



2009 ASA St. Louis Chapter Valuation Symposium



American Society of Appraisers

2009 ASA St. Louis Chapter Valuation Symposium

A Primer for Research Methods for Valuation Projects

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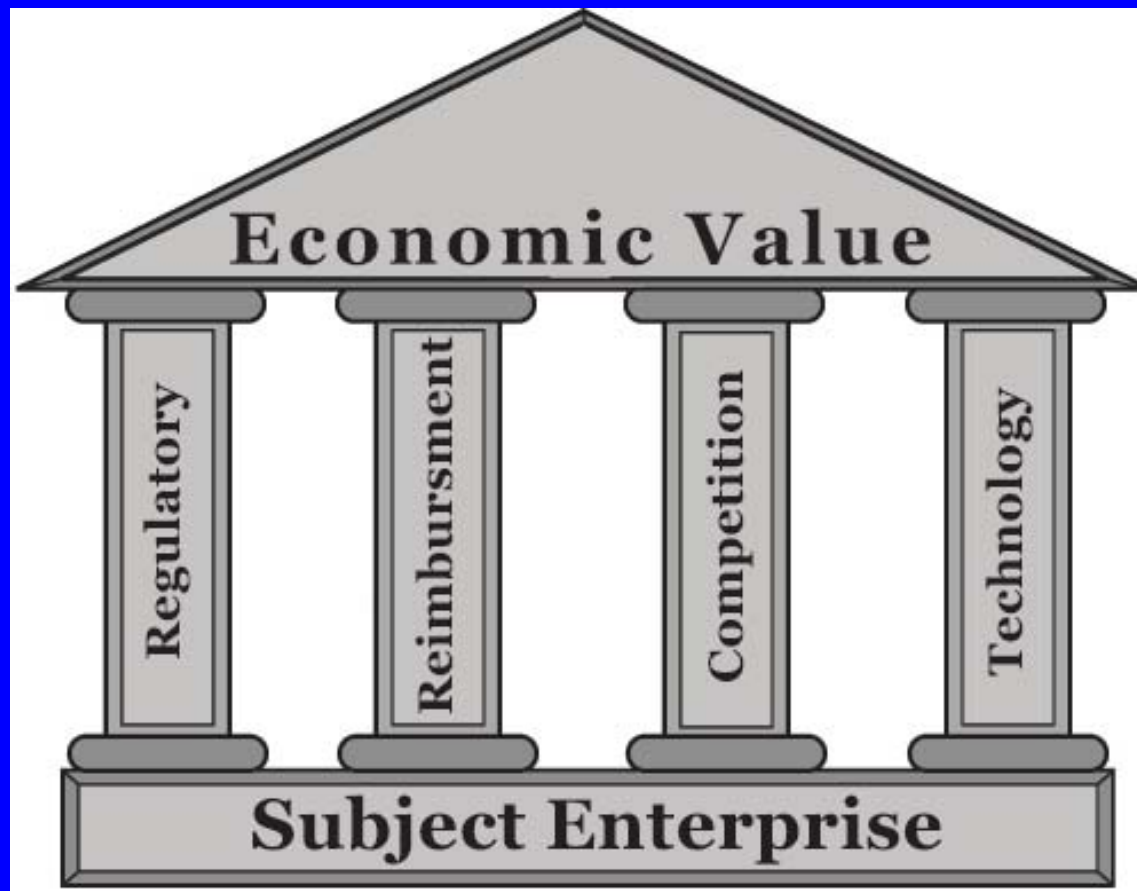
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I INTRODUCTION TO RESEARCH THEORY

I.A *The Four Pillars: A Framework for Industry Research*





I INTRODUCTION TO RESEARCH THEORY

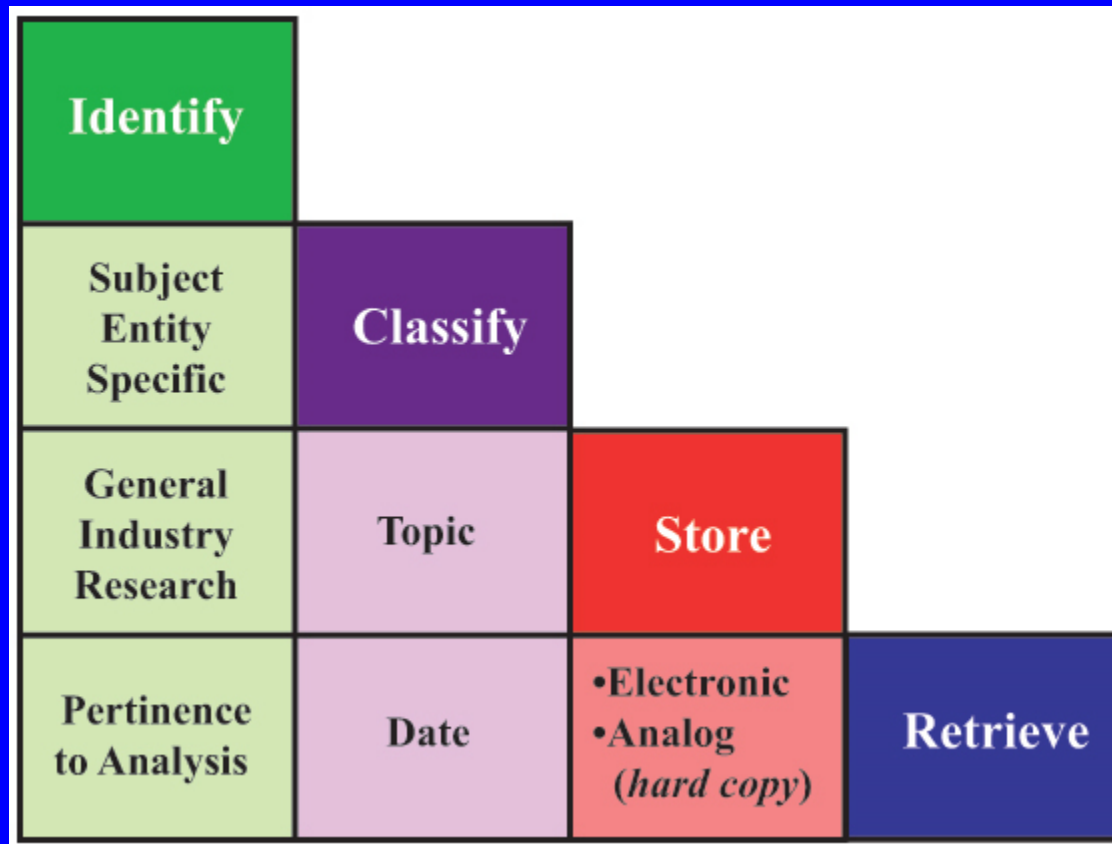
I.B Types of Research and Their Organization

	Specific Research (Archives Department)		General Research (Library and Research Dept.)
Engagement:	Valuation Consulting	Litigation Support	Valuation Consulting or Litigation Support
Research Request Form:	Documents and Materials Request	Request for Production of Documents	Request for Library Materials
Research Survey:	Medical Practice Worksheet	Deposition	Library Research / Resources Request (Short Form)
Research Interview Questionnaire:	Site Visit Workbook	Interrogatories	Detailed Library Research / Resources Request (Long Form)
Filing or Shelving Arrangement:	By date or project, with possible subdivision by type.	By case, date, or project with possible subdivision by type.	By media, then by title for periodicals, author for conference proceedings, and by subject category for books, annuals, and most others.
Database Fields:	Project type, date, contacts, company, file location, etc.	Project, case, date, contacts, company, file location, etc.	Author, title, edition, series, publisher, date, description, subject terms and classification, holdings, notes, and administrative fields.
Records Retention Period:	As required by law, or for internal use.	As required by law, or for internal use.	Until superseded or no longer current. Some materials held for historical reference.



I INTRODUCTION TO RESEARCH THEORY
I.B Types of Research and Their Organization

I • C • S • R





I INTRODUCTION TO RESEARCH THEORY

I.C Historical Trends

Daubert v. Merrell Dow Pharmaceuticals, Inc

- Expert testimony must be deemed by the courts to be scientifically valid utilizing generally accepted sources of data

Kuhmo Tire

- Expanded criteria set forth in *Daubert* to non-scientific testimony, i.e. financial economics/analysis

IRS:

- Set forth federal regulations to monitor valuation practices
- Provides sanctions for failure to comply (e.g., censure, suspension, disbarment from profession)



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.A Use of Multiple Sources

II.B Specific Research

II.C General Research

II.D General Research Related to Business Enterprise Valuation

II.E General Research Related to Real Estate Valuation

II.F General Research Related to Machinery & Equipment Valuation

II.G General Research Related to Artwork Valuation



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.A Use of Multiple Sources

Books & Monographs

Associations & Conferences

Government Agencies

Online Databases

Periodicals

Proprietary Data Aggregators

The Expanding Universe of Information



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.A Use of Multiple Sources

Typical Aggregators of Data

1. Associations and Conferences
2. Government Agencies
3. Proprietary Data Aggregators
4. Books and Monographs
5. Periodicals
6. Online Databases



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.A Use of Multiple Sources

- The *Source* of the research will depend on what *Type* of research is needed:
 - **General** – gathered to provide a basis for evaluating specific research
 - **Specific** – concerns only information specific to the subject entity or property



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.B Specific Research

- The valuator must know what specific information is required for each type of engagement and how this data will be compared to the general industry research gathered.
- Two (2) main types of **Specific** Research :
 - Documents related to the subject entity or property
 - Subject entity Site Visit/Management Interviews
 - Subject property inspection



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.B.1 Specific Research Related to Business Enterprise Valuation

- Subject entity documents include:
 1. Historical Financial Statements – important for identifying key variables and trends for analysis
 2. Tax Returns – obtained to understand entity's tax position and to obtain additional financial data
 3. Forecasts and Proformas – provides opinion of entity's earnings potential and historical ability to meet projections
 4. Legal Documents – reviewed to determine if contractual arrangements affect the entity's operations and overall value



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.B.1 Specific Research Related to Business Enterprise Valuation

- Subject entity documents include:
 5. Information regarding Operations and Staff – used to gain understanding of the entity’s operations and key personnel
 - Can be accomplished by touring the facilities, interviewing key managers, and obtaining additional operational data
 - Increases awareness of operational data or contracts that may affect value
 6. Capital Structure – classes of equity, e.g., preferred or common; if debt from affiliates, adjustments may be required to the economic value of the subject entity



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.B.1 Specific Research Related to Business Enterprise Valuation

- Information to be collected at the site visit or through interviews:
 - *Background Information*
 - *Building Description*
 - *Office Description*
 - *Management Information Systems*
 - *History of Entity*
 - *Staff Description*
 - *Competitive Analysis*
 - *Client Base Information*
 - *Reimbursement Environment*
 - *Privileges and Facilities*
 - *Credit Policy and Collections*
 - *Financial Management*
 - *Operational Assessment*
 - *Summary*



II SOURCES OF VALUATION & INDUSTRY RESEARCH

II.C General Research

Research Challenges

- Determining survey definitions, questions, sample sizes, survey methods, and other criteria to allow for evaluation of the quality and applicability of the data
- Obtaining sufficient data to provide representative sample sizes
- Researching survey data for that is comparable when data is divided by SIC Codes
- Locating robust research support on time and within budget for the engagement



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.1 Porter's Five Forces of Competition

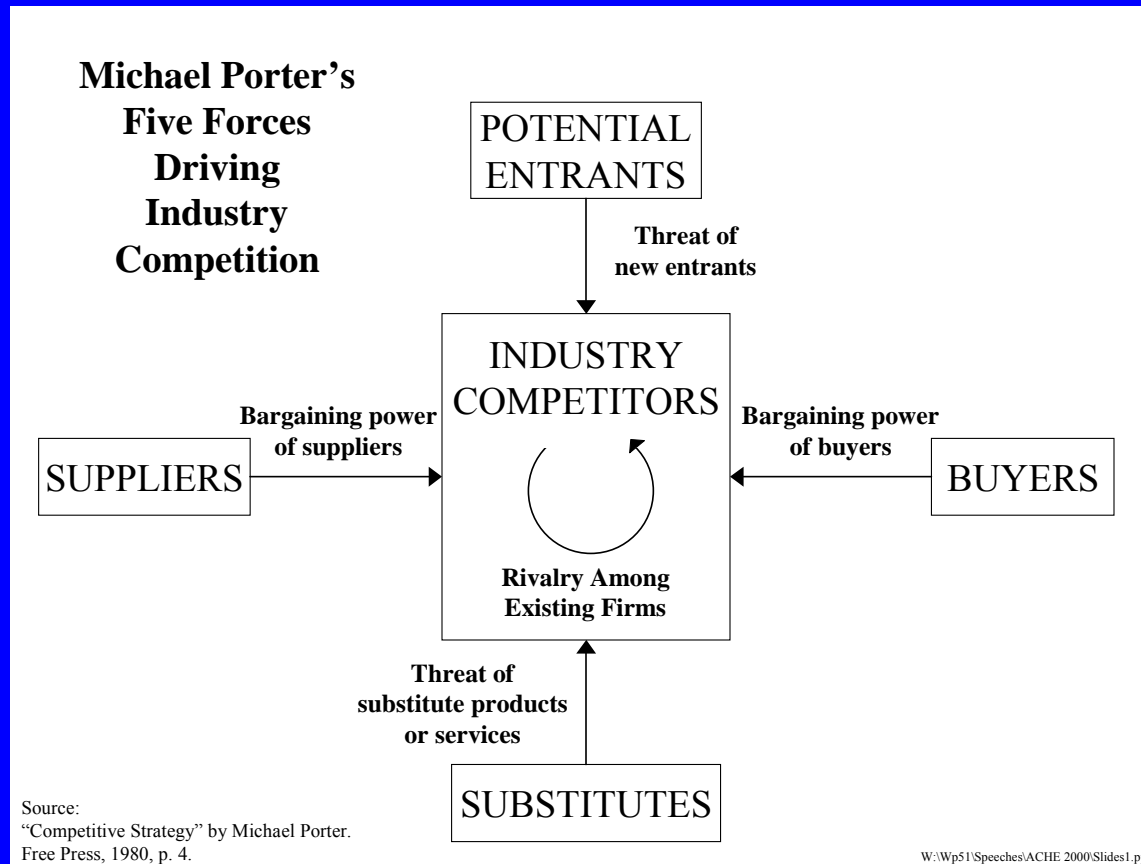
- **Threat of New Market Entrants:** The risk of a similar company entering your marketplace and winning business
- **The Bargaining Power of Suppliers:** A supplier can be defined as any business relationship you rely on to deliver your product, service, or outcome
- **Threats from Substitute Products or Services:** Substitute products or services are those which are sufficiently equivalent in function or utility to offer consumers an alternate choice of product or service.
- **The Bargaining Power of Buyers:** The degree of negotiating leverage of an industry's buyers or customers
- **Rivalry Amongst Existing Firms:** Ongoing competition between existing firms without consideration of the other competitive forces which define industries



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.1 Porter's Five Forces of Competition





II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.2 Demographics

- Population demographics of the market service area in which an entity operates and from which it draws its clients/customers are linked with its current and potential client base and earnings
- High population growth and turnover rates generally lower the value of existing enterprises with established client/customer bases
- A stable or decreasing population with little turnover would therefore generally increase the value of an existing enterprise



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.2 Demographics

- U.S. Department of Commerce's Bureau of the Census is the largest source of demographic data
- Local chambers of commerce are another potential source of information for local areas
- Many organizations aggregate and analyze demographic data for reporting and resale, i.e. Claritas



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.2 Demographics

Research Challenges

- Locating specific utilization demand data divided by demographic variables such as age and sex
- Projecting accurate population growth by demographic criteria within a geographic service area



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.3 Economic Trends

- Information on national and local economies is needed to determine local economic trends and place them in a national perspective
- Basic economic data such as unemployment, inflation, new housing starts, and household income should be available for most metropolitan areas, e.g.,
 - *U.S. Bureau of Labor Statistics*
 - *U.S. Bureau of Economic Analysis*
 - *Claritas*
 - *Business Valuation Resources*
 - *Key Value Data*
 - *Mercer Capital*



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.3 Economic Trends

Research Challenges

- Correlating economic income levels with demand for a specific entity/service
- Translating national economic trends to the local geographic service area
- Translating economic conditions to their impact on the subject entity's business



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.4 Direct Market Comparable Transactions

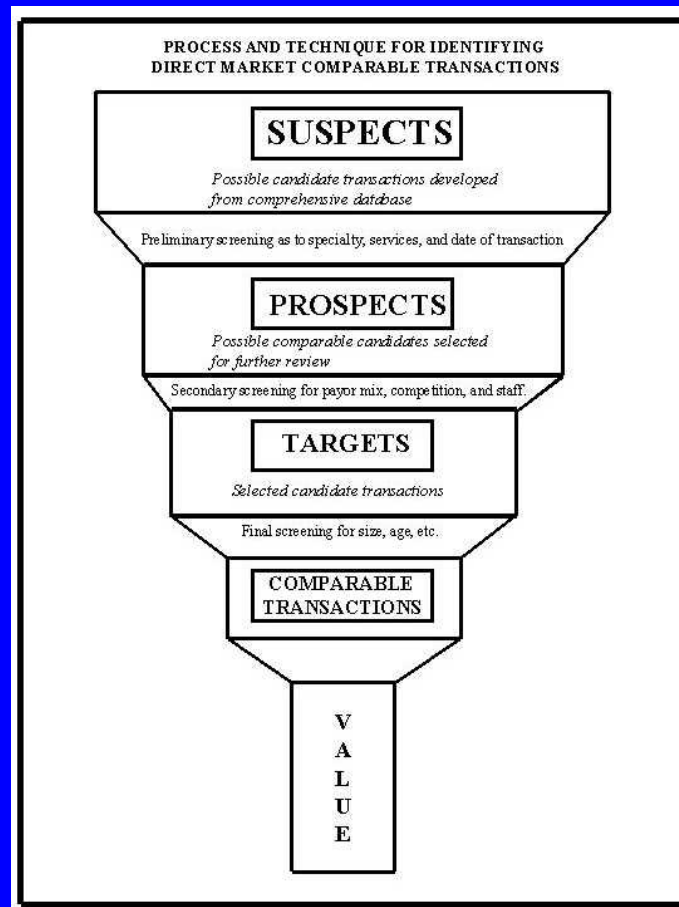
- Analyzes the terms (price, terms, interest, assets included, etc.) of specific transactions involving the acquisition of substantial, control positions (most often the entirety) of similar entities
 - Resources include:
 - *Irving Levin*
 - *Business Valuation Resources (Pratt Stats & Biz Comps)*
 - *Done Deals*
 - *Thomson SEC Platinum Financial*



II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.4 Direct Market Comparable Transactions





II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.4 Direct Market Comparable Transactions

Restrictions of the Comparable Market Transaction Approach

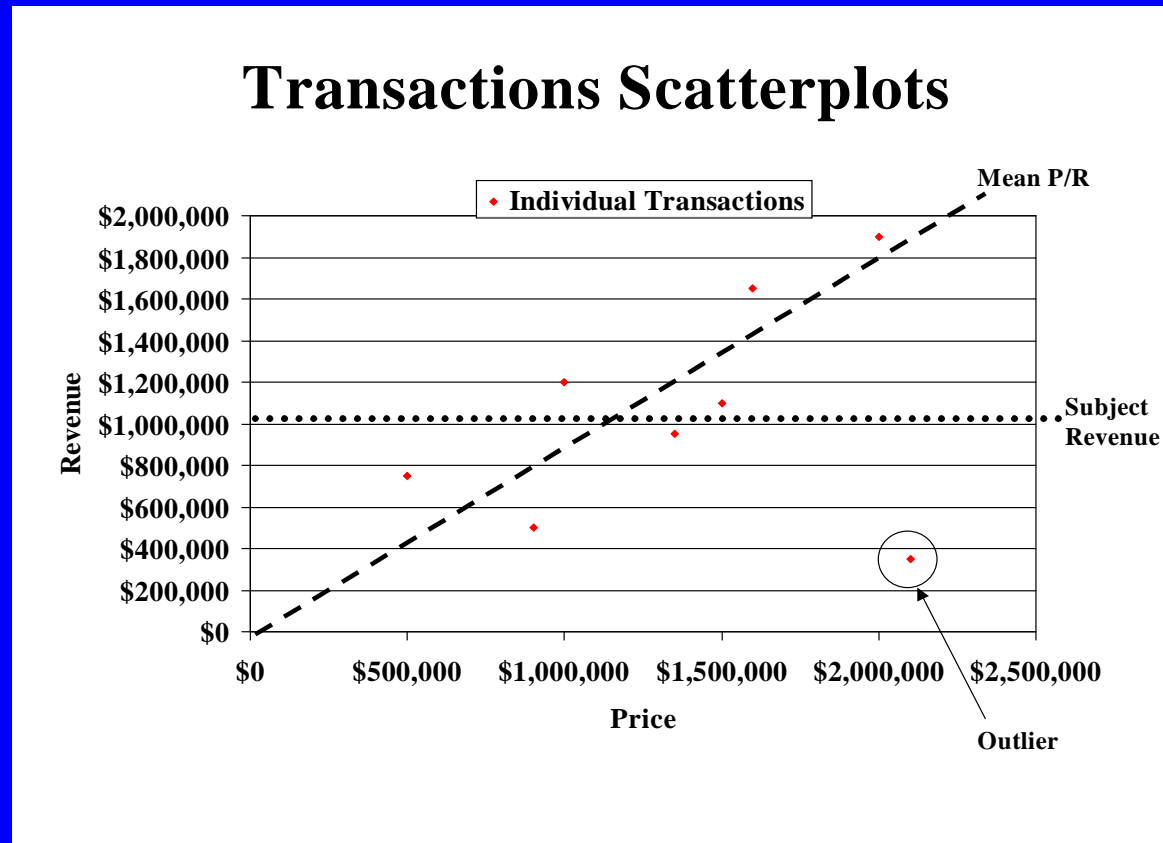
- Guideline companies may not be fully identical to the subject entity
- There may be transaction ratios varying significantly from the norm (“outliers”) that must be evaluated as potentially misrepresentative transactions
- May be difficult to determine the degree of comparability necessary to assure that the financial ratios derived from the transactions examined are predictive of value for the subject entity
- Skewness of reported transactional data due to inherent limitations in individual databases



II SOURCES OF INDUSTRY RESEARCH

II.C General Research – Direct Market Comparable Transactions

II.C.4 Direct Market Comparable Transactions





II SOURCES OF INDUSTRY RESEARCH

II.C General Research

II.C.4 Direct Market Comparable Transactions

Research Challenges

- Researching sufficient details on both transactions and their target companies to ensure that they are arm's length and truly comparable to the subject entity.
- Determining the cause of outliers
- Finding a sufficient sample size of recent, comparable transactions in the same subject industry and geographic region



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.1 Guideline Publicly Traded Companies

- Based on theory that an indication of value of the subject entity can be derived through the valuation multiples of the freely traded, minority interest registered shares of publicly traded companies
- Investment services' directories and databases that allow searching by an industry code or descriptor may be useful in identifying potentially comparable guideline publicly traded companies
- If a sufficient number of guideline companies in the same industry as the subject entity are identified, collect data on these companies via the company's **Securities and Exchange Commission (SEC)** reports



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.1 Guideline Publicly Traded Companies

- **Ibbotson's Cost of Capital Center** includes data and downloadable statistics on publicly traded companies for purchase.
- **The Federal Reserve Banking System** collects and publishes a wide variety of economic data including rates of return on securities, of use to analysts. Much of this data is also available through the **Federal Reserve Economic Data (FRED)** electronic bulletin board website.
- The **SEC's** Internet online **EDGAR** service is a source of 10Ks and other company reports which must now be filed electronically.
- Historical stock prices may be obtained through a number of Internet investment service sites including **10K Wizard, Morningstar**



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.1 Guideline Publicly Traded Companies

Research Challenges

- Obtaining data on a sufficient sample size of comparable companies to the subject entity
- Assessing the comparability of the mix of services provided by the public companies as compared with the subject entity



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.2 Control Premium

- *An increase in the pro rata share of the value of the business that reflects the impact on value inherent in the management and financial power that can be exercised by the holders of a control interest of the business, usually the majority holders*
- Two sources that attempt to quantify control premiums are often considered in valuations:
 1. *Mergerstat Review*
 2. *Control Premium Study*
- Consider specific conditions and factors related to the subject entity and the typical mix of the type of buyer in the universe of hypothetical purchasers for entities similar to the subject entity in determining relevance of sources



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.2 Control Premium

Research Challenges

- Evaluating the applicability of data from the various available surveys to the subject entity or property
- Establishing a point in the range of reported data at which to place the subject entity or property



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.3 Discount for Lack of Marketability

A discount that may be applicable to the value of a closely held company due to the inherent illiquidity of the investment

Several empirical studies have been performed in an attempt to quantify a DLOM:

- *Restricted stock studies*
- *Pre-IPO Studies*
- *Mergerstat Review Study*
- *eQuantifiable Market Discount Method (QMDM)*



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.3 Discount for Lack of Marketability

Research Challenges

- Evaluate the applicability of data from the various available surveys to the subject entity
- Obtaining data related to Discounts for Lack of Marketability in small, closely-held businesses



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.4 Assessment of Risk

- Must develop the appropriate risk adjustment to required rates of return
- Considerations in developing discount rate:
 - Investors have alternative investments available – compare to rates of returns on other investments
 - High risk factors have greater than average change of negatively affecting earning power (and vice versa)
 - Higher risk investments should require a higher rate of return
 - Each individual's risk tolerance varies - often based on subjective judgment of valuator



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.4 Assessment of Risk

Research Challenges

- Researching and evaluating the different types of competitive threats to the subject entity
- Evaluating potential future changes in reimbursement methods and levels
- Weighing the risk from current regulations as well as potential regulatory changes



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.5 Comparative Financial Data

- Can obtain information to compare subject entity's financial statements with industry averages from a variety of industry studies (e.g., "RMA Annual Statement Studies")

Research Challenges

- Identifying benchmarking surveys for the specific industry being valued
- Determining benchmarking survey methods to allow for evaluation of the quality and applicability of data



II SOURCES OF INDUSTRY RESEARCH

II.D General Research Related to Business Enterprise Valuation

II.D.6 Return on Investment – Discount Rate/Cost of Equity

Research Challenges

- Finding research to support the quantification of subject entity risk premiums
- Obtaining size premium data for small companies



II SOURCES OF INDUSTRY RESEARCH

II.E General Research Related to Real Estate Valuation

Trade Associations Related to the Valuation of Real Estate

- The Appraisal Institute – Founded 1932
- National Association of Master Appraisers – Founded in 1982
- National Association of Real Estate Appraisers – Founded 1966

Industry Newsletters and Reports Related to Real Estate Valuation

- Valuation Review – 24 times per year
- Realty Times Newsletter – daily
- Real Estate Appraisal Industry Research in the U.S. – annual
- October Research National Appraisal Survey, A Snapshot of the Real Estate Valuation Industry – 3 volume release



II SOURCES OF INDUSTRY RESEARCH

II.F General Research Related to Machinery & Equipment Valuation

Trade Associations Related to the Valuation of Machinery & Equipment

- *The Association of Machinery & Equipment Appraiser* – Founded 193
- *Machinery Dealers National Association (MDNA)* – Founded in 1941



II SOURCES OF INDUSTRY RESEARCH

II.G General Research Related to Artwork Valuation

Industry websites providing catalogues, indexes and databases related to artwork valuation

- **National Gallery of Art** - www.nga.gov
 - 2,400 periodical titles (900 are current)
 - subscribes to all categories of auction catalogues from all major American and European auction houses
- **Art Dealers Association of America** – www.artdealers.org
 - Expert art historians who possess in-depth knowledge of the art market and extensive experience valuing works of art.
- **Art Sales Index** – www.artsalesindex.artinfo.com/artsalesindex/asi



III USEFULNESS OF BENCHMARKING

III.A Benchmarking Process

Financial Benchmarking

- An established and long accepted process of financial analysis
- Assist valuers in developing a comprehensive understanding of the operating performance and financial status of the subject entity
- Steps in a successful financial benchmarking analysis process include:
 - *Historical Subject Benchmarking*
 - *Benchmarking to Industry Norms*
 - *Financial Ratio Analysis*



III FINANCIAL BENCHMARKING

III.A Benchmarking Process

III.A.1 Benchmarking Subject Entity Data Against the Industry

- The comparison or benchmarking of subject entity financial data against industry averages and norms typically includes the following steps:
 - Selection of appropriate surveys to use as a benchmark
 - If required, re-categorization and alignment of the subject entity's revenue and expense accounts to the selected survey's structure and definitions
 - Calculation and expression of variances from the industry averages and norms, in terms of either variance in ratio or dollar unit amounts and percentages of variation



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FINANCIAL BENCHMARKING

Benchmarking Process

1.1 Benchmarking Subject Entity Data Against the Industry

Benchmarking the subject entity financial data against industry norms can be done in two (2) forms

Financial Ratio Analysis

Operational Performance Benchmarking



USEFULNESS OF BENCHMARKING

A Benchmarking Process

A.2 Usefulness of Benchmarking in the Valuation Engagement

Common Methods of Applying the Results of Benchmarking Analysis

- Adjustment of operating expense and capital items as well as capital structure to industry norms (when valuing control position).
- Adjustment to the indication of a discount rate or cost of equity as derived from the market (Subject Entity Specific Risk Premium)
- Selection of the appropriate financial multiples or ratios (e.g., price/earnings, price/revenue, price/EBIDTA, etc.)
- Selection of the appropriate discounts and premiums, based on the level of value sought (e.g., discount for lack of marketability, control premium, minority discount, etc.)



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CONCLUSIONS

No longer can valuers support their valuation opinion by means of an “*ipse dixit*” (it is, because I say it is) argument

Research provides the foundation for valuation within the framework of the “*Four Pillars*”

Although the valuator need not conduct this research himself, it is the ability to *understand* and *manipulate* the research gathered that can put him ahead of his competitors

General and *Specific Research* must be at the forefront of every valuation engagement in order to produce a credible valuation, as well as to protect the client and the appraiser from legal liability