
The Transaction Method: Uses and Abuses of Market Data

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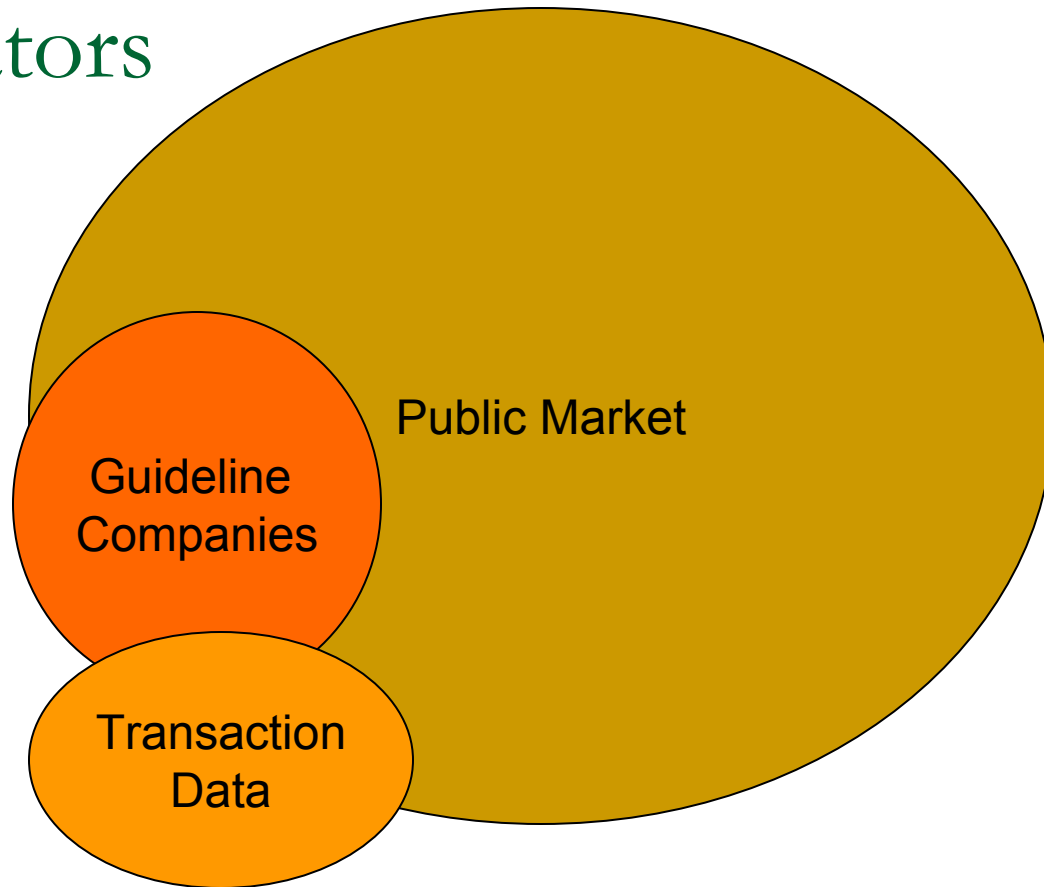


The numbers don't lie
...we tell their story.

Agenda—a bit of a hodgepodge:

- A few general concepts
- Database basics, and not-so-basic
- Potential Pitfalls
- Various and sundry application issues
- Assorted studies
- Database application issues

Starting with a few General Concepts: Transaction data in context of other market indicators



Transaction data theoretically requires fewer adjustments than public data, but consider:

- The quality and integrity of the data *reported to* the databases
 - Screening and refining for consistency
 - Tolerances for transactions included
 - Manner of collection
 - Amount of data collected
 - Size of transactions included
- The *uniformity of the reporting* by the various databases.
as in...almost none

Where the Pitfalls Arise

- ✓ Theory: **Prices of similar companies** that have sold in the marketplace can provide reasonable **approximation of the value** of our subject company.
- ✓ Disputes over key terms:
 - What assets and liabilities are included in *Price*
 - How denominator calculated (*revenue, earnings, assets*)
 - What determines *similar companies*
 - How to apply *prices of similar companies* to measure *value*

The databases all define these terms differently

Advantages & Disadvantages

Advantages:

- Availability of transaction data has increased
- Value based on actual sales
- Easily understood
- Math is simple

Disadvantages:

- Deceptively easy
- Mistakes are common, implications can be significant and costly

Database Basics

Tens of thousands of transactions

- ✓ Pratt's Stats
- ✓ BIZCOMPS
- ✓ Done Deals
- ✓ Mergerstat M&A Database

The Databases: where does the data come from and how is it collected? *It matters*

	<u>Pratt's Stats</u>	<u>BizComps</u>	<u>Done Deals</u>	<u>Mergerstat</u>
# Transactions	Around 12K	Around 10K	Around 7K	Thousands
Since...	15 yrs	15 yrs	?	1992
Size	large and small, public and private	generally small	Middle market (\$1m-\$250m deal size)	Mid to large (> \$1M deal size)
Data points	Allows substantive comparison	Few; little comparative data available	Allows modest comparison	Unlimited combinations; allows substantive comparison when data available

Premise for use of database

- **Transaction by Transaction Analysis**—Pratt's Stats, Done Deals, Mergerstat

- **Total Market Theory**—Pratt's smaller market, BIZCOMPS, IBA

Pratt's Stats - Gathering data

- Private—obtain from brokers
 - Go to brokers offices and obtain
 - Have 50-75% of financial statements on private deals
- Public
 - Search buyer 8-K's as they come out
 - Link directly to buyer public filings, provide date of 8-K or 8-K/A from which data obtained

Pratt's Stats - Price

- Price reported is Market Value of Invested Capital (MVIC) – total consideration paid, including cash, notes and/or securities used as payment, plus interest-bearing debt assumed
 - ❑ Includes non-compete value
 - ❑ Excludes real estate, earnouts, employment/consulting agreements
 - ❑ **Could be any mix of assets and liabilities, and could be different for every deal**

Pratt's Stats – How to Find Out What Transferred

- ✓ Look at “Asset Data” and “Additional Notes” fields of Transaction Report and/or SEC filings for purchase price allocation
- ✓ Upon application of multiple, all of subject company's assets and liabilities not included in deal get added (or subtracted) from product of multiple

Pratt's Stats - Asset Data

- “Purchase price Allocation agreed upon by Buyer and Seller”—**usually means stated at FMV**
- “Latest Reported”—**at BOOK**
- Note if real estate is listed
- Note if liabilities are listed

Compare assets listed as acquired to purchase price
For example, one transaction listed price of
\$958,000, but assets acquired of \$2.2 million (and no
liabilities assumed) (??)

Pratt's Stats - Asset Data

- In addition to possibly providing details of what was acquired:
 - Gives insight into comparability of guideline company to subject company
 - Allows creation of *meaningful* asset multiples in some industries (have to segregate between “book value” and “purchase price allocation”—but can be worth it)
 - This can be a pretty “grounding” exercise for some valuations of industries that are asset-intensive, but may have service-type companies mixed in the same SIC

Done Deals – Gathering Data

- ✓ Most data from SEC reports
- ✓ This is great! Because it means we can find most of their transactions.
 - ✓ 80% are acquisitions of private companies
 - ✓ 8% are acquisitions of public companies
 - ✓ 12% are acquisitions of subsidiaries of public companies

Done Deals - Price

- ✓ For Stock sales (~75% of deals) price says it is an equity price *but many are really MVIC prices.*
- ✓ For Asset sales (~ 25% of deals) price is a deal (MVIC) price.
- ✓ Where no debt is assumed, deal price = equity price (*so then you know its an MVIC price – deduct debt of your subject!*)

Done Deals – How to Find Out What Transferred

- Like Pratt, could be any mix of assets and liabilities, and could be different for every deal
- Terms” field lists value of liabilities assumed by buyer, when known
- Search buyer SEC filings
- Upon application of multiple, all of subject company’s assets and liabilities not included in deal get added (or subtracted) from product of multiple

Done Deals – Revenue and Earnings Definitions

- ✓ All revenue and earnings figures from most recent account period (occasionally this is full 12-month period); annualized data provided
- ✓ “Net Income” generally after-tax
 - ✓ *Unless pass-through entity, then net income is before tax—so the data is a mix of both*
- ✓ “Cash flow” is defined as:
 - ✓ Net income after tax, plus depreciation & amortization, plus changes in working capital
 - ✓ Does not include cash flow changes from investments of financing, such as dividends or capital expenditures

Mergerstat—Gathering Data

- Data gathered from SEC filings
- Typically from 8K-A's

Mergerstat - Price

- ✓ All transactions said to be stock sales, but again--cannot assume that debt transferred – need to look at “liabilities assumed” and “synopsis” fields
- ✓ In fact, some are asset deals—see “synopsis” field to identify them
- ✓ **Base Equity Price** (or “Deal Size”) – the price paid for the equity of the acquired company

Plus Liabilities Assumed = **Total Invested Capital**

Less Cash = **Enterprise Value**

If no liabilities assumed, base equity price and invested capital will be the same

Mergerstat - Example

- Hights Cross Communications buys Buckle Down Publishing (\$mm):
 - Deal Size (Base Equity Price): \$27.5
 - Liabilities Assumed: \$0
 - Total Invested Capital \$27.5
 - Consideration is \$24.0m in cash and \$3.5m in preferred stock
 - Equity Price/Revenue = 2.57
 - Invested Capital/Revenue = 2.57
- You must deduct debt of your company from both

Mergerstat - Example

- AOL Buys Time Warner (\$mm):
 - Deal Size (Base Equity Price): \$101,002.50
 - Liabilities Assumed: \$17,800.00
 - Total Invested Capital \$118,802.50
 - *Consideration included \$101 billion in stock and \$17.8 billion in debt.
 - Equity Price/Revenue = 6.70
 - Invested Capital/Revenue = 7.88 (PLUS DEBT)
 - Enterprise Value/Revenue = 7.84 (MINUS CASH)

Mergerstat - Example

Difference between multiples:	Equity Value	Enterprise Value	Invested Capital
Revenue	\$15,000	\$15,000	\$15,000
Multiple	<u>6.70</u>	<u>7.84</u>	<u>7.88</u>
Value Indication	\$100,500	\$117,600	\$118,200
Less Debt		<u>\$17,800</u>	<u>\$17,800</u>
Value Indication	\$100,500	\$99,800	\$100,400
Plus Cash:		<u>\$645</u>	
Value Indication	\$100,500	\$100,445	\$100,400

Mergerstat

- ✓ The deal price may include:
 - ✓ earn-outs,
 - ✓ warrants, options, and
 - ✓ other additional payments that are not cash equivalents.
- ✓ The database includes deals when announced, whether they are closed or not
 - ✓ *If multiple bids, Mergerstat only includes highest bid*
 - ✓ *...until the deal is closed*
 - ✓ *...so some of your transactions may be “announced, not closed”*

Mergerstat

- ✓ In addition, the database contains:
 - ✓ the cancel date (if applicable)
 - ✓ the close date (if applicable), and
 - ✓ the close price (which may be different from the initial offer price!)
- ✓ Bottom Line => You have to look at the data carefully to make sure you know what you are getting!

Mergerstat

- ✓ See “additional pricing details” which breaks down the deal into its various components
- ✓ You can also view information regarding transaction purpose:
 - ✓ financial acquisition
 - ✓ horizontal acquisition
 - ✓ vertical acquisition
 - ✓ *Therefore are sometimes able to identify synergistic premiums*
 - ✓ *How, exactly, would you use that?*
 - ✓ *See slides, at end of presentation....*

BIZCOMPS – General Application

- “Total Market Theory”
 - ✓ Data generally used “in total”—as general indication of the market
 - ✓ The more multiples the better, creating a statistically relevant sample

BIZCOMPS – Asset Sales

- ✓ Two elements contained in sale price:
 - ✓ Fixtures and equipment
 - ✓ Goodwill (intangible value)

“Cash, accounts receivable, loans receivable, and other assets are not included and all liabilities have been excluded.”

BIZCOMPS - Inventory

✓ BIZCOMPS User Guide:

*Inventory is NOT included in the price; it must
be added separately*

BIZCOMPS - Earnings Multiple

- ✓ Price to seller's discretionary earnings (SDE)
 - ✓ Earnings before interest, taxes, depreciation and amortization, and owner's compensation
 - ✓ “Generally, the highest paid partner's compensation is added back and the lesser paid partner's compensation is normalized. Typically, brokers who sell businesses try to indicate the highest earnings available to one working owner”

Usefulness of earnings multiple depends on quality of the earnings data reported.

BIZCOMPS – Non-compete and Consulting Agreements

- Non-Compete and Consulting Agreements are included in the sale price; if there was something negotiated on top of the sale price, it would not be included.

Rules of Thumb

- Tom West: The Business Reference Guide
- Multiples of revenue, earnings
- Price generally for fixed assets, goodwill, sometimes inventory
- Price does not include
 - Inventory – unless it states that it does
 - Real estate
 - Other balance sheet items, such as cash and AR
 - Liabilities
- Reasonableness check

Prior Transactions

- Don't forget to ask about them
 - Price paid for x% interest
 - Financial and legal information used to determine value - was it based on a Stock Purchase Agreement? At book value? At fair market value?
- Might include:
 - Past changes in control ownership
 - Past transactions of minority interests
 - Acquisition made by the subject company
 - Equity financing
- Must be arms-length to be useful in fair market value analysis

Potential Pitfalls

Equity versus Invested Capital

The source of our undoing...

- The databases often have prices that they call either stock (Done Deals or Mid Market Comps aka Done Deals) or equity (Mergerstat),
 - Or multiples that they call equity multiples
- But: **they are really invested capital**
- **IMPLICATIONS?**

- If it was *really an equity multiple*, **you would not subtract the debt** of the company you are valuing.
- If it is *really an invested capital multiple*, **you would subtract debt** of the company you are valuing.

Whether or not to subtract debt can (and usually does) make a material difference!

Start with how the databases calculate their multiples:

- **Multiple = Price/Parameter**
- **Equity Price** is defined as the owner's interest in property after deduction of all interest-bearing liabilities
 - It is the price paid for all assets and liabilities of the business, after deducting interest-bearing debt that was assumed in the deal
- **Invested Capital Price** is defined as the sum of equity and debt that was assumed in the deal (It can also include other forms of capital, such as preferred stock or other forms of equity or debt.)
 - It is the price paid for the assets of the business, and may include operating assets and liabilities (defined as net working capital.)

Invested Capital Price

- In order to be an invested capital price, **it need not be “plus debt.”** The important thing is that it is not *net of* debt.
 - Resist the urge to “subtract debt” that was not assumed in order to “re-create” an equity multiple on Pratt’s
 - Doing so creates a false “price” for the deal.

Market Value of Equity multiples

- Price/Earnings (net income **after interest** after tax)
- Price/Net Cash Flow (**after interest** after tax, cash flow adjustments including principal)
- Price/EBT (earnings **after interest** before taxes)

Price after debt deducted, **Earnings** after interest deducted

Market Value of Invested Capital (MVIC)

- MVIC/Sales
- MVIC/EBITDA (earnings **before interest** expense, income taxes, and non-cash charges)
- MVIC/EBIT (earnings **before interest** expense and income taxes)

Price before debt deducted, **earnings** before interest deducted

Note IBA and BIZCOMPS are always invested capital.

Mismatch in databases:

- Remember Equity = Price after debt, earnings after deduction of interest
- MVIC = Price before debt, earnings before interest deducted

MISMATCH:

- “Stock” (Done Deals) or “Equity” (Mergerstat) (price and multiples) = Price before debt deducted, earnings after interest deducted
 - Note that this occurs when (interest-bearing) debt is not assumed in a deal as a part of the purchase price

Calculation of Price/Sales Multiples

Where: $MVIC = \text{Equity Price} \div \text{Net Sales}$

Done Deals, and some Mergerstat

	<u>MVIC</u>	<u>Equity</u>
<u>Total deal price</u>	<u>6,675,807</u>	<u>6,675,807</u>
<u>Net Sales</u>	<u>7,596,518</u>	<u>7,596,518</u>
<u>Price/Sales</u>		

Calculation of Price/Sales Multiples

	<u>MVIC</u>	<u>Equity</u>
<u>Total deal price</u>	<u>6,675,807</u>	<u>6,675,807</u>
<u>Net Sales</u>	<u>7,596,518</u>	<u>7,596,518</u>
<u>Price/Sales</u>	<u>0.879</u>	<u>0.879</u>

Calculation of EBIT Multiple

	<u>MVIC</u>	<u>Equity</u>
<u>Total deal price</u>	<u>6,675,807</u>	<u>6,675,807</u>
<u>Net Sales</u>	<u>7,596,518</u>	<u>7,596,518</u>
<u>Price/Sales</u>	<u>0.879</u>	<u>0.879</u>
<u>EBIT</u>	<u>2,356,152</u>	
<u>Price/EBIT</u>	<u>2.833</u>	

Calculation of EBT Multiple

	<u>MVIC</u>	<u>Equity</u>
<u>Total deal price</u>	<u>6,675,807</u>	<u>6,675,807</u>
<u>Net Sales</u>	<u>7,596,518</u>	<u>7,596,518</u>
<u>Price/Sales</u>	<u>0.879</u>	<u>0.879</u>
<u>Interest Expense</u>		<u>107,282</u>
<u>EBIT/EBT</u>	<u>2,356,152</u>	<u>2,248,870</u>
<u>Price/EBIT/EBT</u>	<u>2.833</u>	<u>2.969</u>

Calculation of Pricing Multiples

	<u>MVIC</u>	<u>Equity</u>
<u>Total deal price</u>	<u>6,675,807</u>	<u>6,675,807</u>
<u>Net Sales</u>	<u>7,596,518</u>	<u>7,596,518</u>
<u>Price/Sales</u>	<u>0.879</u>	<u>0.879</u>
 <u>Interest Expense</u>		<u>107,282</u>
<u>EBIT/EBT</u>	<u>2,356,152</u>	<u>2,248,870</u>
<u>Price/EBIT/EBT</u>	<u>2.833</u>	<u>2.969</u>

EBT
includes carrying
cost of debt,
on debt
not assumed

Application of MVIC Pricing Multiple— Company w/ long term debt

	<u>MVIC</u>
EBIT	2,356,152
Multiple	<u>2.833</u>
Value indication	6,675,807
Less debt	<u>1,788,033</u>
Value of Equity	4,887,774

Application of EQUITY Pricing Multiples—Company w/ long term debt

	<u>MVIC</u>	<u>Equity</u>
EBIT/ EBT	2,356,152	2,248,870
Multiple	<u>2.833</u>	<u>2.969</u>
Value indication	6,675,807	6,675,807
Less debt	<u>1,788,033</u>	
Value of Equity	4,887,774	

Comparison of Pricing Multiple Results

	<u>MVIC</u>	<u>Equity</u>
EBIT/EBT	2,356,152	2,248,870
Multiple	<u>2.833</u>	<u>2.969</u>
Value indication	6,675,807	6,675,807
Less debt	<u>1,788,033</u>	
Value of Equity	4,887,774	

Unless you know EBT multiple can produce an MVIC price, you wouldn't know to subtract debt...

What do you look for?

- Equity and MVIC price are the same (cannot tell this on Done Deals, as they only give you one price)
- Liabilities are zero or n/a
- Why?
 - Because it indicates that debt was not assumed in the deal, but the denominator of the multiple has interest expense deducted as if it was.

The moral to the story

- **Don't use equity multiples**

Item	Pratt's Stats	Done Deals	Mergerstat
Seller SIC	2759	2759	2759
Sales	\$ 30,104,243	\$ 32,533,333	\$ 29,000,000
Sales as of	10/31/2005	Annualized (9 months)	LTM
Value Indication per database	Enterprise	Equity Which is it?	Enterprise
Price	9,444,000	7,000,000	\$ 7,000,000
Price Includes	\$7MM cash, \$2.444 LOC assumed	\$7MM cash	\$7MM cash
Price Excludes	\$4.85MM earnout	\$4.85MM earnout	\$4.85MM earnout
P/R Multiple	0.31	0.22	0.24
Subject Revenue	\$ 14,000,000	\$ 14,000,000	\$ 14,000,000
Value Indication	\$ 4,390,000	\$ 3,010,000	\$ 3,380,000

Assets:

Cash	\$ 45
A/R	\$ 4,592
Inventory	\$ 886
Other current assets	\$ 360
Equipment	\$ 314
Other assets	\$ 820
Customer list	\$ 1,361
Goodwill	\$ 4,470
Total Assets	<u>\$ 12,848</u>

Liabilities & Equity:**Current Liabilities:**

Accounts payable	\$ 1,013
Line of Credit	\$ 2,444
Accrued Expenses	\$ 1,242
Total Current Liabilities	\$ 4,699

Long Term Liabilities:

Deferred Taxes	\$ 582
Other liabilities	\$ 564
Total long term liabilities	<u>\$ 1,146</u>

Total Liabilities**\$ 5,845****Equity****\$ 7,003****Total Liabilities and equity****\$ 12,848****Interest-bearing debt**

It would be fine
to call this an I/C price,
IF your denominator
added back interest
on LOC

equity price--all paid in cash

**Done Deals Equity Price,
Mergerstat I/C Price**

Let's look at another transaction:

- ✓ \$7.2 million cash at closing
- ✓ 250,000 shares of buyer's stock
- ✓ Performance based earn-out
- ✓ 3-year CNTC @ \$300,000
- ✓ Employment contract
- ✓ 5 year lease with 5 year renewal.

Gory Details:

- **Buyer's shares given in the deal:**

- ✓ Restricted; could be put in 3 years for \$4; valued at \$2; 8K noted 15% discount

- **3-year, performance based earn-out:**

- **EBITDA * 60.2%**

- ✓ Paid 50% cash,
- ✓ 50% note payable over 3 years, at 7% interest

- **How was the deal reported by the databases?**

Very differently...

Item	Pratt's Stats	Done Deals	Mergerstat
Seller SIC	3541	3569	3566
Sales	\$ 9,439,346	\$ 8,200,000	\$ 8,620,000
Sales as of	12/31/1997	Annualized-3 mos.	LTM
Price (EV)	\$ 8,037,500	\$ 13,600,000	\$ 15,520,000
P/R Multiple	0.85	1.66	1.82

- Note 3 different SIC codes
- Note differences in revenues based on definition in database
- Two of the databases didn't include the liabilities assumed; the third included them—but the wrong amount, as they included shareholder debt that was not a part of the liabilities assumed;
- Pratt mentions an earn-out but doesn't add it; other two calculate and add;
- Restricted stock valued differently by each—with or without discount.
- Done Deals did not include CNTC, others did.
- Note that Mergerstat's EV *excludes* cash of the seller

What did we really need to know?

- ✓ Cash - \$7,237,500
- ✓ Stock - \$425,000 or \$500,000?
- ✓ Liabilities assumed - \$1,384,740
- ✓ CNTC - \$300,000
- ✓ Earn-out – up to \$5,937,500 over 3 years based on meeting future EBITDA targets
 - *Only by looking at 8K did all information become clear*

One more.

Item	Pratt's Stats	Done Deals	Mergerstat - SIC search	Mergerstat - Deal Report
Seller SIC	2752	2752	2759	2759
Sales	\$ 7,101,426	\$ 7,100,000	\$ 7,100,000	\$ 7,100,000.00
Sales as of	Dec-98	Dec-98	LTM	LTM
Value Indication per database	Enterprise	Equity	Enterprise	Enterprise
Price	\$ 3,600,000	\$ 4,800,000	\$ 5,250,000	\$ 6,450,000.00
Price Includes	\$3.6MM cash	\$3.6MM cash + \$1.2MM add'l. cash contingent on 1999-2000 earnings (plus 3-yr. employ. agrmts. with certain sellers)	\$3.6MM cash + \$1.65MM of assumed liabilities	\$3.6MM cash + \$1.2MM cash contingent on performance + \$1.65 of assumed liabilities
P/R Multiple	0.51	0.68	0.74	0.91
Subject Revenue	\$ 14,000,000	\$ 14,000,000	\$ 14,000,000	\$ 14,000,000
Value Indication	\$ 7,100,000	\$ 9,460,000	\$ 10,350,000	\$ 12,720,000

Note varying treatment of contingency and debt

All had the same revenue, because LTM was LFY, and most recent reported period to SEC

Note different SIC's

Differences even within Mergerstat (one with, one without contingency)

Note large variances in indications of value

Differences in treatment of Revenues:

- Pratt's Stats: Last fiscal year
 - This is what we're typically applying the multiple to...
- Done Deals: Most recent accounting period, annualized
- Mergerstat: LTM
- BIZCOMPS: Last year reported

Differences in the definition of Earnings

- Pratt's—EBITDA, EBIT, Gross Profit, Discretionary Earnings [Operating profit + owner's compensation + non cash charges]
- Done Deals—EBITDA, Cash Flow [net income after tax plus non cash charges and changes in working capital], Net Income [after tax, except pass-through entities]
- Mergerstat—EBITDA or many others
- BIZCOMPS-SDE [highest paid added back, lesser paid normalized]

Differences in treatment of CNTC

- Pratt's—includes in price
 - But breaks out detail
- BIZCOMPS – included in price; if negotiated in addition to sales price, then not included
- Mergerstat—included in the price
- Done Deals—does not include

Is the CNTC part of the purchase price for the business?

- Or is it additional consideration paid to the seller solely in order to ensure that they don't compete with the business?
 - It depends
- Often driven by tax and deal structure considerations
 - Spread over time
 - Ordinary v. capital gains
 - In C corp, keep proceeds out of biz. and avoid double tax
 - Allocation of purchase price to certain individual(s)

Many small business will require a CNTC, without which, they would be buying a diminished business...

Value

- Value of business with seller competing
- + value seller brings to business
- = Value of business

Price

- Diminished price paid for business
- + CNTC
- = Price paid for business

Contingent Payments

- Pratt's Stats—does not include
- Done Deals & Mergerstat—say they include
- Can be a significant portion of purchase price
 - Always exclude deals with earn-outs?
 - Include deals, but exclude earn-outs from price?
 - Include deals with earn-outs at full value?
 - Include deals with earn-outs at some reduced value?
 - Appraiser judgment call - be able to explain your decision

Differences in treatment of liabilities:

- Pratt's includes interest bearing debt assumed by buyer
- Done Deals includes any liabilities assumed (they say; but did not in all examples provided)
- Mergerstat includes short and long term liabilities (they say; but did not in all examples provided)

Interest-bearing debt assumed is usually provided and can be adjusted if necessary

Differences in Asset Deals

- Pratt's Stats: generally fixed assets, inventory, intangible value (see "Asset Data" and "Additional Notes" sections for more information)
- BIZCOMPS: fixed assets and intangible value, *excludes inventory*
- Done Deals: deal by deal
- Mergerstat: typically stock deals

What's an appraiser to do??

- **READ THE INSTRUCTIONS**

Each of the databases tells us how to use their data, **and** they go out of their way to do so.

- **READ THE TRANSACTION REPORT**

There is information provided in there that you cannot ignore.

- **CALCULATE YOUR OWN MULTIPLES**

- **SEEK ADDITIONAL INFORMATION**

Useful Transaction Information Provided by the Databases

- “Consideration is over **20 years at 3%** interest”
- “Income statement data is **8 months of the year 1999**”
- “Purchase price (\$101,500,000) could increase by \$8,000,000” (**earn-out, not included**); “contingent payments are not included in the selling price”
- “Consideration: \$28,000,000 cash, \$5,000,000 convertible note, and \$4,000,000 earn-out” (of \$37mm reported proceeds—**earn-out is included**)
- “EBT includes “other expense” of \$4.4mm” (?)
- “Net income includes a tax benefit of \$9,372,000” (?)
- “Remaining portion of consideration, \$19mm, includes PV of deferred payments of **FF27mm, FF27MM, and FF36MM over 3 years at 3%**”

More Useful Information...

- “Estimated FV of assets is \$810,000. Assets acq’d included inventory, A/R, FA, **R/E**, and LHI.” **\$16MM restricted stock**, where the price was listed as \$16 million; *in many cases, if not most, restricted stock is worth less than its face value*;
- \$28.5MM cash *plus \$2.7MM transaction costs, where the price was listed as \$31.2 million*, and \$27MM cash **plus \$1.1 MM acquisition costs**, where the price was listed as \$28.1 MM; in most cases, “Price”, for the transaction method, would not include transaction costs;
- Price was listed as including “**liabilities assumed...plus debt forgiven...plus debt paid at closing**”;
- **Earn-outs** are included in some, but not all, deals.

Should you calculate your own multiples?

MVIC Price	19,838,000
EBITDA	996,679
MVIC/EBITDA	19.9

- “Consideration paid as follows: \$17,138,000 cash, \$2.7 million promissory note for real estate...”
 - ...note the footnote to MVIC price says deal did not include real estate (as noted on every deal.)
- Additional notes:
 - “EBT includes stockholder bonuses expense of \$3,449,000 and other income of \$101,824.”

Adjusting the Price and EBITDA

	<u>Unadjusted</u>	<u>Adjusted</u>
MVIC/Price	19,838,00	17,138,000
		Remove Real Estate of \$2.7 million
EBITDA	996,679	4,343,855
		Add back Bonus Expense of \$3.4 million
MVIC/EBITDA	19.904	3.95 *

*(adjusted by PS)

Why calculate your own multiples?

- **Appraisers don't uniformly treat:**
- Below interest loans (*consider normalizing*)
- Contingent selling price
- Real estate in a particular transaction (*should usually segregate*)
- Non-competes (*consider removing; depends on facts & circumstances*)
- Other items
- Be consistent

How to Find More Information

- ✓ Difficult to verify private company transaction data
 - ✓ They are private, after all...
- ✓ Call to database - information on specific transactions, or on how to use the database in general.
 - ✓ Some have more information and are willing to share it.
- ✓ Call to intermediary may provide additional information.
 - ✓ They're usually willing to talk.

How to Find More Information...

- ✓ Information from SEC report is most valuable.
 - ✓ Can be found for most of Mergerstat, Done Deals, and many of Pratt's transactions (Pratt's links you to buyer SEC reports and gives 8-K or 8-KA filing date).
- ✓ Obtain data from multiple databases.
 - ✓ Allows you to cross-check data and find out additional information

Various and Sundry Application Issues...

Historical vs. Forecast

- Do you apply the multiple to your subject's historical or forecasted results?
- Revenue Ruling 59-60: "Valuation is...a prophecy as to the future."
- You wouldn't necessarily use historical results in the Income Approach (although it may be an important factor in determining future performance); why would you use it in the Market Approach?
- Answer WILL depend...perhaps on **Company's earnings volatility and rate of growth relative to the market**

The Transaction Method and DCF

- First...would you use a CCF and a DCF in the same valuation?
- If you're using variable revenues and/or earnings in the Income Approach (i.e., a DCF), to what do you apply the market multiples?
 - - terminal year, when earnings are forecasted to stabilize
 - - market approach most compatible with single period of normalized earnings

Things to watch out for when using “canned” software:

- Wiley Value Source uses Done Deals (calls it “mid market comps”) and BIZCOMPS as their source data
- “Stock” (equity) deals in Done Deals (and therefore the software) are often really invested capital deals—but if you don’t get the details of the deal, you wouldn’t know
- The software does not know what assets and liabilities to pull in, once the multiple is applied, and often pulls in the wrong ones
- It does not know what definition of income to apply the multiple to
 - Be especially careful on S corps

- Disclaimer: I admittedly have a built-in bias here, as I have seen nothing but *spectacular* errors—often of multiple orders of magnitude—when folks have used valuation software and attempted to use the transaction method.

Make sure you pay attention to “canned software” output...

Expert's Calc.

Revenue	10,000,000
Multiple	<u>0.25</u>
Indicated by Multiple	2,500,000
Plus: Adjusted Net Book Value (??)	<u>1,250,000</u>
Indicated Value	3,750,000

Valuation software can pull in the data but it does **not know what to do with it after that.**

Importance of Comparability

- The importance of comparability, as summed up by the court in *Hendrickson v. Commissioner**:
 - *“Because value under the guideline method is developed from the market data of similar companies, the selection of appropriate comparable companies is of paramount importance.”*
- * T.C. Memo 1999-278, August 23 ,1999.

Transaction Search Tip...

- ✓ Start at Yahoo Finance
- ✓ Once you've identified one company in the industry, search for "competitors"
- ✓ **Then go to Mergerstat and look for specific transactions involving those companies**
 - ✓ **We've had some of our best luck looking for meaningful comps. doing it this way**
 - ✓ Alternatively, go directly to SEC reports
- ✓ Works particularly well when valuing companies in poorly-defined SIC codes
 - ✓ Rather than doing an SIC "hunt and peck" in Pratt's, Done Deals or Mergerstat, you can key in on players in the field.

YAHOO

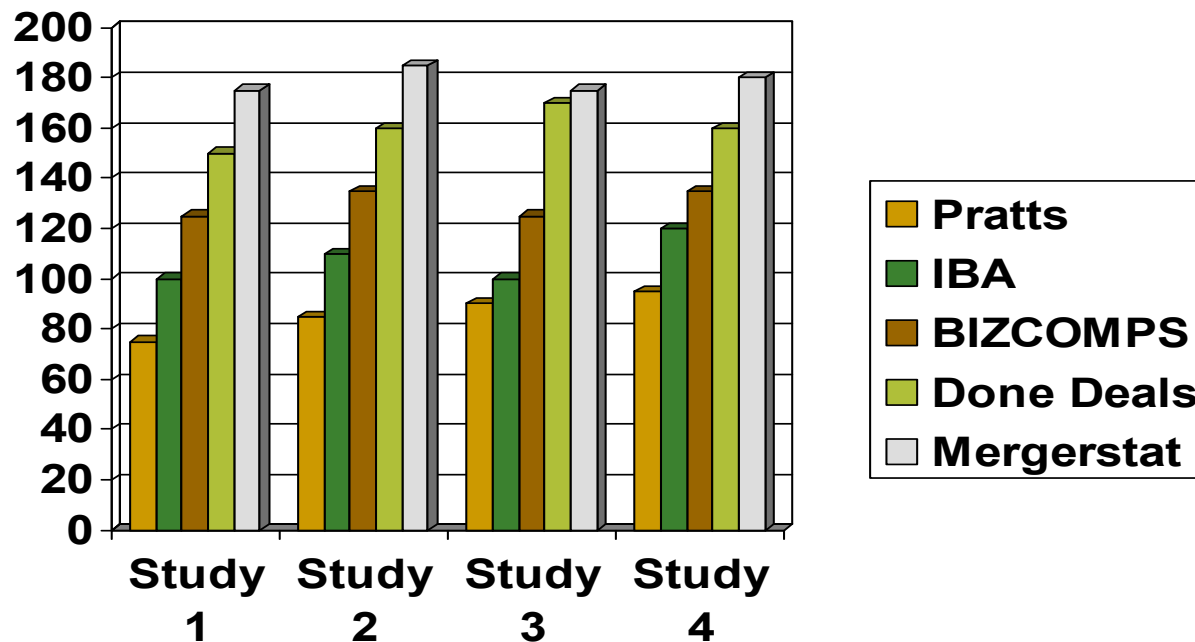
- **VALUATION MEASURES:**

■ Market Cap (intraday) ⁵ :	22.0M
■ Enterprise Value (7-Nov-07) ³ :	13.6M
■ Trailing P/E (ttm, intraday):	N/A
■ Forward P/E (fye 30-Jun-09) ¹ :	N/A
■ PEG Ratio (5 yr expected):	N/A
■ Price/Sales (ttm):	1.43
■ Price/Book (mrq):	2.11
■ Enterprise Value/Revenue (ttm) ³ :	0.88
■ Enterprise Value/EBITDA (ttm) ³ :	-2.818

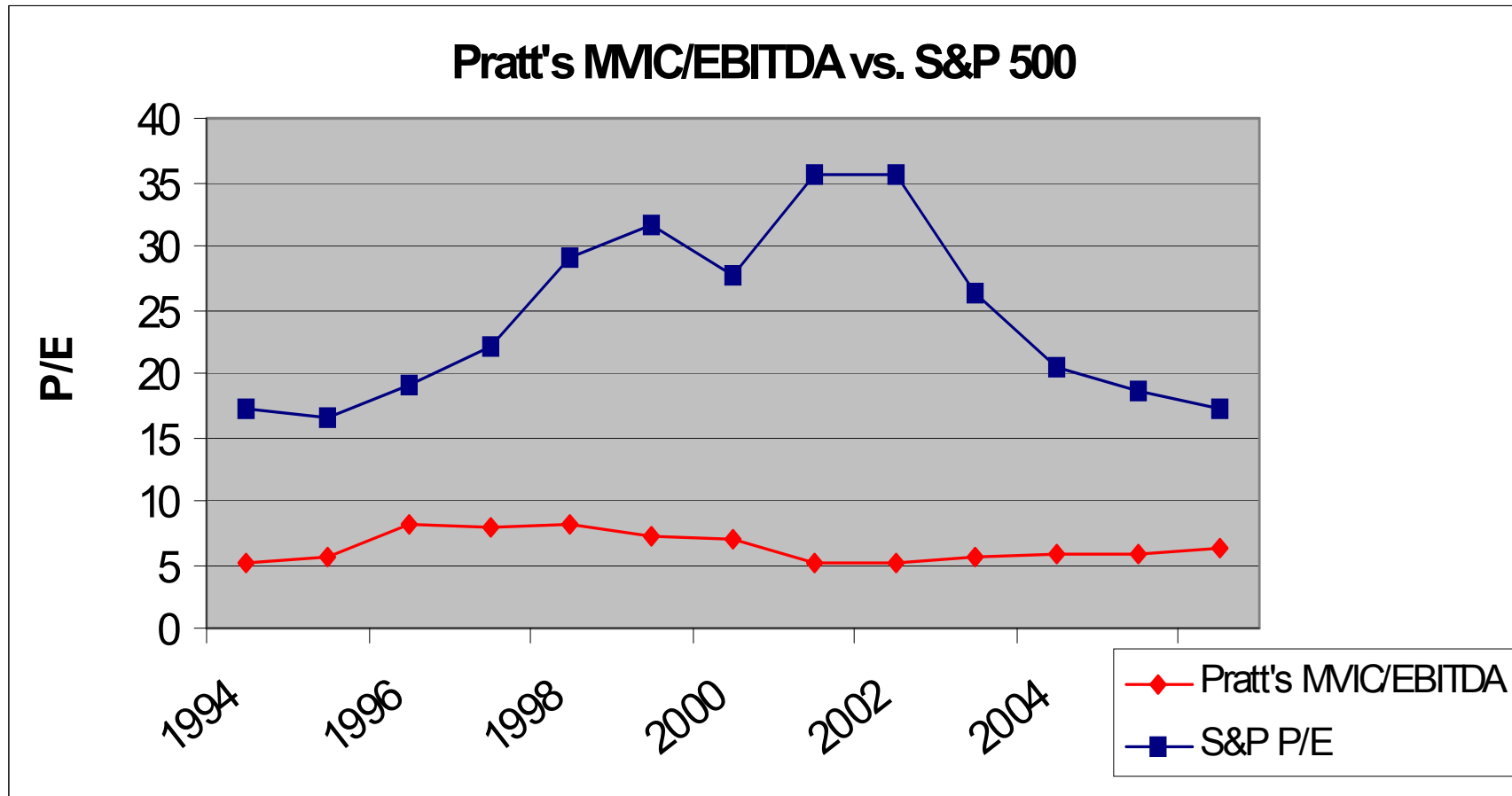
Calculation of Market Cap and Enterprise Value (Yahoo):

Item	Amount
# shares outstanding	\$11,835,661
Price / share	\$1.86
Market cap	\$22M
Plus debt	\$1,341,000
Minus cash	(\$9,621,000)
Enterprise value	\$13.7M

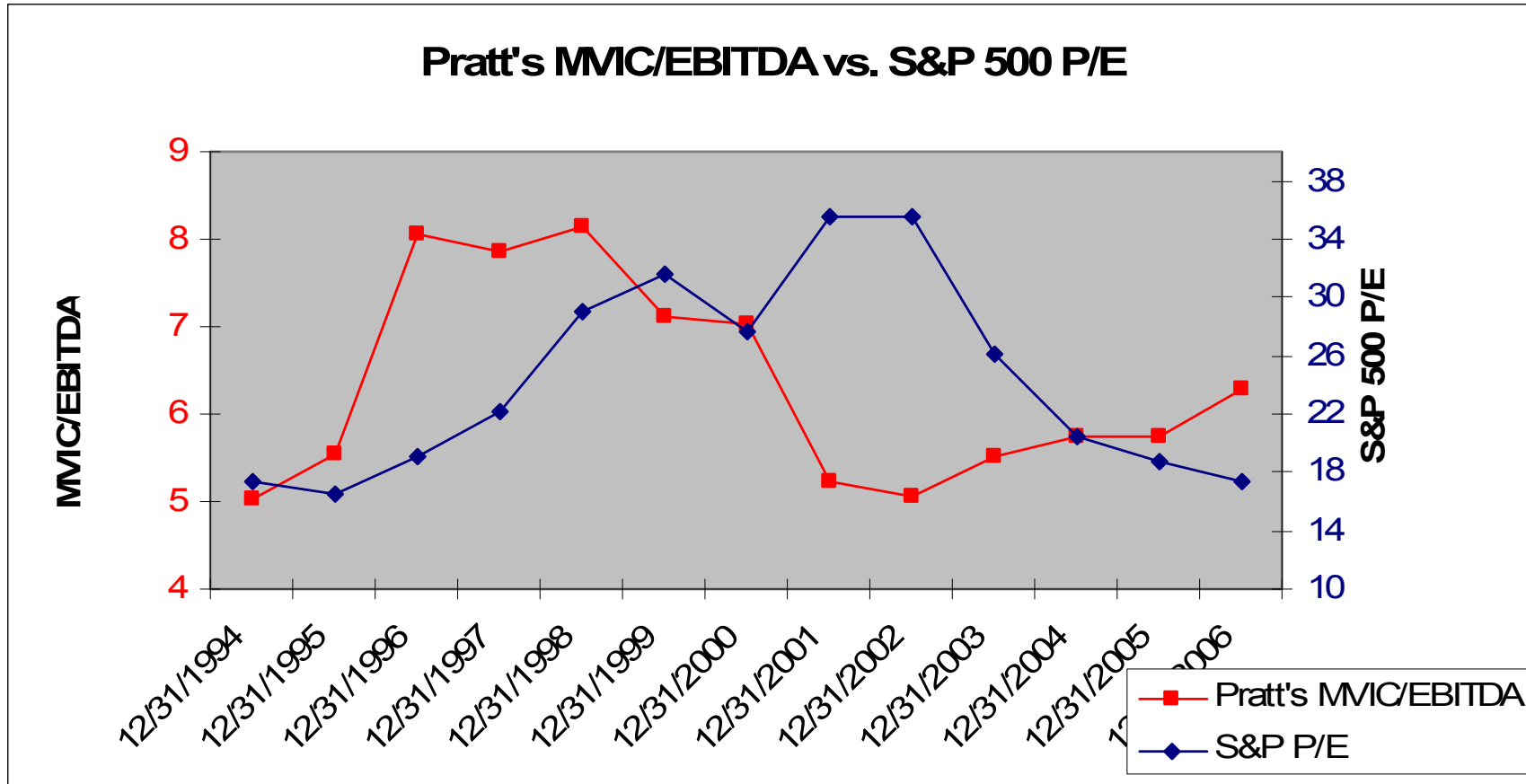
Assorted Studies



Do private transaction database multiples change over time? Doesn't look like it...



Or does it...??



Correlation to the S&P PE

- ...very little
- Among the private transaction databases, also very little correlation to each other.

How do we handle changes in multiples over time?

- Movement of entire database doesn't really tell us much; analyst should examine multiples in *particular SIC* to see if movement over time is relevant
- Note BIZCOMPS removes multiples >11 years old annually
- Pratt's has only been around 15 years
- We typically try to determine a relevant time period (business or economic cycle, to the extent determinable)

Pratt's Stats™

S Corps versus C Corps Median Operating Profit Margin By Revenue Range and Business Type

Sale dates from 1/1/2002 - 7/2006

Copyright 2006 Business Valuation Resources, LLC (BVR).

Revenue Range	Median Operating Profit Margin for S Corps	#	Median Operating Profit Margins for C Corps	#
\$0 - \$1,000,000	13.8%	853	2.5%	365
\$1,000,001 - \$10,000,000	7.4%	430	0.4%	535
\$10,000,001 - \$50,000,000	7.3%	97	1.4%	247
> \$50,000,000	5.8%	40	5.9%	231

Does Size Matter?--Pratt's Stats™

Median MVIC/EBITDA Valuation Multiples by Major Industry Category

Sale dates from 1/1/2002 - 7/2006

Copyright 2006 Business Valuation Resources, LLC (BVR).

Industry	SIC Codes	Revenues	Median MVIC/EBITDA	Deal Count
Manufacturing	2000-3999	<1M	4.6	104
		1M - 10m	6.8	160
		10m - 50m	9.3	65
		>50m	8.9	78
Wholesale Trade	5000-5199	<1M	4.0	51
		1M - 10m	5.0	54
		10m - 50m	5.1	12
		>50m	8.9	15
Retail Trade	5200-5999	<1M	2.9	342
		1M - 10m	5.7	100
		10m - 50m	6.5	16
		>50m	7.3	17
Services	7000-8999	<1M	4.0	425
		1M - 10m	12.2	256
		10m - 50m	10.4	97
		>50m	10.6	57

Let's narrow this down to a particular SIC

SIC 5921 Liquor Stores--Pratt's Stats				
Sales From/to		Gross Profit to Sales	MVIC to Sales	MVIC to Gross Profit
\$ -	\$ 291,716	36%	0.3	1.2
\$ 291,716	\$ 391,277	23%	0.3	1.5
\$ 391,277	\$ 677,225	26%	0.4	1.5
\$ 677,225	\$ 1,062,672	23%	0.4	1.7
\$ 1,062,672	\$ 1,818,669	21%	0.3	1.7

Another SIC:

SIC 2752, Printing--Pratt's Stats					
Sales From/to		MVIC to Sales	Gross profit margin	MVICToGrossPr ofit	
\$	-	167,667	0.7	87%	0.7
\$	167,667	326,207	0.6	62%	0.8
\$	326,207	703,261	0.5	59%	0.9
\$	703,261	4,921,001	0.6	55%	1.1
\$	4,921,001	21,350,774	0.5	33%	1.9
\$	21,350,774	158,194,000	0.9	32%	2.5
Medians		703,261	0.6	54%	1.1

Remember:

- All these multiples are calculated on *reported profits*, where:
- In the <\$1M category, there is an incentive for S corps to retain profits, and an incentive for C corps to pay out profits (and the data is tilted towards S corps)
- So reported profits tend to be *high*; corresponding multiples tend to be *low*
- *As you move up the totem pole of size, this “normalizes out”*
 - *Why??*

The point?

- *In the data:*
 - *In general, the lower the profit, the higher the profit multiple*
 - *the higher the profit, the lower the profit multiple*
- *The underlying data is not necessarily rational,*
 - *or indicative of what “normalized earnings” would reflect—particularly at the smallest sizes*

Terms matter?

- BIZCOMPS study found significant impact of seller financing on pricing:

<u>Price/SDCF</u>	<u>Mean</u>	<u>Median</u>
70% or more seller financing	2.31	2.03
Some seller financing	2.15	1.84
All Cash	1.84	1.60

What does “all cash” mean?

- Probably means **seller** was able to finance the company with outside debt
- Seller financing may imply some contingency piece to it as well

Duplicates

- Look out for them
- They can be significant
- They can be both within, and across, databases

Closing Comments

- Transaction method provides strong evidence of value when applied rigorously
- When applied carelessly, it will produce false evidence