent, as a discount.

Additionally, the IRS had assumed a discount of zero for BICG tax liabilities in the Notice of Deficiency, which the court also determined to be unreasonable, stating that "if PHC had offered no discount, an investor would simply buy the stocks and be better off. That is, the market would have required a discount, and any fair market valuation must reflect a discount."[10]

The court tossed out the concept of a 100 percent discount in this particular matter "because it would not reflect the economic realities of PHC's situation."[11]

BICG Tax Liability Discounts—Location, Location, Location

The estate's expert relied upon the opinions of the Courts of Appeals for the Fifth and Eleventh Circuits. However, the court noted that this particular matter, if appealed would fall under the jurisdiction of the Third Circuit. Further, the court also noted, in the Second Circuit Courts of Appeals (*Estate of Eisenberg, v. the Commissioner*), the Sixth Circuit Court of Appeals (*Estate of Welch v. Commissioner*), and the U.S. Tax Court (*Davis v. Commissioner* and *Estate of Jensen v. Commissioner)*, that the 100 percent discount for BICG tax liability had not been upheld. Above and beyond the jurisdiction, the Richmond opinion illuminated the importance of the underlying facts and circumstances.

BICG—Not One Size Fits All, but Situation Specific

The court states, in reference to a 100 percent discount for BICG tax liability, that it considers it "plainly wrong in a case like the present one."[12] Supporting the concept of a discount of less than 100 percent, the court cited the contingent nature of the liability (only due when the underlying assets are sold), expectations of a buyer regarding reasonable turn-over of the assets, and the changing diversity and dilution of ownership of PHC's stock as factors a "rational economic actor" would consider in pricing the Interest. While these factors pointed towards some level of discount, in the court's eyes, a 100 percent discount was not in keeping with the facts of this particular case.

To illustrate, the court offered an example of a hypothetical holding company (HHC) identical to PHC, except that instead of the $18.1 million BICG tax liability, it had a debt due the next day for the same amount. The court concludes that:

PHC is simply worth more than HHC, because a prospective BICG tax liability is *not* the same as a debt that really does immediately reduce the value of a company dollar for dollar. A 100% percent discount, on the other hand, illogically treats a potential liability that is susceptible of indefinite postponement as if it were the same as an accrued liability due immediately. We do not adopt this approach. A 100% discount, on the other hand, illogically treats a potential liability that is susceptible of indefinite postponement as if it were the same as an accrued liability due immediately. We do not adopt this approach. [13]

Leaving the Door Open a Crack for the 100 Percent Discount

While the Richmond opinion may appear to toll a death knell on a 100 percent BICG tax liability discount, the court stresses the importance of situation specific facts and circumstances. However, the cited situation warranting a full discount is limited to such situations where buyers would expect to immediately liquidate the company upon acquisition. Clearly, PHC's intent to hold the underlying assets fired the court's thinking regarding future intentions of buyers and the impact this has on timing the payment of the liability.

A Side Note Regarding the Seriatim Application of Valuation Discounts

The court noted that there was an inherent error in the commissioner's expert's combining of the BICG tax liability and DLOM discounts. The BICG discount belongs at the entity level, to be followed by the DLOC and then, finally the DLOM. The estate's expert applied the discounts correctly (in his secondary method computation), as did the judge.

10 *Richmond Opinion*, page 29.

11 *Richmond Opinion*, page 32.

12 *Richmond Opinion*, page 30.

13 *Richmond Opinion*, page 31.

The Tax Court's Determination of the BICG Discount

The court concluded that the commissioner's expert's method for determining the discount for the BICG was not "supported by evidence" and was not convinced that a buyer would be wholly indifferent to BICG of 50 percent of NAV. However, the court did determine that Thompson's amount for the BICG discount was reasonable based upon its own independent analysis.

The court independently computed a range of present values of the BICG liability assuming a 20-year and 30-year turnover, based upon the commissioner's expert's testimony that a more reasonable term than the 70 years observed for the PHC would be 20 to 30 years. The selected discount rates used by the court were seven percent (generally accepted rate of return), 9.414 percent (Ibbotson data over a similar 20-30 year period), 10.25 percent (used in Schweihs' model), and 10.27 percent (Ibbotson's data from 1926–2004). The resulting present values ranged from $5.6 million to $9.6 million. The court concluded that since Thompson's figure was within this range, it was reasonable.

DLOC—The Court Scrutinizes the Data

Both experts relied upon the same source data but differed in its use. Specifically, they used data from closed-end funds, of which the court noted that the "methodology is sound and appears to be a reasonable way to calculate an appropriate discount for lack of control." The estate's expert took the median (eight percent) while the commissioner's expert took the mean (6.7 percent) and adjusted downward from there to six percent. The court reviewed the data and found concern over using the mean due to three outliers. He removed these from the set and recomputed the mean as 7.75 percent, which approximated the median. Exercise caution in selecting a statistic.

DLOM—The Court Takes the Middle Path among Restricted Stock Studies

The commissioner's expert relied upon seven restricted stock studies. Although he noted a review of pre-IPO data, he did not rely upon it. The estate's expert relied upon the same data and did not offer any further data of his own. However, citing the court's ruling in *Estate of Davis vs. the Commissioner*, where the limitations of restricted stock studies were noted and pre-IPO studies were favored, the estate's expert criticized the omission of pre-IPO study data. However, the estate's expert did not include any such data in his report and did not explain how such data would have impacted the discount. The court noted that in some circumstances it has preferred restricted stock studies (no surprises here for most appraisers) and absent analysis to support the criticism, the court was not convinced.

The court then found itself with the same data set being used by both experts to arrive at very different results. The commissioner's expert selected the low end of the range of data and adjusted downward from there. Although, the court acknowledged that the rationale for lowering the discount "warranted consideration," it faulted the expert for "providing no basis for the quantum of the adjustment" and was not convinced. The estate's expert took the high end of the range, citing that unlike the stocks in the studies had definite periods of trading restriction while the non-public status of the interest was indefinite, thus requiring a discount at the high end of the range. Again, the court was unconvinced. Ultimately, the court opined that a DLOM was warranted and that the average of the data sets, 32.1 percent was "reasonable in this case."

Given the court's conclusion, the lessons gleaned from this aspect of the case are that the court requires more support from appraisers in this critical area of business valuation.

A Few Words about Appraiser Qualifications

In addition to $2,854,729 in federal estate tax, the court also levied an accuracy-related penalty of $1,141,892. The estate sought to relieve itself of the burden of the accuracy-related penalty by invoking Section 6662(g)(1), wherein the 20 percent accuracy-related penalty is not applied to any portion of an understatement "if it is shown that there was a reasonable cause for such portion and that the taxpayer acted in good faith with respect to such portion."[14] Specific to business valuation, the court stated, "To establish good faith, taxpayers cannot rely blindly on advice from advisers or on an appraisal."[15]

The court found that the estate did not act with reasonable cause and in good faith in using an unsigned draft valuation report by its accountant, who had no valuation credentials and limited valuation experience. This resulted in the estate failing to toll the bell and avoid the 20 percent accuracy penalty. Importantly, the court states that:

> While we do not disagree with the estate's assertion that the decedent's interest in PHC may be difficult to value, we believe that this further supports the importance of hiring a qualified appraiser. In order to be able to invoke 'reasonable cause' in a case of this difficulty and magnitude, the estate needed to have the decedent's interest in PHC appraised by a certified appraiser. It did not.

Rounding Up the Pieces—How the Valuation Panned Out

Figure 2 summarizes the valuations noted in the *Richmond* case.

Ultimately, the court used an asset approach and concluded upon a FMV for the interest of $6,503,804. To arrive at its conclusion, the court ruled upon: (i) the selection of valuation methodology,

14 IRC section 6662(1), (b)(5) and (g) as cited in the *Richmond Opinion*, page 47.

15 *Richmond Opinion*, page 48.

Figure 2

	Estate	Commissioner	Court
Approach	Dividend growth model; asset as secondary method	**Asset**	**Asset**
NAV	$52,114,041	$52,114,041	$52,114,041
BICG discount	$18,113,083 100%	**$7,817,106** 15% Excess appreciation over 50% of value	**$7,817,106** Present value based upon normalized portfolio turnover and expected return
DLOC	**8.00%** Median from closed end fund data	6.00% Adjusted downward the mean from closed end fund data	**7.75%** Median from closed end fund data after removing 3 outliers
DLOM	35.60% High from 7 restricted stock studies	21.00% Low from 7 restricted stock studies adjusted further downward	**32.10%** Median from 7 restricted stock studies
FMV, dividend discount	$5,048,724	NA	*$6,055,000*
FMV, asset approach *Variance from Court*	*$4,721,962* *22.4%*	$7,330,000 *12.7%*	**$6,503,804**

Note:
The estate presented an asset approach as a secondary method but ultimately relied upon the dividend discount method. This table incorporates the data from the Asset Approach of the estate's expert for comparative purposes.

(ii) treatment of BICG tax liability, (iii) how to apply valuation discounts, and (iv) selecting a discount from a data set by scrutinizing the data and providing adequate support for the discount selected. The other key theme weaving throughout the opinion is the concept of situation-specific facts and circumstances driving the process. In several places, the importance of considering case-specific facts is clearly driven home as being more important than pointing to other cases, absent identification of areas of similarity to the case at hand.

Heather Tullar, ASA, CPA/ABV/CFF, is a director with Delphi Valuation Advisors, Inc. in Norwood, Massachusetts. Ms. Tullar has 25 years of business experience and 15 years of experience in business valuation, economic damages, and litigation consulting. Ms. Tullar may be reached at ht@delphivaluation.com or (781) 551-8258.

ABOUT THE INSTITUTE OF BUSINESS APPRAISERS

The Institute of Business Appraisers is the oldest professional society devoted solely to the appraisal of closely held businesses. Established in 1978, IBA is the pioneer in business appraisal education and professional accreditations.

Membership Benefits:

Market Data: IBA members have access to an online database which includes actual sales information on approximately 34,000 closely held businesses. Members and other professionals are invited to provide sales data to IBA headquarters.

Around the Valuation World™ in 90 Minutes

All IBA members and ADAM subscribers are automatically entitled to a no-charge subscription to the Around the Valuation World™ (ATVW) monthly webzine. This monthly 90-minute broadcast presents the most important news and technical information affecting our profession. Webinar materials are distributed and an opportunity for CPE is available.

Professional Accreditations:

IBA's business appraisal accreditations are the most respected in the profession. IBA offers the following credentials: Certified Business Appraiser (CBA) and Master Certified Business Appraiser (MCBA).

Peer Review:

IBA's education and accreditation process encompasses the profession's most comprehensive and thorough peer review. Accreditation candidates are mentored by the profession's leading business appraisers in the development of two appraisal reports.

Education:

IBA partners with the Consultants' Training Institute (CTI) in development and delivery of training programs. The introductory course is followed by an advanced program, clinic and workshop preparing members to qualify for the CBA credential.

Business Appraisal Practice:

The profession's most practical journal, with articles from leading practitioners.

IBA INSTITUTE OF BUSINESS APPRAISERS
THE PIONEER OF BUSINESS APPRAISAL

For more information, contact IBA at:

5217 South State Street, Suite 400 • Salt Lake City, UT 84107-4812
Phone: (800) 299-4130 • Fax: (866) 353-5406 • Email: HQIBA@Go-IBA.org • www.Go-IBA.org

Special Offer

Upgrade for $89 and Save 40%!

Existing ADAM subscribers can upgrade to ADAM Premier for an additional $89 (40% savings) for the first year.

If, after 30 days, you are not completely satisfied, we will refund the $89 cost.

Announcing

ADAM

Appraisal Database & Mentoring Services

PREMIER

ADAM™ Premier adds access to the following NEW and expanded services:

- **BIZCOMPS®** (7 downloads per year)
- **Guideline Public Company Database** (unlimited downloads)
- **IRS Corporate Ratios Database** (unlimited downloads)
- **Monthly National Economic Report**
- **Attorneys Marketing Database** (addresses and e-mails)
- **Federal and State Valuation Case Law Database**
- **Archived Industry and Metro Area Reports**
- **Conference Presentations Database**
- **S-1 Filings Database**

$645 *(includes $495 ADAM subscription, plus $150 for expanded Premier services)*

IBA INSTITUTE OF BUSINESS APPRAISERS

To subscribe, visit www.ADAMdata.com or call (800) 299-4130.

Business Appraisal Practice

PUBLISHED BY:

The Institute of Business Appraisers
5217 South State Street, Suite 400
Salt Lake City, UT 84107-481

Phone: (800) 299-4130, Fax: (866) 353-5406
E-mail: BAP@Go-IBA.org
Website: www.Go-IBA.org

Shawn M. Hyde, CBA, CVA, CMEA
Editor in Chief

Copyright 2014 Institute of Business Appraisers.
All rights reserved

Subscription $95.00 per year for both members and non-members.

The Institute of Business Appraisers and the Editorial Board of *Business Appraisal Practice* have used their best efforts to insure the accuracy of the content of this publication. However, the articles published herein are the opinions of the authors, who are solely responsible for their content. Accordingly, the Institute of Business Appraisers disclaims any liability and offers no warranties as to the accuracy of any information within this publication.

For permission to reproduce in whole or in part, and for quotation privilege, contact IBA Headquarters at the above address.

EDITORIAL BOARD:

Editor:

Shawn M. Hyde, CBA, CVA, CMEA
Yeo & Yeo CPAs
Phone: *(989) 793-9830*
Email: shahyd@yeoandyeo.com

Reviewers:

Kumi D. Bradshaw, CBA, MAFF
Asgill Post

Dan A. Browning, JD, MAFF
DB Consulting, Inc.

Curt A. Christianssen, CBA
Carpenter & Company

Robert James Cimasi, MHA, ASA, FRICS, MCBA, CVA, CM&AA
Health Capital Consultants

Rand M. Curtiss, MCBA, FIBA
Loveman-Curtiss, Inc.

Steven M. Egna, CBA, ABAR, CM&AA
Teal Becker & Chiaramonte, CPAs, PC

Russell T. Glazer, MCBA, ASA, ABAR, CPA/ABV, MBA, CVA
Gettry Marcus Stern & Lehrer, CPA, PC

Baria Jaroudi, CPA, CVA
Briggs & Veselka Co.

Tracey D. Jeffers, CBA, MBA, CMEA
ValuPath Advisors, Inc.

James B. Lurie, CPA/ABV, ASA, CBA, CVA, BVAL, CFFA
Cap-Val American Business Appraisers, LLC

Paul G. Marquez, JD, CPA/ABV/CFF, ASA, CBA, CMA, CFM
Sigma Valuation Consulting, Inc.

Chris M. Mellen, MCBA, ASA
Delphi Valuation Advisors, Inc.

Laurie L. Miller, CBA, BVAL
Business Valuation Group, LLC

William J. Reddington, ASA
Reddington Business Valuation

Robert P. Schweihs, ASA
Willamette Management Associates

Diego Sorroche-Fraticelli, MBA, ACC, ABAR, SBA, CMEA, CDEI, MIE, GRI
Puerto Rico Appraisers & Consultants

Dr. M. Mark Walker, PhD, CFA, CBA
University of Mississippi

EDITORIAL POLICY:

Business Appraisal Practice is published by the Institute of Business Appraisers. The journal is written by practitioners, for practitioners, on how to be better practitioners. Its focus is less on theoretical or conceptual topics and more on the practical application of the business appraisal process. The primary audience of the journal is anticipated to be members of The Institute of Business Appraisers and other business valuation practitioners. For a manuscript to be acceptable for publication, the topic should be of interest to the intended readership, the discussion should be clearly and thoroughly explained, with use of practical examples where appropriate, and the arguments or findings should be presented effectively and efficiently.

Review Process: Each manuscript submitted to *Business Appraisal Practice* is subject to the following general review procedures:

1. Review by the editor or associate editor for general suitability for this journal.
2. For those that are judged suitable, at least two reviewers are selected and a blind review process takes place.
3. Reviewers are encouraged to provide a written description of their reactions to the article, which can be forwarded anonymously to the author for his or her consideration in the review process.
4. Using the recommendations of the reviewers, the editor will decide whether the particular manuscript should be accepted as is, revised, or rejected for publication. Submission of Manuscripts: Authors should observe the following guidelines for submitting manuscripts:

A. Manuscripts currently under consideration by another journal or other publisher should not be submitted. The author must state that the work is not submitted or published elsewhere.

B. Manuscripts must be formatted in Microsoft® Word. Editing of text supplied by authors should conform to the following conventions: margins one inch top, bottom, right, and left; paragraph alignment justified without indentation of first line of paragraph; all text in 12-point Times New Roman; headings within the article in 12-point Times New Roman bold, not underlined; a brief biographical sketch in nine-point Times New Roman should appear at the end of the article; endnotes are preferable to footnotes; and authors should not use word processing tools such as "styles" and "block protect."

C. Spreadsheets, charts, tables, and illustrations must be formatted in Microsoft Excel. Workbooks must be submitted with the manuscript. Manuscripts should be submitted to Editor in Chief Shawn M. Hyde at BAP@Go-IBA.org.