

Viewpoint on Value

Sanity checks provide an added measure of comfort

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Valuing employee stock options

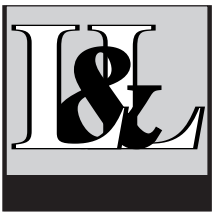
Swing vote premiums

Not all minority interests are created equal

A new twist on discounted cash flows



PLUS: Revenue Ruling 59-60: Building reliable valuations



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Sanity checks provide an added measure of comfort

The JOP test can support a valuator's findings

Business valuation is based on many complex financial analyses that can be difficult for nonfinancial experts to understand. Many computations rely on comparisons with large public conglomerates, which differ significantly from small private entities. To avoid getting caught up in the theoretical jargon, valuers typically stand back at the end of every valuation assignment and ask: "Does this value make sense in the real world?"

The valuation community has developed several sanity checks to assess the reasonableness of business appraisals. In some instances, the company's buy-sell

agreement, a recent offer to purchase the business or an industry "rule of thumb" may help support a valuator's findings. Absent these value indicators, however, many valuers turn to the justification of purchase (JOP) test.

What is the JOP test?

The JOP test is an intuitive reality check that estimates probable financing for a transaction and spreads interest and principal payments over the projected term of the loan (typically five to seven years). Under the JOP test, a valuator's conclusion is justified if the company

HYPOTHETICAL JUSTIFICATION OF PURCHASE TEST

ASSUMPTIONS

Appraised value:	\$10 million	Down payment:	\$2.5 million
Loan-to-value ratio:	75%	Loan term:	5 years
Loan amount:	\$7.5 million	Interest rate:	10%

PROJECTED CASH FLOWS

	Year 1	Year 2	Year 3	Year 4	Year 5
Pretax profits	\$2,800,000	\$2,940,000	\$3,087,000	\$3,241,350	\$3,403,418
Interest payments ¹	750,000	627,152	492,019	343,373	179,862
Adjusted pretax profits	\$2,050,000	\$2,312,848	\$2,594,981	\$2,897,977	\$3,223,556
Income taxes (at 40%)	820,000	925,139	1,037,992	1,159,191	1,289,422
Adjusted net income	\$1,230,000	\$1,387,709	\$1,556,989	\$1,738,786	\$1,934,134
Principal repayments ¹	1,228,481	1,351,329	1,486,462	1,635,108	1,798,620
Equity-free cash flow ²	\$ 1,519	\$ 36,380	\$ 70,527	\$ 103,678	\$ 135,514

5-YEAR RETURN ON EQUITY

Sum of equity cash flows (Years 1 through 5)	\$ 347,618
Down payment	÷ \$2,500,000
Return on investment	13.9%

All numbers are rounded to the nearest whole dollar amounts.

¹ Assuming annual compounding.

² Based on the assumptions that (a) annual depreciation expense reasonably approximates the company's need to purchase capital equipment and (b) the company's need for working capital will remain constant over the term of the loan.

will generate enough cash to cover the transaction's financing *and* provide the hypothetical buyer with an acceptable return on investment.

How is a JOP test applied?

In applying the JOP test to the controlling value of a hypothetical business, a valuator would make various assumptions about how the buyer might finance the deal, based on his or her judgment as well as discussions with commercial lenders. (See "Hypothetical justification of purchase test" on page 2.) The valuator obtains information about the loan-to-value ratio, the interest rate and the term. In this example, the valuator assumes an average debt-to-value ratio of 75%, an annual interest rate of 10% and a five-year loan term.

Next, the valuator projects the company's pretax profits over the loan term. In most cases, the valuator will have already prepared this information when he or she applied the market and income approaches. From there, the valuator adjusts projected pretax profits for interest and principal payments (net of the tax benefit of interest expense) to arrive at the equity-free cash flow, which is the amount left over for the purchaser.

In this hypothetical example, the appraised value appears reasonable because the company's cash flows support the requisite debt load and interest payments. These hypothetical cash flows also provide the buyer with a moderate 13.9% return on investment during the financing period.

What are the limits of JOP?

Unfortunately, the JOP test doesn't work well in all cases. Take minority interest values, for example. JOP calculations begin with a purchase price for the entire company. Some valuation methods directly produce a minority value indication, so the valuator never estimates the company's controlling value. It hardly makes sense to estimate a subjective control premium merely to apply a sanity check.



The JOP test also can fall short when valuing startups and technology companies that project little or negative short-term cash flows. Moreover, market trends — such as industry consolidation — may spur unusually high pricing multiples and, therefore, may skew the outcome of the JOP test.

Don't try this at home

As with most valuation analyses, the JOP test requires a sophisticated understanding of financial principles and should be used only by qualified valuation experts. In the wrong hands, the use of JOP and other sanity checks can lead to flawed conclusions. ■

Valuing employee stock options

Stock options provide an attractive way for companies to supplement employee compensation packages. They give recipients the right — but not the obligation — to buy company stock at a specific price over a finite time period. Options don't require any immediate cash outlays, and employees can become equity investors in a growing business. They also motivate employees to maximize profits and shareholder value.

Thanks to the Financial Accounting Standards Board (FASB), employee stock options have become a hot topic among business owners and their advisors.

Revised accounting rule

In December 2004, the FASB revised its rules on share-based payments, including employee stock options, restricted share plans, performance-based

awards, share appreciation rights and employee share purchase plans.

In the past, companies could value employee stock options using the intrinsic method. This outdated method estimated option value as the difference between the stock's market price at the issue date and the option's exercise price. As long as the exercise price was equal to or higher than the stock's fair market value, the method allowed companies to defer expense recognition until employees exercised their options.

FASB Statement No. 123(R), *Share-Based Payment*, eliminates the use of the intrinsic method (with a few rare exceptions) for valuing employee stock options. Instead, companies must estimate the fair value of the options and incur a proportionate expense over the options' requisite vesting period.

As they switch over to the fair value method, companies that issue employee stock options will take an immediate hit to profits. They will also pay more in professional fees, as compliance with Statement No. 123(R) will likely necessitate the use of outside valuation experts.

As a result of these incremental compliance costs, many companies that have historically issued employee stock options plan to eliminate or redesign their share-based compensation programs in the future.

Companies have several choices

The most popular way to estimate the fair value of employee stock options is the Black-Scholes-Merton



FINDING FAIR VALUE

For companies that continue to use employee stock options, Financial Accounting Standards Board (FASB) Statement No. 123(R) allows considerable leeway when it comes to estimating fair value. Acceptable option-pricing models should address the:

- Exercise price,
- Expected term,
- Current fair market value of the underlying stock,
- Expected volatility of the underlying stock (or, for private companies, the expected volatility of a comparable market pricing index),
- Expected dividends, and
- Risk-free rate over the expected term.

model, which is widely used to value exchange-traded options. Although familiar and reliable, this model has several downsides. First, the formula is based on complex calculus theories, which can be difficult to explain to auditors, employees and juries in the event that employee stock option value comes under fire (for instance, in an accounting malpractice or minority shareholder lawsuit).

Further, the Black-Scholes-Merton model usually overvalues employee stock options, which — unlike exchange-traded options — may be subject to vesting schedules, transfer restrictions, termination clauses, change in control provisions and other limitations. Overvalued options translate into higher expenses and lower profits over the short run.

Other models, such as the binomial (and trinomial) lattice models, offer flexible alternatives. For example, though time-consuming to set up, lattice models are based on simple algebra and are easier to demonstrate and explain.

Specialized expertise

Valuing employee stock options requires more than just plugging numbers into an option-pricing formula. These valuations are especially challenging for private companies that lack the internal resources to perform timely and accurate fair value estimates. In such a case, outside valuation assistance is key. ■

Swing vote premiums

Not all minority interests are created equal

How much would you be willing to pay for a minority interest in a private company? Would your answer change if your small percentage could be combined with other ownership interests to control major business decisions? It's in that type of situation that a swing vote premium might apply.

Applying the premium

Minority interests may possess “swing vote” potential warranting a premium when an owner can join with another owner to achieve control of the company. Although swing vote premiums don't preclude minority interest discounts, they can substantially reduce the minority interest discount the IRS or a judge will accept.

To illustrate, suppose a business is split among three partners. One owns 2% of the outstanding partnership units; the other two partners split the remainder equally. Neither 49% partner possesses control of the partnership. If the two 49% owners disagree, the 2% partner has the power to tip the scales. As a result, a swing vote premium may apply to the 2% interest.

Quantifying the premium

Quantifying a swing vote premium is highly subjective. With no empirical studies to use as a starting point, valuers must evaluate the unique characteristics of the business interest, such as the composition of the remaining ownership interest and whether the business is family owned. In addition, the valuator asks:

- Have the shareholders historically quarreled or agreed on major issues?
- Can the minority shareholder reasonably expect continued cooperation with the other minority shareholder(s) to retain ongoing control of the company?
- Does the subject interest possess full voting rights?
- Are there any relevant state laws or ownership agreement provisions that address the issue of control?

Understanding the IRS's role

Most swing vote premium literature pertains to gift and estate tax returns. The IRS has historically used swing vote premiums to lower the minority interest discounts taxpayers claim on their gift and estate tax returns.

The most widely referenced source for swing vote premiums is IRS Technical Advice Memorandum (TAM) 9436005. In this case, a donor owned a private business and gifted 30% of the company to each of his three sons. He also gifted a 5% interest to his wife.



The gifts granted no individual stand-alone control of the business. But the IRS concluded that each gift should receive a swing vote premium, because two or more owners could band together to achieve control.

However, the IRS has seen only limited success in asserting swing vote premiums. In several cases, the courts ultimately rejected the respondent's swing vote arguments. Even though a swing vote premium can make sense in limited situations, circumstances may change, thus eliminating the potential for a swing vote. Rather than completely eliminating the discount and applying a premium instead, a reduced minority interest discount may be easier to justify. ■

A new twist on discounted cash flows

The discounted cash flow (DCF) valuation method is one of the most familiar and trusted. In a nutshell, DCF models require valuers to project future cash flows and to discount them back to net present value using the weighted average cost of capital. But this method assumes that the company will retain a specific capital structure into perpetuity, and often this assumption is unrealistic.

To remedy this shortcoming, many business schools have begun teaching an alternative type of DCF technique called the adjusted present value (APV) method. While the APV method is a relatively new, untested concept in business valuation, it may be quite useful in some circumstances.

How APV works

The APV method allows for the possibility that companies may increase or decrease debt financing over the short term. As a result, the APV method more accurately estimates the incremental value associated with a company's efficient (or inefficient) use of leverage.

Companies that don't use borrowed funds operate inefficiently. Within limits, debt can create value. Leveraged companies effectively use other people's money to grow and increase shareholder value. Furthermore, debt financing is less expensive than equity financing.



In addition, lenders require a lower rate of return than equity investors, and interest payments are tax deductible. The APV method attempts to capture the value of this "interest tax shield" by separating it from the valuing of the business's operations.

Applying the APV method is a two-step process. (See "Components of the APV method" below.) First, a valuator estimates the company's unlevered value (as if it were financed with 100% equity) using the company's cost of equity (as opposed to its weighted average cost of capital). This unlevered value is analogous to the value of the operating business.

Next, the valuator estimates the interest tax shield's value. To do so, he or she estimates the annual tax benefit of the company's interest expense and then discounts this income stream back to its net present value. The valuator uses a rate of return that considers the risk-free interest rate at the valuation date, the expected changes in short-term interest rates, the subject company's marginal cost of debt, and the subject company's creditworthiness.

In general, the discount rate applied to the interest tax shield will be lower than the company's cost of equity. But the valuation community hasn't come to a consensus on how to calculate this discount rate.

When APV may be appropriate

When a company expects to maintain a constant capital structure into perpetuity, the APV method

COMPONENTS OF THE APV METHOD

$$\begin{array}{r} \text{Value of unlevered firm} \\ + \text{Value of interest tax shield} \\ \hline \text{Adjusted present value (APV)} \\ - \text{Interest-bearing debt} \\ \hline \text{Value of equity} \end{array}$$

should — theoretically — generate the same value conclusion as that derived from a traditional DCF method based on the weighted average cost of capital.

But when a company expects to alter its capital structure over the short run, the value conclusion will be different. APV models capture the income tax benefits of debt in the company's projected income stream, rather than in its capital structure — where the true benefit is often lost.

Where to look for assistance with APV

Although the APV method may not apply in every case, its growing academic recognition makes it a viable valuation alternative worth considering in some situations. ■

REVENUE RULING 59-60: BUILDING RELIABLE VALUATIONS

The IRS published Revenue Ruling 59-60 nearly 50 years ago. Despite its age, this guideline remains among the most frequently cited resources for all valuation assignments — not just those prepared for tax purposes.

Part of Revenue Ruling 59-60's timelessness lies in its simplicity. Rather than providing a how-to manual for complex financial calculations, Revenue Ruling 59-60 provides a skeletal framework for business valuation fundamentals. Attorneys may find this straightforward resource helpful when evaluating experts' qualifications, critiquing valuation reports, and drafting deposition and trial questions.

Definition of fair market value

Revenue Ruling 59-60 is best known for its definition of fair market value. According to Section 2.02, fair market value is:

The price at which property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of the relevant facts.

8 factors to consider

In Section 4.04, Revenue Ruling 59-60 also lists eight factors to consider when valuing a private business, including the entity's:

1. Nature and history,
2. Economic and industry outlook,
3. Book value and financial condition,
4. Earning capacity,
5. Dividend-paying capacity,
6. Goodwill and other intangible value,
7. Past stock sales and size of the block, and
8. Market price compared with similar companies.

Thorough valuation reports address all of these crucial elements.

Importance in tax cases

When estimating value for tax purposes, it's especially important that valuation reports be organized in accordance with Revenue Ruling 59-60. IRS agents are familiar with this guide and are less likely to challenge valuations that obviously address all of the factors outlined in Revenue Ruling 59-60.

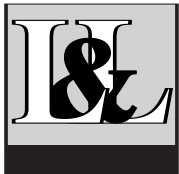
By following the IRS's own rules, a valuator not only demonstrates his or her competency and independence, but also a willingness to cooperate with IRS agents to get the job done right.

John M. Leask, II (Mac) values between 20 and 50 businesses annually for a variety of reasons. **He has done valuations to support estate and gift tax returns and has testified as an expert witness in divorce cases and shareholder disputes. Most often, Mac's valuations are done in conjunction with the purchase or sale of a business** — to assist shareholders or to set values when shareholders purchase the interest of a retiring shareholder. Recent examples of valuation engagements include a valuation done to support a pre-nuptial agreement and a valuation of a franchise business prior to purchase. Here are some more specifics about the types of engagements Mac performs:

- **Due Diligence & Assisting in the Purchase of a Business:** Mac has assisted the purchasers of businesses by determining or reviewing the offer. He is often called upon to help negotiate the purchase price and perform due diligence. These services have included, but are not limited to, verifying liabilities and assets, reviewing sales and expense records, and identifying critical issues relating to the future success of the businesses.
- **Family Limited Liability Partnerships/Companies & Closely Held Businesses:** Mac is regularly called upon to value various sized business interests for estate and gift tax purposes. He provides assistance to estate and trust experts during audits of reports prepared by other valuers.
- **Expert Witness in Divorce & Shareholder Disputes**

More information about Leask & Leask's valuation services (including case studies) may be found at our firm's web site (www.leask.com).

Contact Mac for a copy of our business valuation brochure, to schedule an individual consultation, or to discuss any other points of interest. He may be reached by phone at (203) 384-1237, Ext. 223, toll free at 1-888-LEASKPC (532-7572), by fax (203) 384-9157, or by e-mail: mac@leask.com. Be sure to visit our web site at www.leask.com.




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