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SPECIAL REPORT

Reality Check: Testing Valuation Conclusions For 'Fool's Market Value'

By Mike Pellegrino, MBA*

Editor's note: This article emerged from a series of subscriber exchanges in the *BVWire*™ (beginning with issue #*59-5*) on the interpretation and application of the fair market value standard—in which the author first posited an alternative: "fool's market value."

There's a persistent confusion in the valuation profession regarding the term "fair market value," resulting in value misstatements that plague a variety of venues, from the valuation of assets in litigation and divorce to M&A and tax issues. More than just a matter of semantics, the practical ramifications are substantial, since—next to someone writing a check—an independent valuation is the best indicator of value for a given asset. The root of the problem stems primarily from the misapplication of "fair market value" (FMV) and "investment value," and the cross-use of data based on these different standards.

We can begin to explore the confusion by reference to the current "valuation bubble" concerning e-commerce enterprises. According to a recent blog, "it's not unreasonable for [online properties] to sell for as much as 100 times earnings." (See *BVWire #61-2*, at BVResources.com.) But ask yourself this simple question:

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Is it possible that a company, valued under the fair market standard of value, as defined in Rev. Ruling 59-60, could trade for an earnings price multiple in excess of 100?

Put another way, is a company that trades at 100 times earnings being valued under the fair market value standard—or is it being valued under what could be called a "fool's market value" standard?

Definition of 'fool's market value'

The familiar definition in Rev. Ruling 59-60 posits that:

Fair market value represents a hypothetical transaction between a willing buyer and a willing seller, with knowledge of relevant information and equity to both parties.

By contrast, "fools market value" can be defined as "a transaction where a buyer (real world, hypothetical, or other) overpays for a company, using a valuation that clearly has no sustainable fundamental economic basis."

The issue is controversial, particularly since this "standard" may challenge the means and methods on which many analysts base their practices; however, the ultimate purpose is to find a reasonable response to the question—under what standard of value does an acquirer pay 100 times earnings for a target? To date, professional publications and industry sources provide little in the way of answers.

How do buyers know if they are being "fools" or not? This is not an entirely subjective question; there are some simple reasonableness checks to test any transaction's value for meeting one standard or another. If these simple checks indicate a set of circumstances that can be replicated in the

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current market, then the value conclusion is likely appropriate under the fair market value standard. If not, then an FMV value conclusion is likely inappropriate. If value conclusion is a perverted distortion of economic reality, it may qualify as an opinion more in compliance with the fool's market value standard.

A paradox of risk and reward

Before describing these simple checks, it is important to revisit the relationship between an earnings multiple and a discount or yield capitalization rate. Consider the capitalized future income method—also known as the Gordon Growth Model, which is a particular favorite of the valuation profession. The Gordon Growth Model indicates the value of a perpetuity, such as a going concern business, as follows:

$$Value = \frac{Income_{t+1}}{Cost\ \ of\ \ Capital - Perpetual\ \ Growth\ \ Rate}$$

In this formula the discount rate serves as an inverse of the earnings multiple. Thus, a 20% cost of capital with a 0% growth rate equates to a market multiple of 5; a 33.33% cost of capital with a 0% growth rate equates to a market multiple of 3; and so on. Consequently, there is an inverse relationship between the discount rate and the market multiple, as shown on the chart on the next page.

As the discount rate (or yield capitalization rate) increases, the market multiple decreases, as does value. Since the discount rate serves as a proxy for the risk of buying a target company, higher discount rates and risk should indicate lower values.

But therein lies a paradox in the risk reward paradigm, as practiced by sophisticated investors in the market. (Coincidentally, it serves as our first test.) If higher discount rates signify higher risk, then firms that have relatively small earnings or revenue multiples, such as CPA firms and other "old line" industries, should be trading at higher earnings multiples, since the relative risk of an established CPA firm or old-line company is likely to have a much lower earnings multiple than an Internet startup.

Yet Internet startups, which have some of the highest risk in the market, sell for the highest earnings multiples, indicating a lower overall discount rate (recall the inverse relationship between the earnings multiple and the discount rate). In

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doing so, the market appears to violate its own risk-reward continuum. Is this rational and reasonable? Why would a hypothetical buyer assume a disproportionate amount of risk without proper compensation?

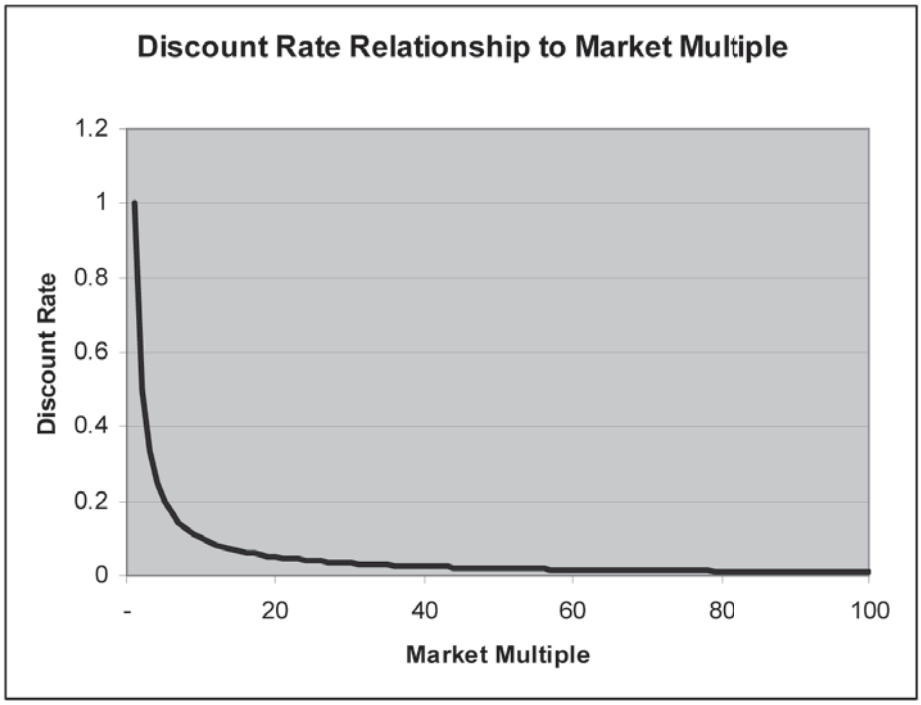
Return on the investment

The next test for reasonableness is to determine when the acquirer recoups the initial investment. If this time is reasonable and normal relative to the market, then the value conclusion is also probably reasonable, and constitutes an FMV valuation. If not, it may be an unreasonable value and possibly a fool's market value.

Let's consider paying 100 times earnings for a web-based company: In simplest terms, the acquirer is paying $100 for rights to current earnings of $1. This 100 earnings multiple is equivalent to a cost of capital of 1% (1/100 = 0.01 or 1%). Under the Gordon Growth Model, the compound annual growth rate reduces the discount rate. To check the reasonableness of this value, assume that the acquirer has a cost of capital of 20% and wants to pay 100 times earnings for the target. To justify paying 100 times earnings, however, an acquirer would actually have to have a cost of capital of 1%, which indicates a perpetual growth rate of 19% (i.e., cost of capital – growth rate = 20% - 19% = 1%).

The following table demonstrates the cumulative growth and the compounded earnings for this target company under these conditions:

Year	Annual Earnings	Cumulative Earnings	Present Value of Cumulative Earnings
0	1	1	$1.00
1	1.19	1.19	$0.99
2	1.4161	2.6061	$1.81
4	1.685159	4.291259	$2.07
5	2.005339	6.29659821	$2.53
6	2.386354	8.68295187	$2.91
7	2.839761	11.5227127	$3.22
8	3.379315	14.9020281	$3.47
9	4.021385	18.9234135	$3.67
10	4.785449	23.7088621	$3.83
11	5.694684	29.4035458	$3.96
12	6.776674	36.1802196	$4.06
13	8.064242	44.2444613	$4.14
14	9.596448	53.8409089	$4.19
15	11.41977	65.2606816	$4.24
16	13.58953	78.8502111	$4.26
17	16.17154	95.0217512	$4.28
18	19.24413	114.265884	$4.29
19	22.90052	137.166402	$4.29
20	27.25162	164.418018	$4.29



As the data suggest, it will take a company eighteen years to reach a point where the deal nominally makes sense—not accounting for the time value of money. But what happens when one considers the purchaser's cost of capital, which compensates the acquirer for the time value of money? The graph on the next page demonstrates the value to the acquirer over the course of fifty years.

As the graph illustrates, the total value to the acquirer peaks at $4.29, which occurs during

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years 18, 19, and 20—and then goes down from there. That means that, in the best year for an exit event, the acquirer will lose $95.71 of the $100 paid for the company. Is this a rational acquisition under the fair market value standard? What happens if one goes further out in the analysis, perhaps to year 50? In that case, the total value to the acquirer is $3.46. In this example, the acquirer never receives a return on the investment that exceeds the opportunity cost of capital for the company. Once again: Is this a rational acquisition under the fair market value standard? Who but a fool would purchase a company knowing that 95.71% of the total value will be lost the date the transaction closes? (This doesn't include transaction costs, which exacerbate the total loss.)

Growth rate

The next test looks to the assumptions inherent in using the earnings multiples—the growth rate. Buyers pay higher multiples for targets that have greater growth potential. Recall that in the Gordon Growth Model, the growth rate is perpetual. As such, in the example above, the target would grow at a compound annual growth rate of 19% for the remainder of its existence. That defies logic, since few enterprises can empirically support such performance.

Further, companies that can not promise such sustainable growth must essentially ask the free market for financing at 1% to underwrite an equity position. Does this sound reasonable for a fair market value opinion, particularly when there is much higher risk? Why would a rational acquirer choose this deal when investment in an FDIC-insured savings account would generate higher returns on a nominal basis, and vastly superior returns on a risk-adjusted basis?

As an example, consider SonicWall, which in 1999 had a price-to-earnings ratio of 8,675 and a market valuation of $1.2 billion on $140,000 in earnings. Assuming its discount rate is the inverse of its earnings multiple, SonicWall's discount rate (the equivalent to its cost of capital) was 0.011%. That means that the public capital markets, fueled by some of the most sophisticated investors in the world, essentially gave an interest-free loan to a company that had profound risk relative to alternative investments. Is this rational and reasonable under the fair market value standard?

To put this into further perspective, consider what is possible with a 0.011% cost of capital. Theoretically, a buyer could borrow a few trillion dollars at 0.011%, buy the entire block of companies in the S&P 500, and live modestly on the margin differences between the S&P 500's returns and the 0.011% cost of capital. Or the buyer could purchase the entire U.S. government debt market and make a few points on the margin. Even with a 1% cost of capital, which implies a 100 times earnings multiple, a buyer could finance the entire S&P 500 or the entire U.S. debt market and make serious gains on the margin between the returns of the S&P 500 or debt yields and the cost of capital.

Fools rush in where FMV fears to tread

In short, an acquirer paying 100 times earnings for a company fails some very basic reasonableness tests for a fair market value opinion. There

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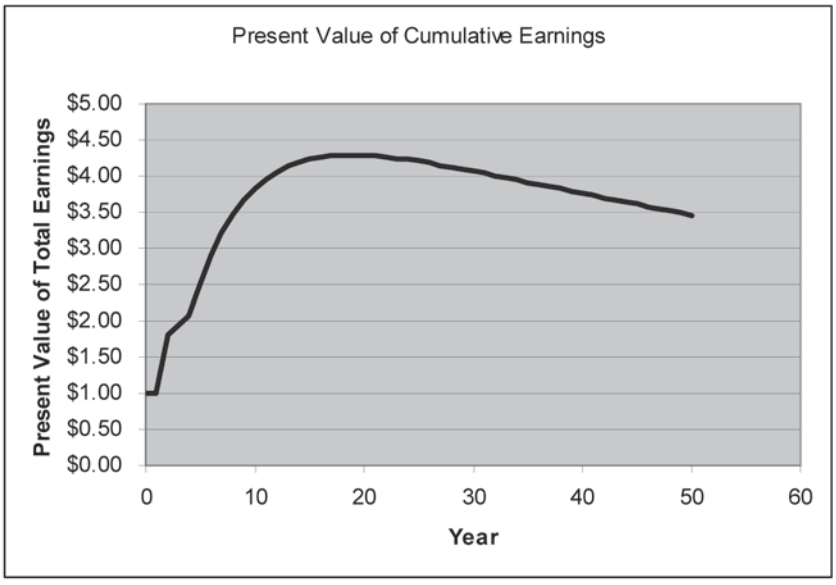

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is possible synergistic value, which is both an investment value standard and a unique situation to a hypothetical buyer. But analysts cannot begin to project this synergy with any reliability, and since it does not represent the general market, it is not appropriate for a fair market value standard. Moreover, compound annual growth rates in value (either through revenues, cost savings, market protection, etc.) vastly exceed most industry norms. As such, only a fool would pay 100 times earnings for a company under a fair market value standard.

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