



Basics of Valuation for
Laboratory Businesses
2008 Executive War College
May 15, 2008



Overview

The greatest of all gifts is the power to estimate things at their true worth.

Francois de La Rochefoucauld, 1665



Overview

- I. Valuation Fundamentals
- II. Factors That Influence Value
- III. How the National Labs Can Justify Their Valuations
- IV. Where Are Lab Valuations Heading?



Valuation Fundamentals

Valuation Fundamentals

First, Let's Get Our Terminology Straight

<u>Income Statement</u>	<u>(\$s in Millions)</u>	
Gross Charges	\$150	
Less: Contractual Allowances	<u>50</u>	
Net Revenue	100	100%
Cost of Sales	<u>50</u>	
Gross Profit	50	50%
Sales, General & Admin. Expenses	<u>25</u>	
EBITDA (a)	25	25%
Depreciation and Amortization	<u>5</u>	
EBIT (b)	20	20%
Interest Expense	<u>8</u>	
PreTax Income	12	12%
Income Taxes	<u>4</u>	
Net Earnings	8	8%

(a) EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization

(b) EBIT – Earnings Before Interest and Taxes

Valuation Fundamentals

Standards of Value

- “Fair Market Value” is the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm’s length in an open and unrestricted market, when neither is acting under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.
- “Investment Value” is the value to a particular investor based on individual investment requirements and expectations.

Valuation Fundamentals

Three Basic Approaches to Valuation:

- The Income Approach
 - Discounted Cash Flow Approach
- The Market Approach
 - Public Market Comparable Approach
 - Comparable Acquisition Approach
- The Cost Approach

Includes
Intangible
Value

Excludes
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Value

Valuation Fundamentals

•The Discounted Cash Flow Approach

Most financial theorists believe that the best measure of going-concern value is the present value of expected future cash flows from an investment.

- Project the Net Revenues to Be Generated by the Company
- Project the Expenses Associated With That Net Revenue Stream, Analyzing the Variable / Fixed Nature of Various Expenses, Excluding Interest Expense
- Subtract the Expenses and Income Taxes From the Net Revenues to Obtain Net Earnings

Valuation Fundamentals

- **The Discounted Cash Flow Approach** (cont'd)
 - Convert the Net Income to Cash Flow by Adding Back Depreciation, Subtracting Capital Expenditures, and Subtracting Increases in Working Capital, but Not Subtracting Principal Payments
 - Discount the Forecasted Debt-Free Cash Flows Back to Present Value, Thereby Accounting for Both the Time Value of Money and Forecasted Risks, Yielding Total Enterprise Value
 - Subtract the Face Value of Interest-Bearing Debt From the Total Enterprise Value, Yielding Equity Value

Valuation Fundamentals

- **The Public Market Comparable Approach**
 - Identify Publicly Traded Comparable Companies
 - Analyze the Financial and Operating Performance of the Public Companies
 - Analyze How Investors Are Pricing the Public Companies, and Why

Valuation Fundamentals

- **The Public Market Comparable Approach** (cont'd)
 - Make Inferences About How Investors Would Price, or Value, the Subject Company Through the Utilization of Various Ratios Such as:
 - Market Value of Total Capital / Net Revenue
 - Market Value of Total Capital / EBITDA
 - Market Value of Total Capital / EBIT
 - Market Value of Equity / Book Value of Equity
 - Subtract the Face Value of Interest-Bearing Debt From the Total Enterprise Value, Yielding Equity Value

Valuation Fundamentals

- **The Public Market Comparable Approach** (cont'd)

MVTC / NET REVENUE	2003	2004	2005	2006	2007	LTM	5 Yr. CAGR Revenue
Bio-Reference Laboratories, Inc.	1.38	1.65	1.39	1.54	1.72	2.02	23.1%
Clariant, Inc. (formerly ChromaVision Medical Systems, Inc.)	8.17	11.54	7.87	3.57	3.60	3.84	37.8%
Enzo Biochem, Inc.	12.08	13.34	11.91	10.76	9.46	7.30	0.1%
Genzyme Corporation	6.17	5.74	6.92	5.59	5.20	5.67	22.1%
Laboratory Corporation of America	1.88	2.41	2.51	2.72	2.69	2.63	8.5%
Medtox Scientific, Inc.	0.88	1.12	1.03	1.41	2.36	2.02	11.8%
Myriad Genetics, Inc.	6.93	7.33	7.12	6.99	8.10	10.96	25.0%
Orchid Cellmark, Inc. (formerly Orchid Biosciences, Inc.)	1.54	3.45	3.87	2.23	2.51	2.51	4.5%
Psychemedics Corporation	2.83	3.03	3.23	3.72	3.77	3.23	11.3%
Quest Diagnostics Incorporated	1.66	2.00	2.23	2.05	1.96	2.10	9.4%
Average of All	4.35	5.16	4.81	4.06	4.14	4.23	15.3%
Median of All	2.35	3.24	3.55	3.14	3.15	2.93	11.5%
Average of BioReference, LabCorp, and Quest	1.64	2.02	2.04	2.10	2.13	2.25	17.0%
Median of BioReference, LabCorp, and Quest	1.66	2.00	2.23	2.05	1.96	2.10	11.5%

Valuation Fundamentals

- **The Public Market Comparable Approach** (cont'd)

MVTC / EBITDA	2003	2004	2005	2006	2007	LTM
Bio-Reference Laboratories, Inc.	13.50	14.35	13.30	12.73	13.38	15.66
Clariant, Inc. (formerly ChromaVision Medical Systems, Inc.)	-	-	-	-	-	-
Enzo Biochem, Inc.	89.98	-	-	-	-	-
Genzyme Corporation	31.72	26.82	20.27	34.71	18.28	19.91
Laboratory Corporation of America	7.68	9.42	9.94	10.55	10.23	9.99
Medtox Scientific, Inc.	12.32	8.95	7.92	8.88	11.99	11.99
Myriad Genetics, Inc.	-	-	-	-	-	-
Orchid Cellmark, Inc. (formerly Orchid Biosciences, Inc.)	-	-	-	-	91.28	91.37
Psychemedics Corporation	15.86	11.67	10.08	10.69	10.05	10.05
Quest Diagnostics Incorporated	8.15	9.63	10.26	9.73	9.91	10.60
Average of All	25.60	13.48	11.96	14.55	23.59	24.22
Median of All	10.24	9.19	8.93	9.30	10.14	10.33
Average of BioReference, LabCorp, and Quest	9.78	11.14	11.17	11.00	11.17	12.08
Median of BioReference, LabCorp, and Quest	8.15	9.63	10.26	10.55	10.23	10.60

Valuation Fundamentals

- **The Comparable Acquisition Approach**
 - Identify Acquisitions of Comparable Companies
 - Analyze the Financial and Operating Performance of the Acquired Companies
 - Analyze How Buyers Are Pricing the Acquisitions, and Why

Valuation Fundamentals

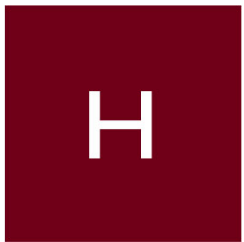
- **The Comparable Acquisition Approach** (cont'd)
 - Make Inferences About How Buyers Would Price, or Value, the Subject Company Through the Utilization of Various Ratios, Such as Multiples of Net Revenue, EBIT and EBITDA
 - Subtract the Face Value of Interest-Bearing Debt From the Total Enterprise Value, Yielding Equity Value
 - The Comparable Acquisition Approach is Typically Only Utilized to Value 100 Percent Interests

Valuation Fundamentals

- **The Cost Approach**
 - Adjust Assets and Liabilities, Both On- and Off-Balance Sheet, to Market Value
 - Difficult to Identify and Value Intangible Assets, Such as Customer List and Goodwill; therefore, the Cost Approach Tends to Undervalue a Company

Valuation Fundamentals

- **The Cost Approach** (cont'd)
 - The Theory is That a Company Utilizes its Entire Bundle of Assets, Including Tangible Assets, Working Capital, and Intangible Assets, to Generate the Primary Driver of Value: Cash Flow
 - Therefore, the Cost Approach is Typically Only Utilized to Value Holding Companies (i.e. Non-Operating Companies) or Companies Which Should Be Liquidated



Factors That Influence Value

Factors That Influence Value

Internal Factors:

- Growth Potential / Historical Growth Rate
- Size (net revenue, EBITDA, number of accessions, etc.)
- Profitability
- Stability / Reputation
- C-Corporation vs. S-Corporation vs. Partnership vs. LLC
 - Objective is to achieve capital gain treatment for sellers
 - Buyers prefer to buy assets

Factors That Influence Value

Internal Factors (cont'd):

- Composition of Revenue – Clinical Lab
 - Price Per Accession
 - Physician office clients vs. Nursing Homes
 - Medical testing vs. Substance Abuse testing
 - Hospital outreach vs. In-patient
- Composition of Revenue – Pathology Practice
 - Part B vs. Part A
 - Non-Hospital vs. Hospital sources of revenue
 - Third Party Billing vs. Client Bill
 - Sub-specialty vs. General AP
 - Global vs. Professional Only

Factors That Influence Value

Internal Factors (cont'd):

- Sustainability of Revenue
- Billing Compliance
- Verifiability of Financial and Operating Data
- Hospital Contract Terms
 - Exclusivity
 - Term and termination provisions
 - Compensation
 - Change of control
 - Quality of relationship with administration

Factors That Influence Value

Internal Factors (cont'd):

- Depth / Composition of Staff
 - Age and number of pathologists
 - Sub-specialty pathologists
 - Quality of management personnel
- Level of Working Capital or Net Asset Value to Be Delivered at Closing

Factors That Influence Value

External Factors:

- Opportunities for the Buyer, (i.e. "Synergies")
 - Revenue Growth from Existing Clients
 - New Marketing
 - New Services and Offerings
 - Subsequent "Fold-In" Acquisitions
- Timing - Seller's Market



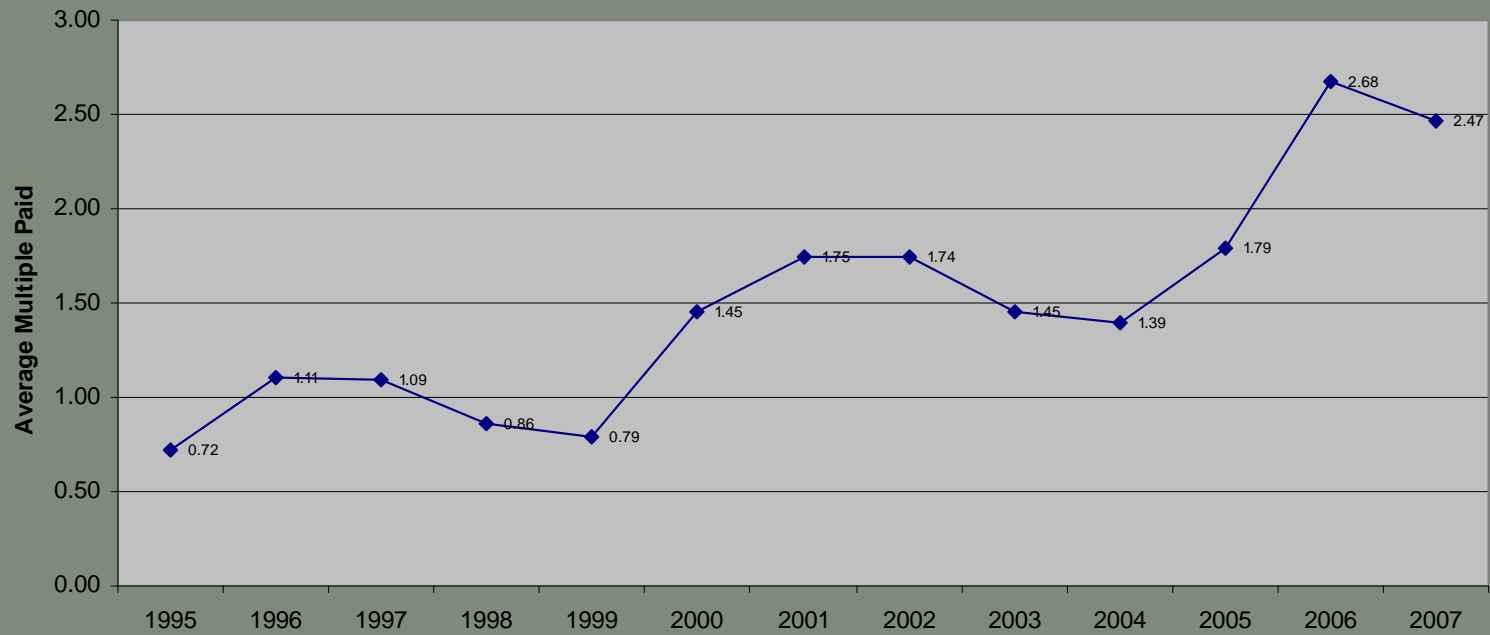
How National Labs Justify Their Valuations

How National Labs Justify Their Valuations

- An intelligent buyer will make an acquisition only if it adds to the value of the acquiring company. Such acquisitions are said to be “**accretive.**”
- Lab buyers can afford to pay *more* for an acquisition as the relative value of their own company *increases*.
- A direct relationship between laboratory acquisition valuations and publicly traded laboratory valuations has been clearly exhibited over the past 20+ years that Haverford has been following the lab industry.

Acquisition Trends

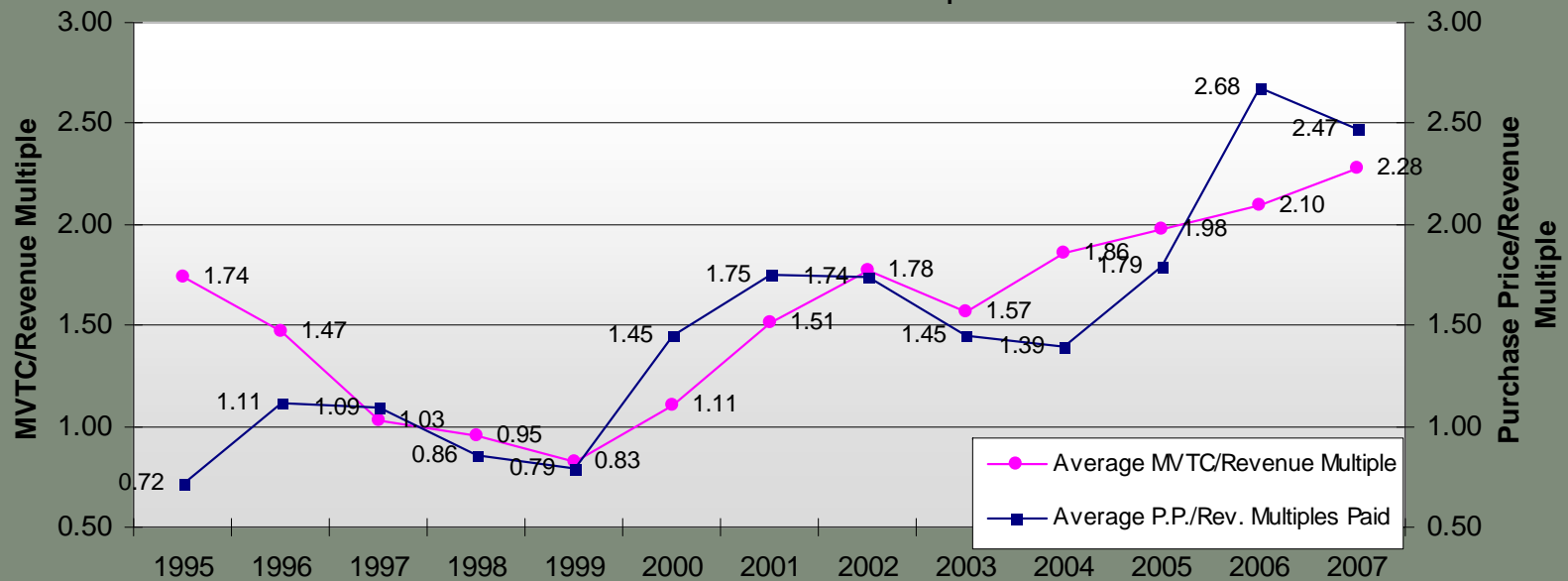
Average Purchase Price to Revenue Multiples Paid



How National Labs Justify Their Valuations

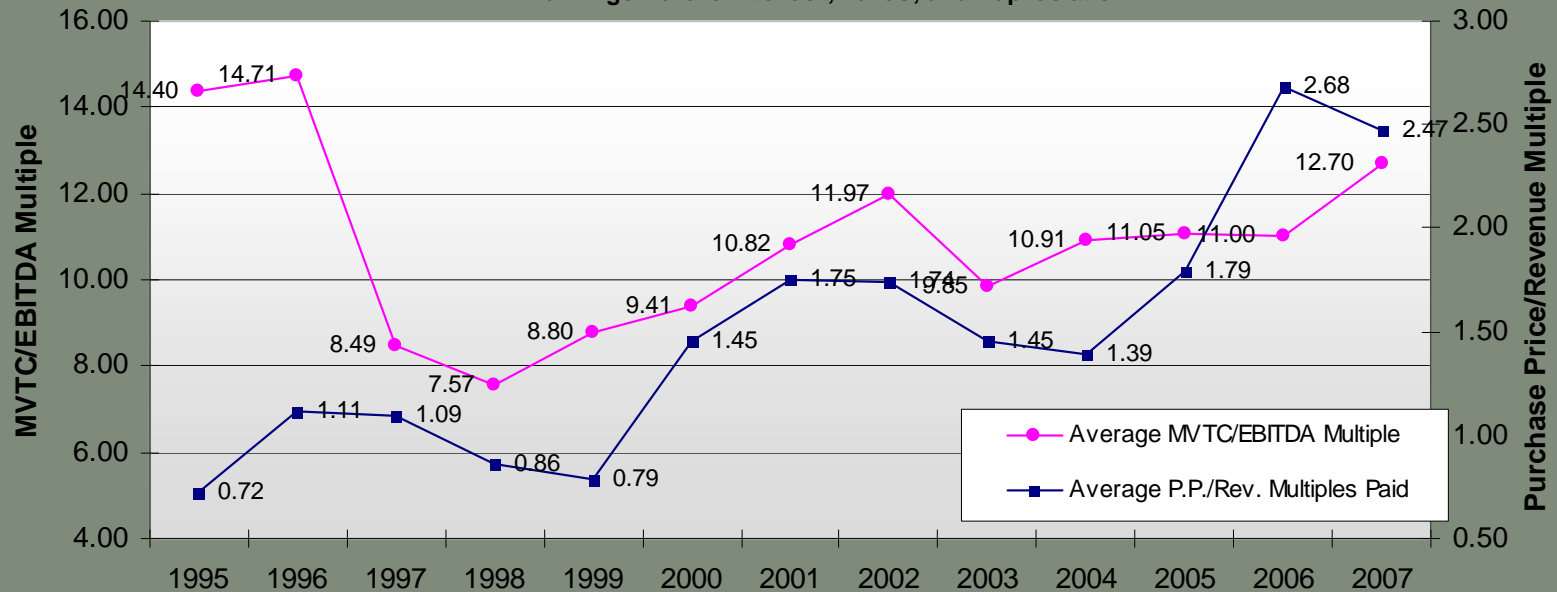
National Commercial Laboratory Companies
Average MVTC/Revenue Multiples vs. Purchase Price/Revenue Multiples

MVTC = Market Value of Total Capital



How National Labs Justify Their Valuations

National Commercial Laboratory Companies
Average MVTC/EBITDA Multiples vs. Purchase Price/Revenue Multiples
 EBITDA = Earnings Before Interest, Taxes, and Depreciation



How National Labs Justify Their Valuations

- How can the same laboratory business be worth more today than it was a year ago?
- It depends upon how badly the buyer wants to do the deal.
- Before completing a major transaction, a public company requires the approval of its Board of Directors. Frequently, the Board will seek the advice of an investment banking firm to confirm the reasonability of the terms of the transaction.
- In order to justify the purchase price paid in certain transactions, buyers and their investment bankers will take into account the **synergies**, or cash flow enhancing benefits, that will *potentially* result to the buyer post-transaction.

How National Labs Justify Their Valuations

Case Study: Quest Diagnostics acquires AmeriPath, Inc.

Key Transaction Facts:

Closing Date	May 31, 2007
Purchase Price	\$2 billion (approx.) including \$770 million in assumed debt
AmeriPath's Data	Net Revenue: \$760 million EBITDA: \$114.8 million
Multiples Paid by Quest	17.4x AmeriPath's 2006 EBITDA 2.63x AmeriPath's 2006 Net Revenue
Quest's Multiples	8.6x Quest's 2006 EBITDA 1.8x Quest's 2006 Net Revenue

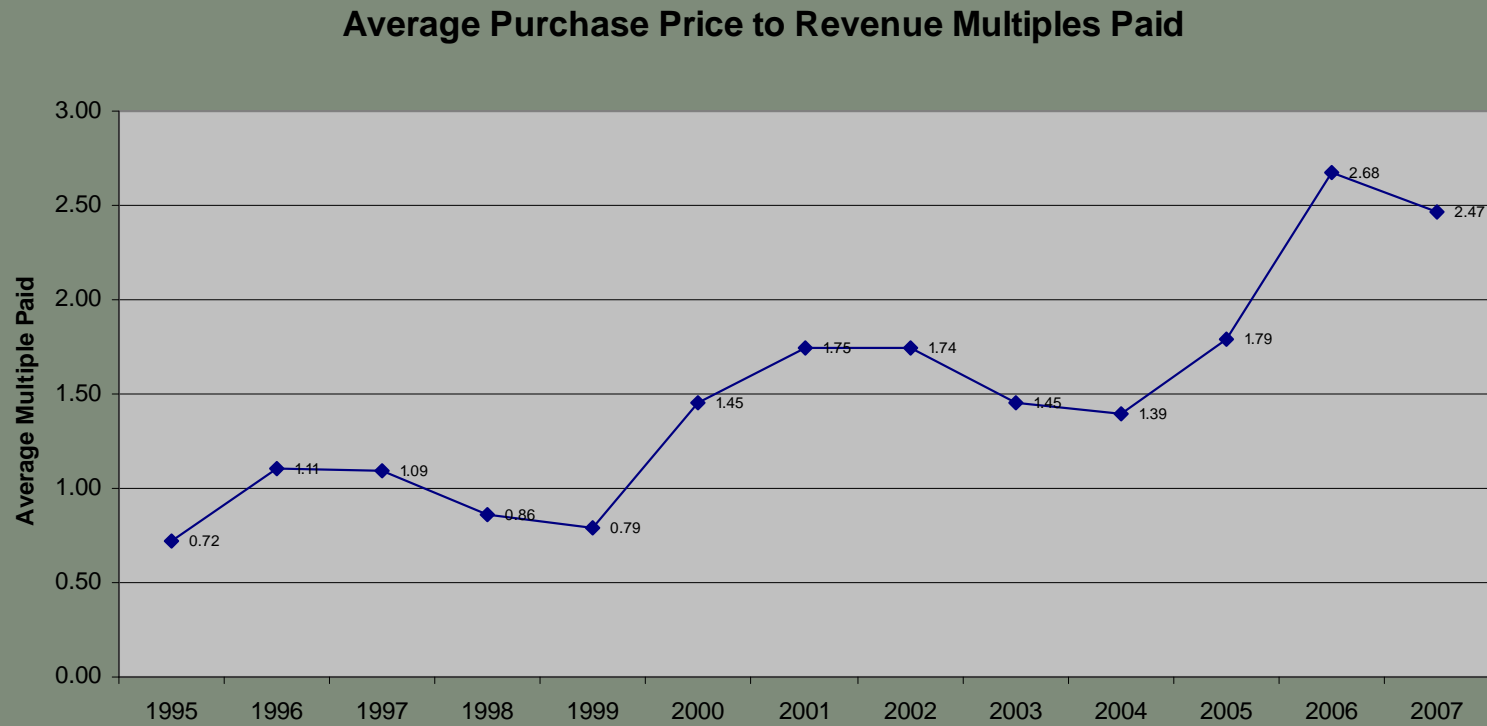
How National Labs Justify Their Valuations

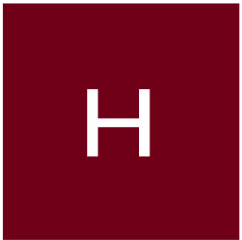
- In a presentation at the Lehman Brothers Global Healthcare conference on March 19, 2008, Quest Diagnostics' management listed the integration of AmeriPath as one of a handful of top areas of focus for 2008 / 2009.
- Another stated top area of focus was the company-wide reduction of costs by \$500 million.
- If Quest streamlines AmeriPath's operations, the cost savings should generate incremental EBITDA for Quest.
- If one were to consider Quest's projected synergies from the AmeriPath transaction, the effective valuation multiple paid for AmeriPath would be lower.



Where Are Lab Valuations Heading?

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Haverford Healthcare Advisors

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