

# Valuation Planning for Right Now: Valuation in Turbulent Times

PRESENTATION BY:

Mark Shayne, ASA, CPA/ABV, MBA  
Managing Director

July 22, 2009

FAE / Closely Held & Flow-Through Entities Conference  
FAE Conference Center, 3 Park Avenue, 19<sup>th</sup> Floor  
New York, New York 10016

# Valuations Have Been Volatile Recently



“My grandfather’s work was doo-doo!”

# The Current Environment

---

- ◆ “Flat is the new up.” (Steve Zelin, Blackstone Group)
- ◆ JM Keynes definition of Uncertainty: “There is no scientific basis on which to form any calculable probability; we simply do not know.”
- ◆ “I sought a phrase that should be always in view, true at all times and in all situations: ‘and this too shall pass away.’ How much it expresses! How chastening in the hour of pride! How consoling in the depth of affliction!” (Abraham Lincoln)
- ◆ “Risks were banished to the distant tails of the probability spectrum.” (Stephen Roach, Morgan Stanley)
- ◆ “Never confuse a bull market with intelligence.” (Randall Quarles, Carlyle Group)
- ◆ “Trying to help a Tech start-up raise cash in Houston is like trying to sell hamburgers to vegans.” (Wharton Linked-in, March 2009)

# Valuation Post-Modernism: Lessons from Recent Events

---

- ◆ Value is not an absolute truth
- ◆ The best anyone can do is “guesstimate” relative value
- ◆ Maybe the focus should be on incremental, accretive value
  - I don’t know what the target/subject is worth; the best I can do is develop a subjective set of scenarios or range of outcomes & values, and see if the expected benefit to me is worthwhile
- ◆ “The objective is not to lose; this qualifying thing is draw, win – but no lose ... maintain possession of the ball, defend with vigor, avoid ostentation and danger. The memory of beautiful football lasts for a while; the result lasts forever.” (Giovanni Trapattoni, Ireland soccer coach)
- ◆ Does anyone believe that equity is less risky today than a year ago?
- ◆ Do observed market values represent fair value?

# Fair Value

---

## ◆ Definition

- “Fair value is the price that would be received to sell an asset or transfer a liability in an orderly transaction between market participants at the measurement date.”

## ◆ Issues to note

- Exit price and entry price may differ (purchase price may differ from “fair value” under FAS 157)
- Relevant benchmark is the “market participant,” which may differ from the actual buyer (top price, synergies)
- “Orderly transaction” differs from “fire sale”
- Measurement date is the time driver

# Fair Value: Levels of Inputs

## ◆ Definition

– “Fair value is the price that would be received to sell an asset or transfer a liability in an orderly transaction between market participants at the measurement date.”

## ◆ Priorities: Level 1 > Level 2 > Level 3

### –Level One

- ▶ Perfect comparable
- ▶ Quoted price for identical security (asset/liability) in an **active** market

### –Level Two

- ▶ Imperfect market data
- ▶ Quoted prices for “similar” securities, or quoted prices for identical security in an inactive market

### –Level Three

- ▶ Unobservable data
- ▶ Reflects the reporting entity’s own assumptions about the assumptions that market participants would use
- ▶ Adjustable if better data available [without undue cost and effort]

# FAS 157: Level One versus Level Three

---

- ◆ Do observed market values represent fair value?
- ◆ Let's think of Level 1 input as market cap, Level 3 input as DCF
  - Normally, we favor Level 1 inputs over Level 3 inputs
- ◆ Is the current period “normal?”
  - Recent trading volume low even for many large cap stocks
  - Bid/ask spreads have widened for many companies to “Pink Sheet” levels
  - No liquidity available to finance deals; private equity has dried up; fund redemptions are forcing sales at below intrinsic value
- ◆ Level 3 inputs (DCF, Comparable Company Multiples) may be better arbiters of fair value than Level 1
- ◆ What is your perspective?
  - Buyer
  - Seller

# Valuation Approaches

- ◆ Three general approaches – market, income, and cost
- ◆ If data is reliable, market approach best indication of value
- ◆ However, often reliable guideline prices are unavailable, in which case the income approach is quite useful
  - Projections must be assessed for reasonableness
  - Projections should not include any entity-specific synergies or other assumptions not applicable to a market participant
  - Typically benchmarking analyses are performed to test reasonableness of projected profit margins, revenue growth, working capital and capital expenditure assumptions, etc.
  - Adjustments can either be made to projections or discount rate to reflect risk inherent in the projections
  - Extreme caution needs to be applied in either case. For example, discount rate adjustments can be quite arbitrary, and publicly available data might not necessarily apply in a particular case if companies not similar enough
- ◆ Generally the cost approach is not appropriate for the valuation of equity, debt, or derivative securities

# Is Riskiness Up or Down?

- ◆ We generally employ *Discount Rates* to reflect the riskiness of a stream of cash flows
  - CAPM is the classic model:  $RFR + B \cdot ERP + SP$  [+ Alpha]
- ◆ Lately, we see that Risk is up (asset volatilities, valuation), but CAPM-computed Discount Rates are down
  - Lower discount rates imply higher values
  - We have a client (a North American infrastructure company) that paid \$2.2bn in mid-2007 for an acquisition (BTW, 30 x EBITDA)
  - Over the next 10 years, EBITDA is expected to miss plan by \$850mm and NCF by over \$400mm
  - The new owners insist that the acquired entity is actually worth more today
- ◆ Would you agree?

# How Could Value be Higher?

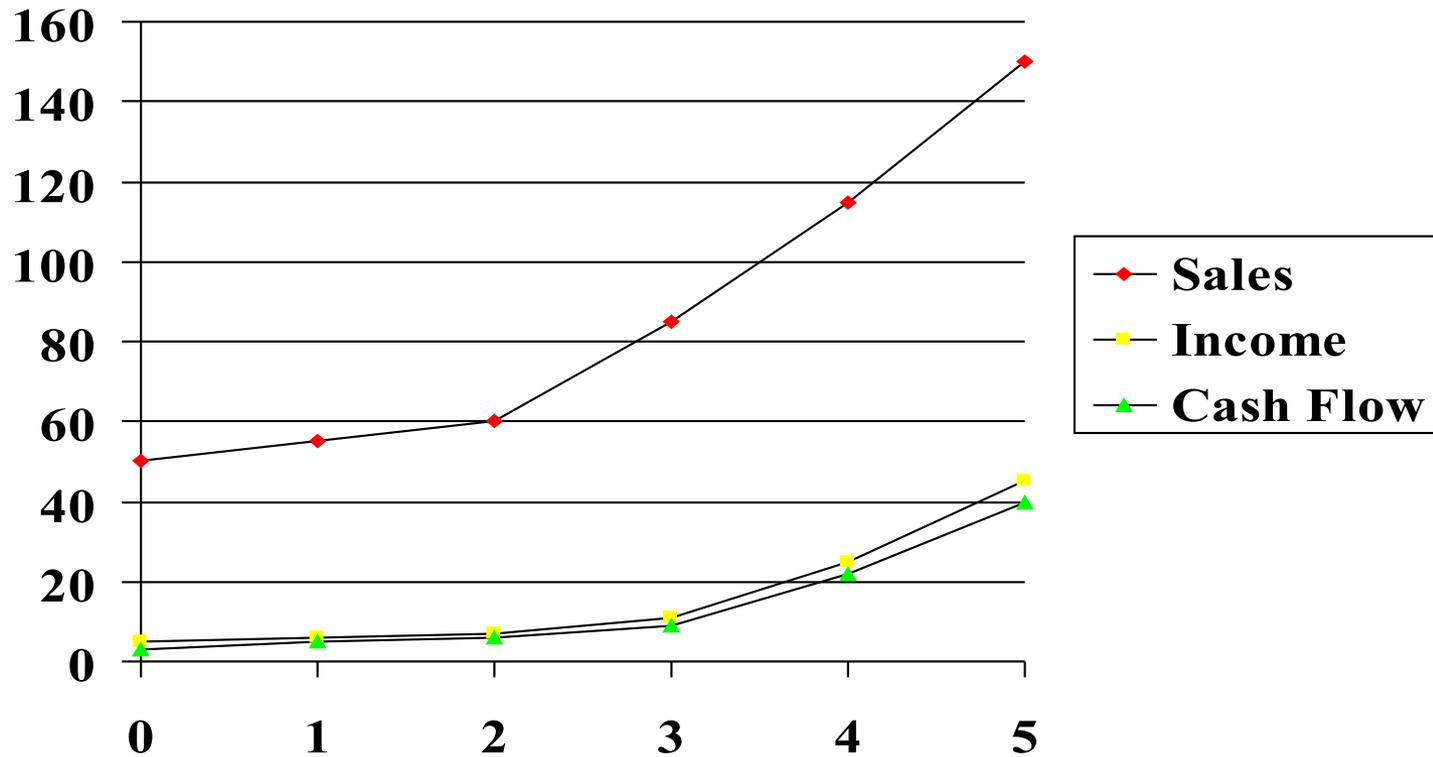
## ◆ The Sting

- Beta decline from 0.90 to 0.67
- RFR decline of 1.3 percentage points
- Debt to capital ratio for Infrastructure companies up from 30% to 50%
- Discount rate drops from 10% to 9%
- Value goes up!

## ◆ What's Wrong with This Picture?

- Beta decline due to dramatic volatility of financial stocks relative to non-financial stocks
  - ▶ Fix with varied time horizon or regression index
- Stampede to acquire Government bills and bonds to escape equity and corporate debt/default risk drives down RFR (yield) , but leads to an incorrect assumption about equity risk (and, hence, equity values)
  - ▶ US Treasuries were oversubscribed at zero percent yield!
- The only reason debt to capital ratios are up is because worldwide equity values are down substantially from peak 2007

# New Respect for the Hockey Stick Forecast?!



**Note: need to consider implications for DCF Terminal Value and Reversion to the Mean**

# Check Your Ego at the Door

- ◆ Two of three new restaurants in the US close within three years of opening
- ◆ Two of three small businesses in the US fail

“Two outta three ain’t good...”



- ◆ McKinsey & Co.: 70% of acquisitions fail to earn their hurdle rate (cost of capital)
- ◆ Cambridge Associates (1981-1998): 45-50% of early stage VC investments and 35-40% of late stage VC investments return less than 1.0 times capital

# Succession Planning: If Not Now, When?

---

- ◆ What does the ideal environment look like for GRAT, Gift, Intra-family sale?
  - Low asset values
  - Weak forecast financial performance
  - Low market multiples
  - Low interest rate environment
  - Liquidity is at a premium (i.e., illiquidity discounts rise)
  
- ◆ The legislative environment is at best status quo, with a real chance for passage of harmful legislation from a planning perspective
  - Unfavorable impact on Allowable Transactions and Discounts

# GVM's for First Round Investments

- ◆ See returns for first round investments (1989 - 2006)
  - IPO & ACQ represent returns on “successful” exits
  - ALL represents returns on all investments (many do not successfully exit)
  
- ◆ Source: Andrew Metrick, Sand Hill Econometrics

	Value Multiple	IPO	ACQ	ALL
Five years after initial VC round,	< .25	1.1%	16.4%	51.9%
• 13.2% IPO	.25 - .5	1.3%	8.9%	6.8%
• 19.8% acquired	.5 - 1	3.1%	12.8%	8.0%
• 6.3% defunct	1 - 2	10.6%	16.0%	5.4%
• 60.7% still private	2 - 3	9.9%	9.7%	4.1%
Ten years after initial VC round,	3 - 5	12.9%	9.5%	4.7%
• 23.2% IPO	5 - 10	25.8%	14.3%	8.6%
• 38.0% acquired	10 - 20	16.2%	7.3%	5.1%
• 14.3% defunct	20 - 50	13.9%	3.4%	3.8%
• 24.6% still private	50 - 100	3.6%	1.3%	1.1%
Note: “acquired” does not guarantee successful exit; “still private” after 10 years is likely problematic	> 100	<u>1.7%</u>	<u>0.4%</u>	<u>0.5%</u>
	Total	100.1%	100.0%	100.0%

# Guideline/Comparable Company Valuation Caveats

---

- ◆ Subject company / Reporting Unit may differ from Public Comparables
  - Size
  - Key people
  - Management Depth
  - Available Resources
  - Stage of Development/Maturation
  - Cash Burn
  - Customer Concentration & Product Dependence
- ◆ Regression analysis can help quantify differences & establish applicable multiples
- ◆ Are the Guideline Companies (Comparables) really comparable?
  - Consider Dow Jones data as an alternative

# Drill Down to Market Data by Industry, Round

*Pre-Financing Valuation is defined as the valuation of the company before the investment represented in the "Amount Invested" was made.*

*Financing Amounts Shown in \$Millions*

Round Class	Business Status	Year Closed	Quarter Closed	Premoney Valuation	Amount Invested
Early Round*	Product Development	1996	2	\$1.0	\$0.5
Early Round	Product Development	1997	2	\$9.0	\$4.0
Early Round*	Product Development	1999	1	\$10.0	\$7.0
Early Round	Product Development	2000	2	\$11.2	\$11.0
Early Round	Product in Beta Test	2000	3	\$72.0	\$28.0
Early Round	Product Development	2002	2	\$6.5	\$15.5
Early Round	Product Development	2002	3	\$3.8	\$5.8
Early Round	Product Development	2003	4	\$6.0	\$8.0
Early Round*	Product Development	2003	1	\$1.5	\$1.5
Early Round	Product in Beta Test	2004	3	\$2.8	\$2.2

<i>Early round financings include a company's first round of financing, or its first round following a seed round of financing.</i>		Premoney	Amt Invested
	Median	\$6.3	\$6.4
	Mean	\$12.4	\$8.4

\*Seed Round

Round Class	Business Status	Year Closed	Quarter Closed	Premoney Valuation	Amount Invested
Second Round	Product Development	1998	2	\$26.0	\$8.0
Second Round	Shipping Stage	1999	1	\$8.3	\$4.5
Second Round	Product Development	2001	1	\$106.4	\$30.0
Second Round	Product in Beta Test	2001	3	\$40.0	\$45.0
Second Round	Product Development	2003	1	\$47.3	\$20.0
Second Round	Product Development	2003	3	\$13.1	\$7.1
Second Round	Shipping Stage	2005	2	\$7.5	\$6.0
Second Round	Profitable	2007	3	\$15.0	\$25.0

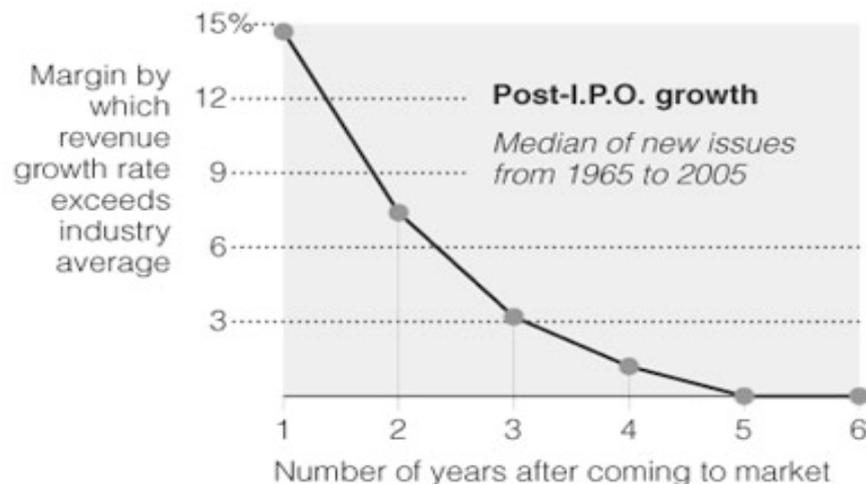
		Premoney	Amt Invested
	Median	\$20.5	\$14.0
	Mean	\$32.9	\$18.2

Industry: Telecom (specific)  
Source: Dow Jones

# Valuation & Growth

While analysts routinely assume a very long high-growth period (with substantial excess returns during this period), the evidence suggests that they are much too optimistic. A study of revenue growth at firms that exit via IPO indicates the following growth trajectory in the years after the IPO,

Typically, the revenue growth rate of a newly public company outpaces its industry average for only about five years.



Source: Andrew Metrick

The New York Times

# Post-Money Value versus Fair Value

Value is \$13.9mm, not \$23.8mm (i.e., \$355/CSE x 67,000 shares)

**CORPORATE SECURITY VALUATION MODEL  
LIQUIDATION/ACQUISITION/SALE/MERGER SCENARIO  
BASED ON DISCOUNTED CASHFLOW VALUE  
AS OF MARCH 31, 2008**

**SUMMARY OF VALUES**

Security	Value (\$MM)			Shares Outstanding (MM)	Fair Market Value Per Share		
	Liquidation Preference	Conversion Feature	Total		Liquidation Preference	Conversion Feature	Total
Series C-1	\$5.74	\$2.18	<b>\$7.9253</b>	0.0223	\$257.17	\$97.89	<b>\$355.06</b>
Series C-1 Warrants	\$0.15	\$0.11	<b>\$0.2626</b>	0.0012	\$128.45	\$97.89	<b>\$226.34</b>
Series B	\$1.23	\$1.55	<b>\$2.7768</b>	0.0158	\$77.54	\$97.89	<b>\$175.42</b>
Series B Warrants	\$0.04	\$0.09	<b>\$0.1329</b>	0.0009	\$47.17	\$97.89	<b>\$145.06</b>
Series A	\$0.32	\$0.81	<b>\$1.1355</b>	0.0083	\$38.59	\$97.89	<b>\$136.48</b>
Common Options (\$0.01)	\$0.00	\$0.21	<b>\$0.2139</b>	0.0022	\$0.00	\$97.89	<b>\$97.89</b>
Common Options (\$150)	\$0.00	\$0.36	<b>\$0.3578</b>	0.0052	\$0.00	\$68.94	<b>\$68.94</b>
Common Options (\$500)	\$0.00	\$0.01	<b>\$0.0149</b>	0.0004	\$0.00	\$36.36	<b>\$36.36</b>
Common Stock	\$0.00	\$1.04	<b>\$1.0406</b>	0.0106	\$0.00	\$97.89	<b>\$97.89</b>
<b>Total Firm Value</b>	<b>\$7.48</b>	<b>\$6.38</b>	<b>\$13.8603</b>	<b>0.0670</b>			

# Empire Corporate Overview

---

- ◆ One of the largest independent valuation consulting firms in the U.S.
- ◆ Valuation professionals are MBAs; many have other designations (e.g., CFA, ASA, CPA, etc.).
- ◆ Extensive estate planning, ESOP and financial reporting valuation background; strong experience with private equity.
- ◆ Empire has strong experience working with both private and public early stage and major corporate clients in the U.S, Israel and Europe. The firm has provided valuation services on behalf of all of the Big Four accounting firms, as well as many regional and local firms worldwide.

# Empire Corporate Overview

---

- ◆ Empire has strong experience in a wide variety of industries, including:
  - Software (300+ valuations)
  - Life sciences and medical devices (100+ valuations)
  - Telecommunications & Internet (300+ valuations)
  - Manufacturing (500+ valuations)
  - Retail (300+ valuations)
  - Food & Beverage (500+ valuations)
  - Print & Publishing (600+ valuations)
  - Engineering, environmental consulting and clean-tech companies (200+ valuations)
  
- ◆ Empire co-chairs the annual Fair Value Summit in NYC ([www.fairvaluesummit.com](http://www.fairvaluesummit.com)), with participants from the major accounting firms, FASB and the SEC.

# Empire Valuation Services

---

- ◆ Estate and Gift Tax Valuation
  - 300+ estate & gift tax valuations annually
- ◆ ESOP Valuations & Fairness Opinions
  - 200+ ESOP valuations annually
- ◆ Financial Reporting, Corporate Planning
  - Mergers & Acquisitions
    - ▶ FAS 141R & IFRS 3 Purchase Price Allocation
  - Financial Compliance
    - ▶ FAS 142 & IAS 36 Goodwill Impairment Testing
    - ▶ FAS 144 Intangible Asset Impairment Testing
- ◆ Valuations for Option Grants
  - IRC 409A
- ◆ Private Equity, Hedge Funds, Family Offices
  - FAS 157 & 159 Investee Company Valuations
- ◆ Fairness Opinions
  - Fees one-third to one-half of investment banks; work product more robust

# Contact Information

---

- ◆ Mark Shayne, ASA, CPA/ABV, MBA
  - Phone: 212-714-0122
  - E-mail: [marks@empireval.com](mailto:marks@empireval.com)
  
- ◆ Web site: [www.empireval.com](http://www.empireval.com)