

# Gregory R. Caruso, JD, CPA, CVA

- Managing Partner, Harvest Business, LLC, Business Valuators
- Author, The Art of Business Valuation, Accurately Valuing a Small Business" Wiley 2020
- Editor, Around the Valuation World, NACVA, from January 2016 to June, 2021
- 100's and 100's of business valuations all types of businesses and valuation purposes
- Present and publish on valuation with BVR, NACVA, CPA Academy, etc.
   (One of NACVA's Instructors of Year)
- Lead broker in over 65 transactions.
- Homebuilder / General Contracting / Transactional Law

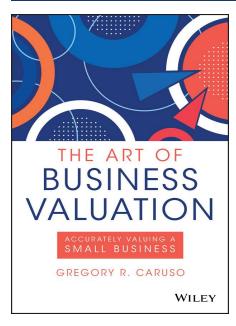


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# Valuing Micro and Small Businesses is Different

# This Book explains how to do it right!





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# Your Profitable Practice – Peer Groups for Professionals

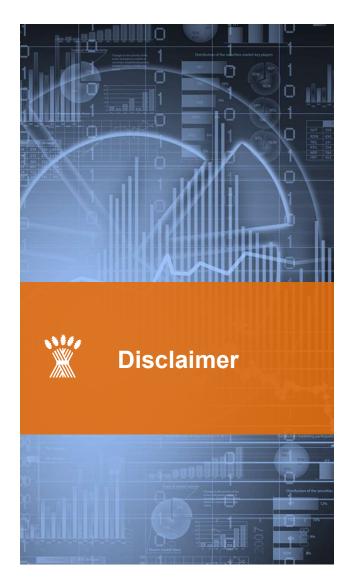
### Peer / Mastermind Groups

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  - Resolve problems
  - Gain by taking opportunities
  - Comfort from support of peers
  - Accountability actually do it!
  - Your practice your way

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### Its an uncertain world, so

#### Disclaimer:

This set of slides and the related PDF worksheets are solely my opinions.

Sample documents, calculations, checklists, and other examples ("Documents") are provided in this presentation. These Documents for learning purposes only. Efforts have been made to ensure reasonableness of the Documents provided but no representations or warranties are given as to the work's accuracy or compliance with any credentialing bodies standards or with any jurisdictional, or user (for example, IRS, SBA, etc.) requirements.

In every instance, small changes to facts or assumptions may completely change methodologies used and outcomes estimated. Business valuation requires a high level of professional judgement and often more than one methodology and result may be reasonable.

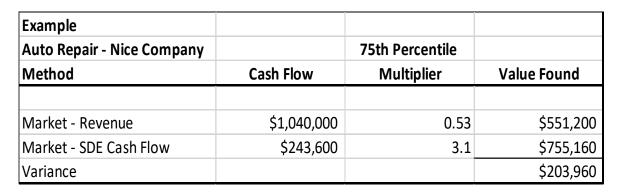
As my father said, "I would rather be approximately right, rather than completely wrong." Or as I say, ask yourself, "Does this makes sense?" If not, keep working until it does.

THIS PRESENTATION IS INTENDED PRIMARILY FOR VALUING COMPANIES WITH UNDER \$10 MILLION OF REVENUES.

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36% variance – I have seen much worse. Particularly high revenue low profit Co.'s

Today I will show you a solution to this "ISSUE".





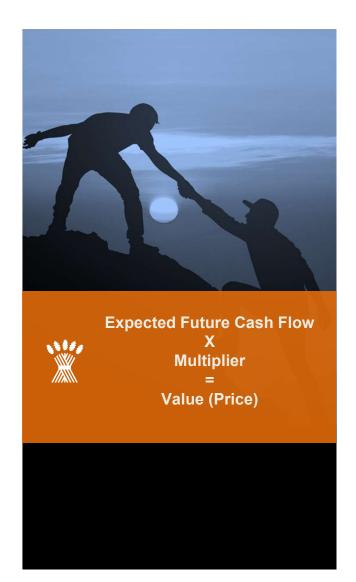
# How do we justify our Specific Company Premium?

### **COE Capitalization Rate**

Cost of equity		
Risk-free Rate of Return	1.8%	
Common Stock Equity Risk Premium	7.3%	
Small Stock Risk Premium	5.0%	
Plus/Minus Industry Risk Premium	0.0%	
Company Specific Premium	6.5%	
Total Cost of Equity		20.6%
Less Sustainable Growth		3.0%
Next Year Capitalization Rate		17.6%
Current Year Capitalization Rate		17.0%
Selected Capitalization Rate		17.0%

"Professional Judgment" - You mean - "Because I know!!!"

How well does that work with your children?

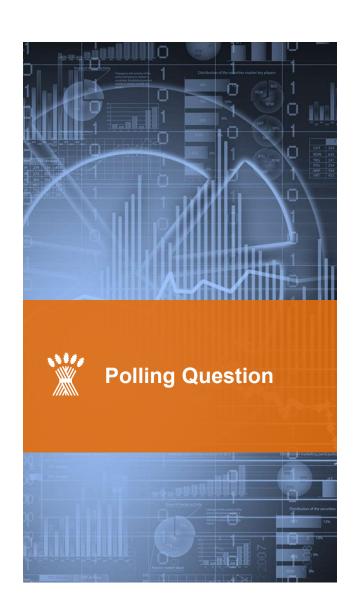


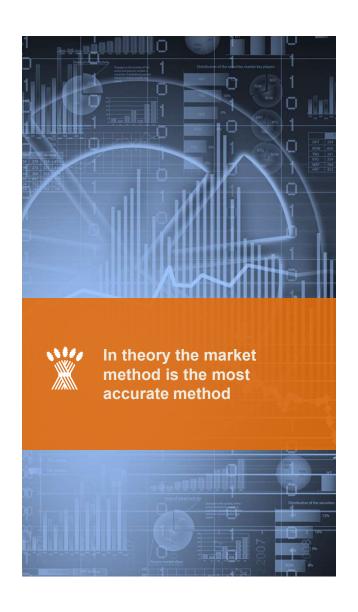
# Market Method for Valuing Small Businesses

Goal: To be able to use the market method to estimate value. (REALLY!)

- Determining the Multiplier
- Determine Cash Flows
- Balance Sheet Adjustments

# **Polling Question**





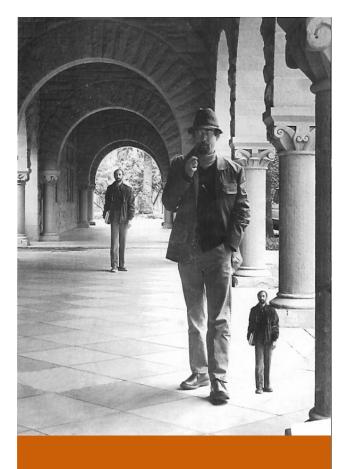
# Market Method for Valuing Small Businesses

Expected Future Cash Flow x Multiplier = Value (Price)

Plus Discounts & Premiums
Plus Balance Sheet Adjustments



# Which man is taller?



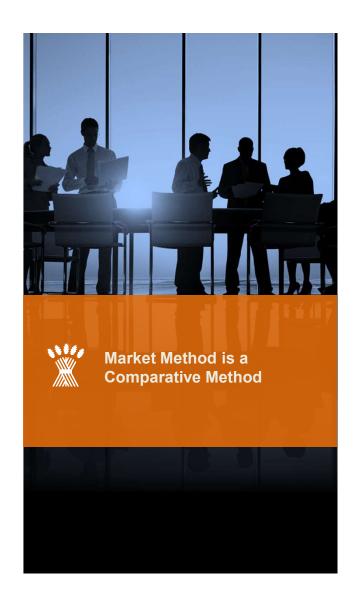
What are we missing in this picture?



### **USPAP Standards Rule 9-5 Comment**

"The value conclusions is the result of the appraiser's judgment and not necessarily the results of a mathematical process."

2018-2019 USPAP



### **Pros / Cons of Market Method**

#### **Pros:**

- Direct Sale Data
- Companies are often similar to those being valued
- SBA has provided reliable financing for 20+ years

### Cons:

- Uneven quality of data
- Unknowns / unknowable's about comparables
- Year before the sale is all that is reported
- Florida / other bias?

# **Polling Question**







Each Data Source Compiles

**Differently** 

and Calculates Measures

### **Sources of Data:**

### **Very Small Businesses:**

- DealStats BVR. Combined both SEC data and broker reported data. Safeguards in place to check data.
   Extensive but inconsistent reporting. Newer tends to be better
- ValuSource Market Comps Formerly IBA Database
- BIZCOMPS very small businesses and limited data
- Peercomps SBA data

#### **Small/ Midsize Business:**

- DealStats SEC data provides lower middle market coverage
- FactSet -
- Capital IQ Very expensive very detailed





comparables similar to your

subject company?

# **Typical Sorts**

### Industry – NAICS or SIC Codes

- Google look-up
- Sometimes need multiple codes, similar type work / risk

### Sales Revenue / Size of Business

Multiples can vary significantly over sales revenue ranges

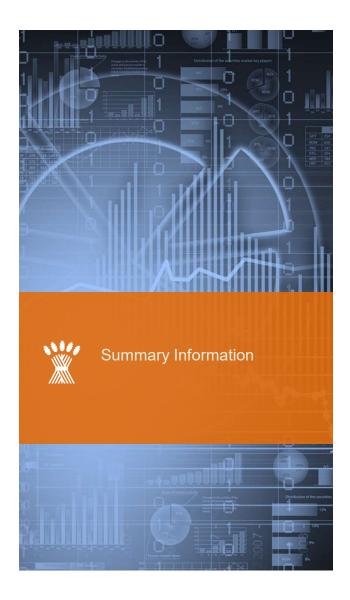
#### **Cash Flow**

- Create apples to apples dataset for comparisons
- Remove extreme multiples

### **Key Words / Other**



# **Demonstration**



# Sample Search – Auto Repair

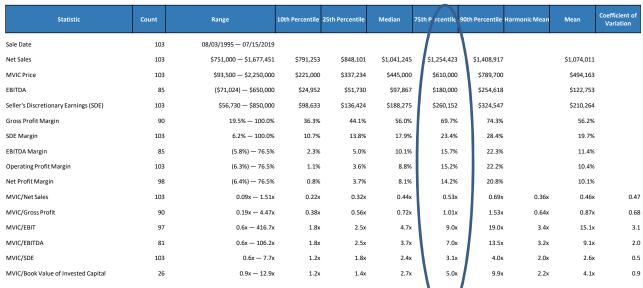
SDE was greater than or equal to \$50,000			
NAICS contains "811111"			
This group of transactions displayed the following valuation n	nultiples:		
Valuation Multiple	Median	Harmonic Mean	Mear
MVIC/Net Sales	0.44x	0.36x	0.46
MVIC/Gross Profit	0.73x	0.64x	0.87
MVIC/EBITDA	3.7x	3.2x	9.1
MVIC/EBIT	4.7x	3.4x	15.1
MVIC/Discretionary Earnings	2.4x	2.0x	2.6
MVIC/Book Value of Invested Capital	2.7x	2.2x	4.1
This group of transactions displayed the following ratios:			
Profitability Ratios	Median	Mean	
Gross Profit Margin	56%	56%	
SDE Margin	18%	20%	
EBITDA Margin	10%	11%	
Operating Profit Margin	9%	10%	
Net Profit Margin	8%	10%	
Return on Assets	30%	42%	
Return on Equity	58%	484%	
Liquidity Ratios	Median	Mean	
Current Ratio	2.59	4.57	
Quick Ratio	2.08	3.77	
Leverage Ratios	Median	Mean	
Fixed Charge Coverage	12.70	4,326.64	
Long-Term Liabilities to Assets	0.00	20.94	
Long-Term Liabilities to Equity	0.00	1,635.23	
Activity Ratios	Median	Mean	
Total Asset Turnover	4.71	6.28	
Fixed Asset Turnover	16.04	94.00	
Inventory Turnover	46.65	108.05	

# **Polling Question**





### **Statistics**

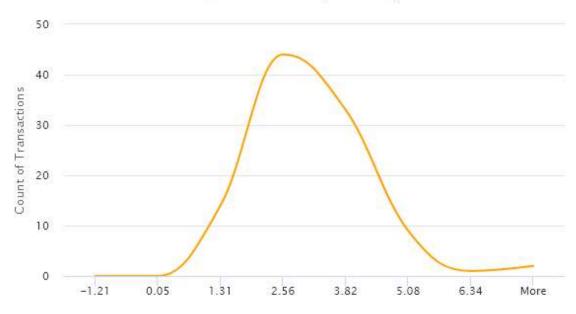


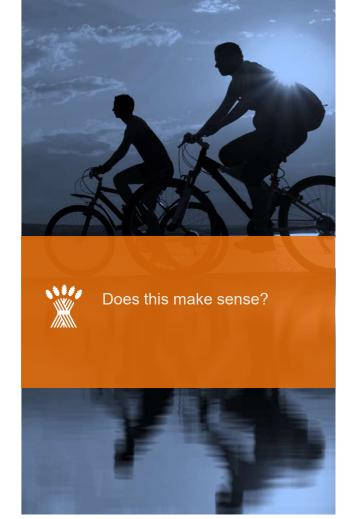




# If Available – What do the distributions look like?

### MVIC/Discretionary Earnings





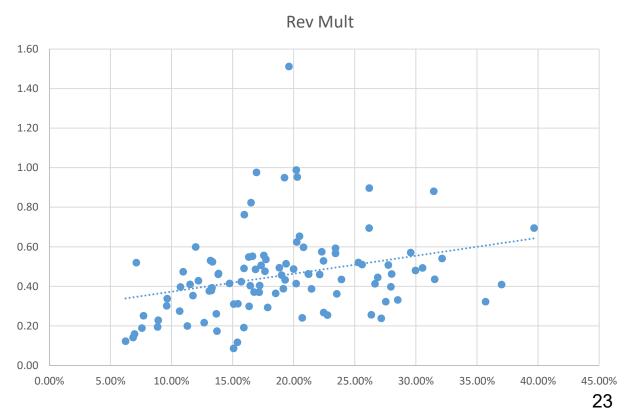


# **Estimating Profitability v. Multipliers**





# **Plotting the Revenue Multiplier**

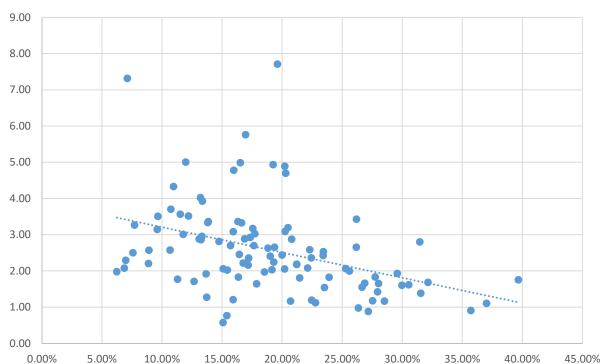






# **Plotting the Cash Flow Multiplier**

Cash Flow Mult





### **Statistics with Market Method**

#### **Pros & Cons**

- Statistics show correlation NOT causation
- Statistics can be very deceptive
- Correlations do indicate relationships
- Must be applied with judgment

### **Regression Analysis**

Shows level of correlation in specific points or factors

#### **Coefficient of Variation**

 Creates a numberless number that allows comparison between methods – It is a dispersion of a probability distribution

# In theory the closer the points are to the trend line the more reliable the point becomes

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# **Regression Analysis**

The regression equation of a line is shown as:

Y = mX + b

Y = dependent variable, which will be assigned to business sales price more formally called the market value of invested capital.

X = independent variable, which will be assigned to the cash flow used measure which may be revenues, gross margin, profit, SDE, EBIT or EBITDA.

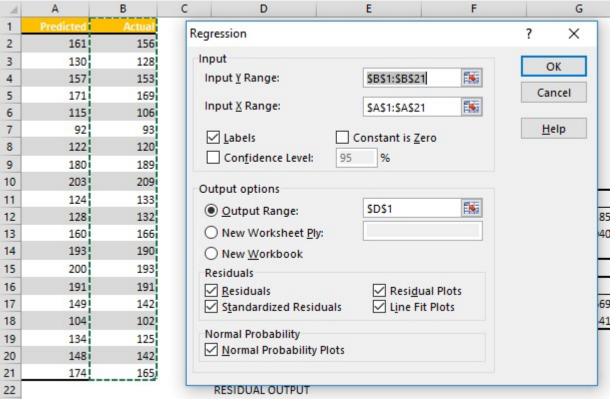
m = samples or data points of the independent variable (otherwise known as a factor).

b = is the intercept or null variable. It is where the value found is equal to 0 which may be a positive or negative number.

What regression analysis does is show whether the selected metric (say SDE to Price) provides cogent or correlated results.



# Regression Input Box



# **Regression Analysis / Excel**

#### SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.461069					
R Square	0.212584					
Adjusted R Square	0.20471					
Standard Error	259196.5					
Observations	102					

This shows that the data is less reliable (less than .50)

#### ANOVA

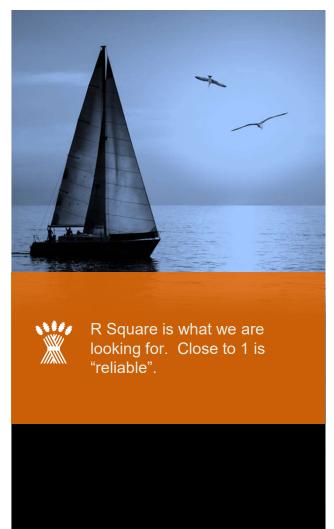
				9	Significanc
	df	SS	MS	F	e F
Regression	1	1.81E+12	1.81E+12	26.99775	1.08E-06
Residual	100	6.72E+12	6.72E+10		
Total	101	8.53E+12			

	Coefficient	Standard					Lower	Upper
	5	Error	t Stat	P-value	Lower 95% l	Jpper 95%	95.0%	95.0%
Intercept	187852.5	64242.75	2.924105	0.004273	60396.75	315308.3	60396.75	315308.3
X Variable 1	1.5001	0.288706	5.195936	1.08E-06	0.927315	2.072886	0.927315	2.072886

X Variable is the angle of the line graph generated. It can be viewed as the base "multiplier"

The Intercept is where the nul variable (essentially 0 value) would cross through the 0 value of the Y axis of the graph chart.







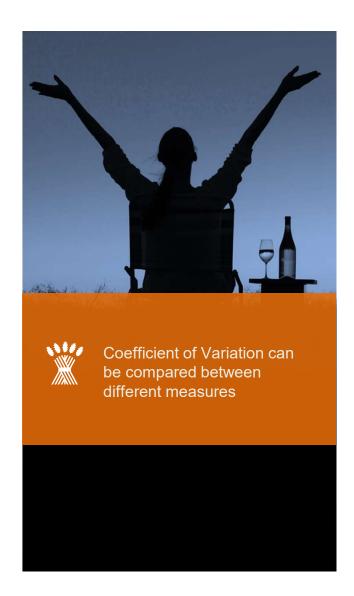




# **Statistics**

Statistic	Count	Range	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	Harmonic Mean	Mean	Coefficient of Variation
Sale Date	103	08/03/1995 — 07/15/2019								
Net Sales	103	\$751,000 — \$1,677,451	\$791,253	\$848,101	\$1,041,245	\$1,254,423	\$1,408,917		\$1,074,011	/ \
MVIC Price	103	\$93,500 — \$2,250,000	\$221,000	\$337,234	\$445,000	\$610,000	\$789,700		\$494,163	
EBITDA	85	(\$71,024) — \$650,000	\$24,952	\$51,730	\$97,867	\$180,000	\$254,618		\$122,753	1
Seller's Discretionary Earnings (SDE)	103	\$56,730 — \$850,000	\$98,633	\$136,424	\$188,275	\$260,152	\$324,547		\$210,264	
Gross Profit Margin	90	19.5% — 100.0%	36.3%	44.1%	56.0%	69.7%	74.3%		56.2%	1
SDE Margin	103	6.2% — 100.0%	10.7%	13.8%	17.9%	23.4%	28.4%		19.7%	
EBITDA Margin	85	(5.8%) — 76.5%	2.3%	5.0%	10.1%	15.7%	22.3%		11.4%	
Operating Profit Margin	103	(6.3%) — 76.5%	1.1%	3.6%	8.8%	15.2%	22.2%		10.4%	
Net Profit Margin	98	(6.4%) — 76.5%	0.8%	3.7%	8.1%	14.2%	20.8%		10.1%	
MVIC/Net Sales	103	0.09x - 1.51x	0.22	0.32x	0.44x	0.53x	0.69x	0.36x	0.46x	0.47
MVIC/Gross Profit	90	0.19x — 4.47x	0.38	0.56x	0.72x	1.01x	1.53x	0.64x	0.87x	0.68
MVIC/EBIT	97	0.6x — 416.7x	1.8	2.5x	4.7x	9.0x	19.0x	3.4x	15.1x	3.1
MVIC/EBITDA	81	0.6x — 106.2x	1.8	2.5x	3.7x	7.0x	13.5x	3.2x	9.1x	2.0
MVIC/SDE	103	0.6x — 7.7x	1.2	1.8x	2.4x	3.1x	4.0x	2.0x	2.6x	0.5
MVIC/Book Value of Invested Capital	26	0.9x — 12.9x	1.2	1.4x	2.7x	5.0x	9.9x	2.2x	4.1x	0.9
										1
										1





# **Coefficient of Variation**

**CV = Standard Deviation / Mean** 

	Price/SDE	Price/SDE	Price/SDE
	Standard	Average	Coefficient of
	Deviation	(Mean)	Variation
2.58 Mean (Average)	1.248041186	2.58	48.32%

2.38 Median (Middle Point)

# **Coefficient of Variation - Issues**

That is, it shows the variability, as defined by the standard deviation, relative to the mean.

The coefficient of variation should not be used for data that are not on a ratio scale.

Also, if the mean value is near zero, the coefficient of variation is sensitive to small changes in the mean.

Also, the coefficient of variation cannot be used to compute confidence intervals from the mean. (National Institute of Standards and Technology)



### **Links for Excel**

- Analysis ToolPak
- https://www.excel-easy.com/data-analysis/analysistoolpak.html
- Regression Analysis
- https://www.spreadsheetweb.com/regression-analysis-betterpredictions/
- Coefficient of Variation
- https://exceltable.com/en/analyses-reports/coefficientvariation-in-excel
- https://www.itl.nist.gov/div898/software/dataplot/refman2/auxill ar/coefvari.htm



# **Estimating the Cash Flow**

#### **Review / Enter Financials:**

- Cash v. Accrual
- Tax Return or Internal, Compilation, Review, Audit
- Add backs
- Comparative Measure to Use
- One-time / Excess
- Discretionary



### **SDE or EBITDA?**

Comparable "Required" Discount Rate as After Tax Cash Flow Drops

This chart shows the "Implied" Discount rate as businesses get very small. Note how the rate drops precipitously While a simplification this chart clearly shows problems with the model as business value drops below \$2,000,000 and even more so under \$1,000,000 of value.

SDE		\$100,000	\$200,000	\$300,000	\$400,000	\$500,000	\$600,000	\$700,000	\$800,000
Reasonable Salary		\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
EBITDA		(\$50,000)	\$50,000	\$150,000	\$250,000	\$350,000	\$450,000	\$550,000	\$650,000
SDE Market Multiplier SDE Value Estimate	2.5	\$250,000	\$500,000	\$750,000	\$1,000,000	\$1,250,000	\$1,500,000	\$1,750,000	\$2,000,000
Implied EBIDTA Discount Rate		-	10.00%	20.00%	25.00%	28.00%	30.00%	31.43%	32.50%



# TheArtofBusinessValuation.com **Normalization Adjustments** How much verification do you do of discretionary addbacks? 36

## **Polling Question**



#### "Soft" Factors:

#### **High Consideration / Deference:**

- Trend of cash flows including revenues and measures of profitability
- Management structure and size of company
- Concentrations or unusual risks or reduction of risk
- Clarity of comparables
- Any known local market comparables (reported or not)
- Comparability of subject company to comparables
- Profitability charting as shown
- Timing of Economic cycle
- Industry trends



## How much verification do you do of discretionary addbacks?

#### **Review / Enter Financials:**

- Cash v. Accrual
- Tax Return or Internal, Compilation, Review, Audit
- Add backs
- Comparative
- One-time/Excess
- Discretionary

## Does this sort produce comparables similar to your subject company?

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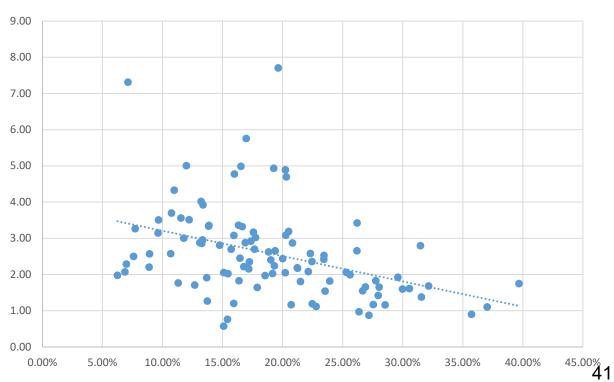
## **Weighting of Cash Flow**

Year	2020	2019	2018	2017	Calculated Cash Flow
SDE Annual Cash Flow	\$40,000	\$60,000	\$80,000	\$100,000	
Weighting Methods					
Average	1	1	1	1	
As Weighted	\$40,000	\$60,000	\$80,000	\$100,000	\$70,000
Weighting Current Years	4	3	2	1	
As Weighted	\$160,000	\$180,000	\$160,000	\$100,000	\$60,000
Weighting Early Years	1	2	3	4	
As Weighted	\$40,000	\$120,000	\$240,000	\$400,000	\$80,000
Weighting Current Year Only	1				
As Weighted	\$40,000	\$0	\$0	\$0 <sub>_</sub>	\$40,000

An example showing the power of weighting. Weighting will vary with the fact pattern behind the numbers.

## **Plotting the Cash Flow Multiplier**

Cash Flow Mult







## **Selecting Multiplier / Indication of Value**

Value	2019	2018	2017	2016
Revenue	\$1,132,700	\$988,600	\$951,500	\$1,087,300
Weight	1	1	1	1
Adjusted Revenues	\$1,132,700	\$988,600	\$951,500	\$1,087,300
	\$1,040,025			
SDE	\$254,800	\$237,500	\$206,800	\$275,200
	1	1	1	1
	\$254,800	\$237,500	\$206,800	\$275,200
	\$243,575			
SDE / Revenues	23.42%			
	Cash Flow M	ultiplier	Indicate Val	
Revenue Estimate	\$1,040,025	0.5	\$520,013	
SDE Estimate	\$243,575	2.2	\$535,865	

## **Balance Sheet Adjustments**

#### **General Assumption – Small Asset Sales**

- Equipment included in cash flow value
- Inventory will be purchased above the price
- Seller retains all other current assets and all liabilities.
- Always read what is included in the database you use.

#### Asset v. Stock Sale

- From DealStats Shows balance sheet data on some transactions. Assumption that Stock Sales include balanced working capital assets.
- Small Broker reported (as opposed to SEC documented)
   beware of that assumption
- Fred Hall, Analyzing Transactional Databases
   <a href="https://quickreadbuzz.com/2018/01/10/analyzing-transactional-databases/">https://quickreadbuzz.com/2018/01/10/analyzing-transactional-databases/</a>



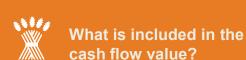
## **Balance Sheet Adjustments**

#### Asset v. Stock Sale – Working Capital

- Many valuators assume stock sales have all assets included. That is often NOT the case with small and very small businesses.
- Some asset sales do have working capital included.
- Most business brokers for smaller transactions do not understand these matters.
- "Deal" balance sheets often have more to do with taxes than conveyed assets.
- "The numbers work themselves out" if the parties are motivated.

#### Working Capital

- Fred Hall recommends removing data based on detailed information
- If data is suspect why do we assume detail is correct and incomplete is not?
- I suggest trying to apply common sense and the following rules of thumb (yes, be careful with rules of thumb but we need to start somewhere).



## **Balance Sheet Adjustments**

Rule of Thumb (Starting point to apply professional judgment). These will vary. Good luck.

- Under \$1,500,000 \$2,000,000 Value (SDE)
- Seller keeps all current assets (inventory is paid for above the price by Buyer) and pays all liabilities
- Between \$2,000,000 and \$5,000,000 value (EBITDA or SDE)
- This range gets negotiated. What makes sense?
  Remember return on "Total Investment" must make sense.
- Over \$5,000,000 value (EBITDA)
- Includes reasonable working capital adjustment.
- In all cases consider inventory turn also



How much verification do you do of discretionary add-backs?

## **Polling Question**



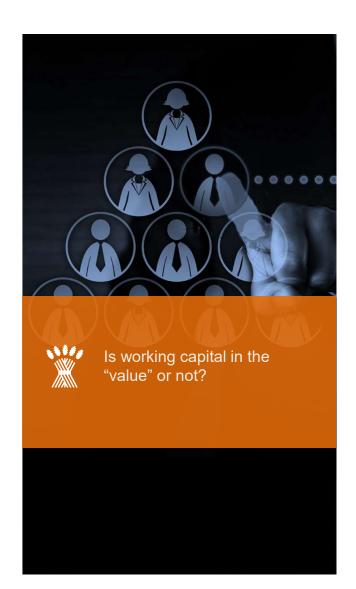


## **Demonstration**



# **Very Small Business Balance Sheet Adjustment**

Selected SDE Multiplier Indication of Value	\$100,000 
Plus Current Assets Cash Accounts Receivable Inventory	\$25,000 \$10,000 \$7,000
Total Current Assets	\$42,000
Liabilities Accounts Payable Long Term Debt	\$5,000 \$20,000
Total Liabilities	(\$25,000)
Net Current Assets	\$17,000
Indication of Value	\$167,000



## **Estimating Working Capital**

Working Cap 30-Jun-17 A/R Aging	oital Estimate	Concrete Contractor with Retention				
	Current	1 - 30	31 - 60	61 - 90	> 90	TOTAL
TOTAL	358,181.73	745,709.75	437,959.40	188,402.20	288,721.18	2,018,974.26
Other Info.						
Annual Reve	nues		\$6,000,000			
Profit			\$200,000			
A/P			\$250,000			
Monthly Rev	enues	Rev/12	\$500,000			
Less Monthly		Profit / 12	\$0	Negligible in th	is case	
Collect at 45	days	1.5 months	\$750,000			
Invoice end	of month	1 month	\$500,000			
Less A/P			(\$250,000)			
			\$1,000,000			
Retention		10%	\$125,000			
Total Require	ed Working Capi	tal	\$1,125,000			49



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