

Private Company Valuation

- “Help! How do you value a **private company**?”
- “Nooooo!!!! I really need to know how to value private companies. They must be **dramatically different**, right?”
- We get **A LOT** of questions on this topic – especially before we added coverage of private companies to our **Financial Modeling Fundamentals** course

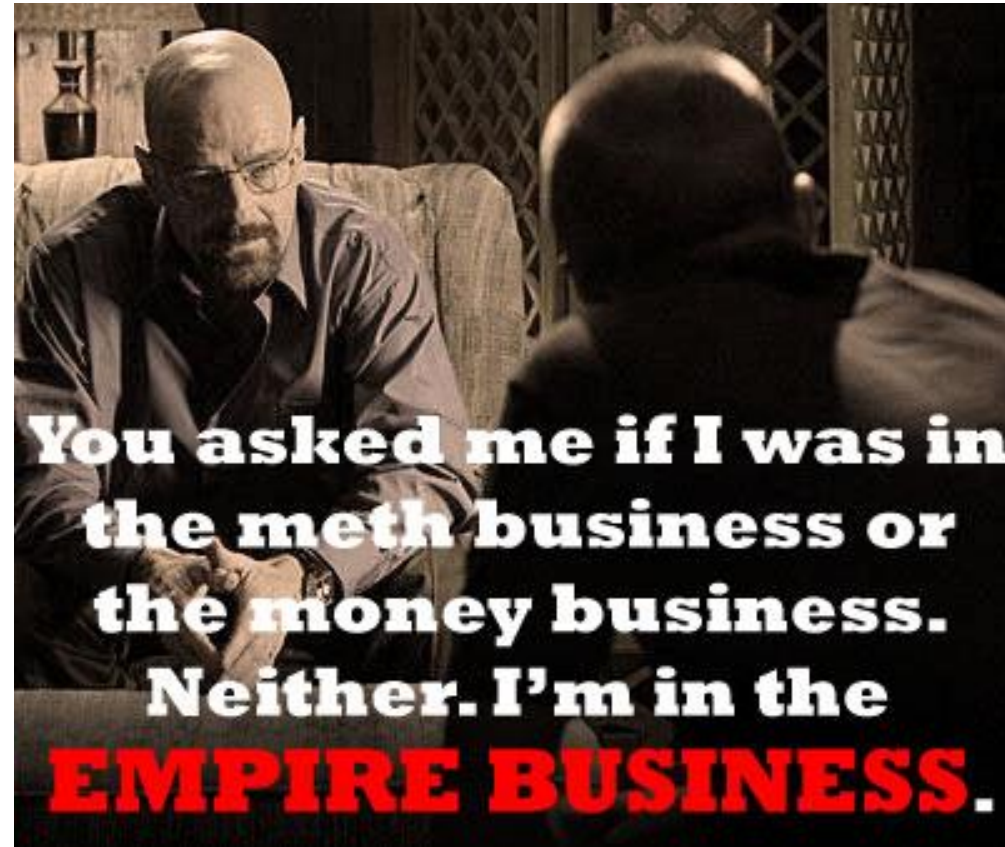


Private Company Valuation

- To answer this question, I'm going to summarize our **10-hour-long** private company tutorials in **20 minutes** (wish me luck!)
- **Case Study #1:** Large private company
- **Case Study #2:** Actual small business
- **Starting Point:** Think about *Breaking Bad*!



Private Company Valuation



- Walt is explaining his **obsession** with crystal meth, but he also lays out **the 3 types of private companies**

3 Main Categories:

- **Money Business:** Small, family-owned business or something heavily dependent on one person



per se



- **Meth Business:** Venture-backed startup planning for exit



WhatsApp



Instagram

tumblr.

- **Empire Business:** Large company with Board and management team; it isn't public but it could be



What About Private Companies?

- **“Empire Businesses” (Large Private Companies):** Almost the same as public co’s; minor differences
- **“Meth Businesses” (Startups):** Still very similar, but a few more differences (e.g., IPO valuation)
- **“Money Businesses” (Small Businesses):** Most differences emerge here – but you rarely work with these in IB/PE unless you’re at a small firm



What Exactly is Different?

- **Accounting & 3-Statement Projections:** *Mostly* an issue for Money Businesses – adjustments required!
- **Valuation:** Private companies might be worth very different amounts to different buyers / investors; illiquidity and other discounts often applied
- **DCF:** No “current” capital structure and no Market Cap, so Cost of Equity and WACC are tricky



Accounting / Projections:

- **Non-GAAP / IFRS Statements:** May have to normalize the categories
- **Salaries / Dividends:** May need reclassification
- **Business / Personal:** Intermingled!
- **Tax Rates:** Personal / small-business rate may differ from corporate / acquirer's rate



“Money Business” Income Statement:

Income Statement:	Units	Historical				
		Year 1	Year 2	Year 3	Year 4	Year 5
Gross Sales by Category:						
Online Courses:	\$	\$ 108,419	\$ 263,157	\$ 433,718	\$ 583,030	\$ 734,675
Product Sales Referred by Affiliates:	\$	40,392	52,631	61,087	37,859	47,706
Coaching & Resume Editing Services:	\$	36,140	44,534	54,978	60,575	66,789
Sales to Institutions:	\$	8,503	20,243	30,544	53,003	76,330
Commissions from Other Products:	\$	19,133	24,291	30,544	22,715	28,624
Total Gross Sales:	\$	212,587	404,857	610,871	757,182	954,123
Commissions by Category:						
Commissions Paid to Affiliates:	\$	20,196	26,316	30,544	18,930	23,853
Commissions Paid to Coaches:	\$	18,070	22,267	27,489	30,287	33,394
Commissions Paid to Sales Reps:	\$	-	8,097	12,217	21,201	30,532
Total Commissions:	\$	38,266	56,680	70,250	70,418	87,779
Gross Sales Less Commissions:	\$	174,321	348,177	540,621	686,764	866,344
Fees & Refunds:						
Payment Fees:	\$	6,165	11,336	17,104	21,201	26,715
Refunds:	\$	6,378	12,551	21,380	30,287	39,119
Total Fees & Refunds:	\$	12,543	23,887	38,485	51,488	65,834
Net Sales After Fees and Refunds:	\$	161,779	324,290	502,136	635,276	800,509
Operating Expenses:						
Tax, Bookkeeping & Legal Fees:	\$	1,250	1,500	1,500	2,000	2,250
Customer Support:	\$	-	30,000	30,000	45,000	60,000
Online Advertising:	\$	-	10,000	20,000	20,000	30,000
Web Design & Development:	\$	10,000	30,000	60,000	60,000	60,000
Sales Reps - Base Salaries:	\$	-	10,000	12,000	12,000	12,000
Marketing Staff:	\$	-	-	40,000	60,000	80,000
IT Infrastructure:	\$	2,000	5,000	10,000	15,000	20,000
Travel & Moving Expenses:	\$	5,768	8,798	6,012	5,123	6,763
Depreciation & Amortization:	\$	568	792	1,011	1,523	2,024
Product Creation:	\$	-	-	40,000	40,000	80,000
Content Creation:	\$	-	-	30,000	30,000	30,000
Total Operating Expenses:	\$	19,586	96,090	250,523	290,646	383,037
Operating Income:	\$	142,193	228,200	251,613	344,630	417,472
Income Taxes:	\$	35,548	61,614	70,452	99,943	125,242
Net Income:	\$	\$ 106,645	\$ 166,586	\$ 181,161	\$ 244,687	\$ 292,231

Normalized Version:

Income Statement:	Units	Historical				
		Year 1	Year 2	Year 3	Year 4	Year 5
Gross Sales:	\$	\$ 212,587	\$ 404,857	\$ 610,871	\$ 757,182	\$ 954,123
Less: Allowances & Refunds:	\$	(6,378)	(12,551)	(21,380)	(30,287)	(39,119)
Net Sales:	\$	206,209	392,306	589,491	726,895	915,004
Operating Expenses:						
General & Administrative:	\$	39,415	97,836	136,604	158,201	188,965
Sales & Marketing:	\$	78,266	126,680	202,250	244,918	319,779
Research & Development:	\$	20,000	30,000	112,000	122,500	180,000
Depreciation & Amortization:	\$	568	792	1,011	1,523	2,024
Total Operating Expenses:	\$	138,249	255,308	451,866	527,142	690,769
Operating Income:	\$	67,961	136,998	137,625	199,753	224,235
Net Interest Income / (Expense):	\$	-	-	-	-	-
Pre-Tax Income:	\$	67,961	136,998	137,625	199,753	224,235
Income Taxes:	\$	35,548	61,614	70,452	99,943	125,242
Net Income:	\$	\$ 32,413	\$ 75,384	\$ 67,173	\$ 99,810	\$ 98,994

- **Changes:** More normal categories, added in the owner's salary, removed personal expenses, and the tax rate will change in future periods

Valuation:

- **What's the Purpose?** Sale to private co. or individual different from sale to public co., IPO, fundraising, or spin-off



- **Illiquidity Discount:** Almost always applied to public comps used to value private companies



- **Discount Range:** Might be 10-30%? Depends on the size/scale of the company and the valuation's purpose

Public Comps:

Valuation Statistics	Capitalization		Enterprise Value /			Enterprise Value /		
	Equity Value	Enterprise Value	LTM	Revenue		LTM	EBITDA	
Company Name				Forward Year 1	Forward Year 2		Forward Year 1	Forward Year 2
Nord Anglia Education Inc	\$ 1,924.7	\$ 2,280.4	4.8 x	4.2 x	3.7 x	17.9 x	15.9 x	13.4 x
Strayer Education Inc	671.1	627.6	1.4 x	1.5 x	1.4 x	6.1 x	6.6 x	6.0 x
Capella Education Company	800.5	633.4	1.5 x	1.4 x	1.4 x	7.0 x	6.7 x	6.4 x
American Public Education, Inc.	595.1	474.3	1.4 x	1.3 x	1.2 x	6.4 x	6.3 x	5.9 x
Lincoln Educational Services Corp	52.9	77.8	0.2 x	0.2 x	0.2 x	NM	NM	NM
National American University Holdings Inc	82.1	74.7	0.6 x	0.6 x	0.6 x	5.9 x	6.7 x	4.9 x
Maximum	\$ 1,924.7	\$ 2,280.4	4.8 x	4.2 x	3.7 x	17.9 x	15.9 x	13.4 x
75th Percentile	768.2	632.0	1.5 x	1.4 x	1.4 x	7.0 x	6.7 x	6.4 x
Median	633.1	550.9	1.4 x	1.4 x	1.3 x	6.4 x	6.7 x	6.0 x
25th Percentile	210.3	176.9	0.8 x	0.8 x	0.8 x	6.1 x	6.6 x	5.9 x
Minimum	52.9	74.7	0.2 x	0.2 x	0.2 x	5.9 x	6.3 x	4.9 x

- **BUT...** we'd need to discount these multiples for a true "small business" – a \$5 million revenue company can't be compared to a \$500 million revenue company

Public Comps:

Valuation Statistics - Capital Capable Media LLC	Capital Capable Media LLC - Range of Valuation Multiples						Capital Capable Media LLC - Range of Implied Equity Values					
	Maximum Multiple	75th Percentile Multiple	Median Multiple	25th Percentile Multiple	Minimum Multiple	Applicable Company Figure	Private Company Discount	Minimum Multiple	25th Percentile Multiple	Median Multiple	75th Percentile Multiple	Maximum Multiple
Public Company Comparables:												
LTM EV / Revenue:	4.8 x	1.5 x	1.4 x	0.8 x	0.2 x	\$ 915,004	30.0%	\$ 557,966	\$ 905,577	\$ 1,293,243	\$ 1,353,497	\$ 3,484,613
Forward Year 1 EV / Revenue:	4.2 x	1.4 x	1.4 x	0.8 x	0.2 x	1,062,800	30.0%	587,952	994,426	1,419,927	1,485,642	3,534,305
Forward Year 2 EV / Revenue:	3.7 x	1.4 x	1.3 x	0.8 x	0.2 x	1,261,408	30.0%	609,685	1,076,907	1,553,490	1,645,378	3,675,304
LTM EV / EBITDA:	17.9 x	7.0 x	6.4 x	6.1 x	5.9 x	226,259	30.0%	1,336,408	1,377,968	1,420,833	1,514,629	3,242,022
Forward Year 1 EV / EBITDA:	15.9 x	6.7 x	6.7 x	6.6 x	6.3 x	272,480	30.0%	1,608,471	1,659,190	1,678,868	1,689,897	3,435,999
Forward Year 2 EV / EBITDA:	13.4 x	6.4 x	6.0 x	5.9 x	4.9 x	306,059	30.0%	1,459,317	1,675,656	1,696,178	1,776,494	3,287,701
LTM Price / Earnings:	72.9 x	23.7 x	21.1 x	15.7 x	14.5 x	98,994	30.0%	1,003,128	1,091,008	1,461,950	1,640,209	5,053,437
Forward Year 1 Price / Earnings:	31.3 x	19.0 x	18.2 x	14.5 x	13.6 x	175,665	30.0%	1,670,284	1,788,969	2,240,788	2,331,002	3,843,166
Forward Year 2 Price / Earnings:	24.6 x	17.2 x	16.2 x	13.7 x	12.1 x	197,221	30.0%	1,666,882	1,888,938	2,234,041	2,375,993	3,397,870

- But you might not apply this same discount for the Precedent Transactions since they already reflect the **control premiums** paid by buyers (and the discount would be much lower for Empire Businesses)

Precedent Transactions:

- No huge differences, but you might use more “creative” metrics, especially for tech start-ups:

Kakao Corp - Comparable M&A Transactions									
Acquirer Name	Target Name	Announcement Date	Transaction			Monthly Active Users (MAUs) in Millions	Enterprise Value /		
			Enterprise Value	LTM Revenue	LTM EBITDA		LTM Revenue	LTM EBITDA	Monthly Active Users
Facebook, Inc.	WhatsApp Inc.	2014-02-19	\$ 19,000.0	\$ 20.0	N/A	450.0	NM	N/A	\$ 42.22
Rakuten, Inc.	Viber Media Inc.	2014-02-14	900.0	1.5	(26.5)	100.0	NM	NM	9.00
Zynga, Inc.	NaturalMotion Ltd.	2014-01-30	527.0	62.0	N/A	N/A	8.5 x	N/A	N/A
Facebook, Inc. (Cancelled)	Snapchat Inc (Cancelled)	2013-11-13	3,000.0	N/A	N/A	30.0	N/A	N/A	100.00
SoftBank Corp.	Supercell Oy	2013-10-15	3,000.0	876.0	464.0	29.4	3.4 x	6.5 x	102.04
Yahoo! Inc.	Tumblr, Inc.	2013-05-20	1,100.0	13.0	N/A	40.0	84.6 x	N/A	27.50
NEXON Co., Ltd.	gloops, Inc.	2012-10-01	468.4	304.8	75.1	10.0	1.5 x	6.2 x	46.84
ZheBao Media Holding Group	GameABC.com	2012-04-10	503.8	66.2	22.9	15.0	7.6 x	22.0 x	33.59
Facebook, Inc.	Instagram, Inc.	2012-04-09	1,000.0	N/A	N/A	35.0	N/A	N/A	28.57
Electronic Arts Inc.	PopCap Games, Inc.	2011-07-12	1,025.0	100.0	N/A	16.0	10.3 x	N/A	64.06
Microsoft Corporation	Skype Global S.à r.l.	2011-05-11	8,500.0	859.8	181.9	145.0	9.9 x	46.7 x	58.62
The Walt Disney Company	Playdom, Inc.	2010-07-27	663.2	50.0	N/A	42.0	13.3 x	N/A	15.79
	Maximum		\$ 19,000.0	\$ 876.0	\$ 464.0	450.0	84.6 x	46.7 x	\$ 102.04
	75th Percentile		3,000.0	253.6	181.9	71.0	11.0 x	28.1 x	61.34
	Median		1,012.5	64.1	75.1	35.0	9.2 x	14.2 x	42.22
	25th Percentile		629.2	27.5	22.9	22.7	6.6 x	6.4 x	28.04
	Minimum		468.4	1.5	(26.5)	10.0	1.5 x	6.2 x	9.00

DCF Problems and Differences

- **Problem #1: The Discount Rate**

- *Should* be higher for a private company – more risk!
- But how do you calculate it when the company doesn't have a market cap or Beta?



- **Problem #2: Terminal Value**

- Similar for Empire Businesses and Meth Businesses, but must be **discounted** for Money Businesses – what if the owner dies?



The Discount Rate

- **Cost of Equity and WACC:**
 - Use industry average or comps' average capital structure?
 - Use firm's "Optimal" capital structure?
 - Circular logic, where DCF output is fed into company's "Market Cap"? (Not recommended)
 - Track volatility of earnings for Beta? (Questionable)

The Discount Rate

Comparable Companies - Unlevered Beta Calculation										
Name	Levered			Preferred		Equity			Unlevered Beta	
	Beta	Debt	% Debt	Stock	% Preferred	Value	% Equity	Tax Rate		
Nord Anglia Education Inc	0.32	\$ 522.4	21.3%	\$ -	-	\$ 1,924.7	78.7%	40.0%	0.28	
Strayer Education Inc	1.55	118.8	15.0%	-	-	671.1	85.0%	40.0%	1.40	
Capella Education Company	1.11	-	-	-	-	800.5	100.0%	40.0%	1.11	
American Public Education, Inc.	1.15	-	-	-	-	595.1	100.0%	40.0%	1.15	
Lincoln Educational Services Corp	2.11	43.9	45.3%	-	-	52.9	54.7%	40.0%	1.41	
National American University Holdings I	1.25	12.3	13.0%	-	-	82.1	87.0%	40.0%	1.15	
Median:	1.20	\$ 28.1	14.0%	\$ -	-	\$ 633.1	86.0%	40.0%	1.15	
Median "Total" Unlevered Beta:										1.93

Capital Capable Media LLC - Levered Beta & WACC Calculation										
	Unlevered			Preferred		Equity			Levered Beta	
	Beta	Debt	% Debt	Stock	% Preferred	Value	% Equity	Tax Rate		
"Optimal" Capital Structure:	1.93		14.0%		-		86.0%	35.0%	2.14	
Cost of Equity Based on Comparables and "Optimal" Capital Structure:										17.01%

WACC = Cost of Equity * % Equity + Cost of Debt * % Debt * (1 - Tax Rate) + Cost of Preferred Stock * % Preferred Stock

WACC, "Optimal" Capital Structure:	14.84%
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- Many approaches, but you'll likely end up just using the **median capital structure of the comps for this**

Terminal Value

- **Terminal Value:** May not make sense for a true small business – can it really operate “forever”?
- **Option #1:** Heavily discount the Terminal Value
- **Option #2:** Skip and project FCF far into the future
- **Option #3:** Terminal Value = Liquidation Value



Terminal Value

Terminal Value - Perpetuity Growth Method:

Baseline Terminal FCF Growth Rate:	3.0%
Baseline Terminal Value:	\$ 3,054,203
Terminal Value After Discount:	2,290,652
Implied Terminal EBITDA Multiple:	4.3 x
PV of Terminal Value:	573,949
Sum of PV of Free Cash Flows:	1,272,949
Implied Enterprise Value:	1,846,899
% of Implied EV from Terminal Value:	31.1%
Plus: Cash & Cash-Equivalents:	407,072
Plus: Equity Investments:	-
Plus: Other Non-Core Assets, Net:	-
Plus: Net Operating Losses:	-
Less: Total Debt:	-
Less: Noncontrolling Interests:	-
Implied Equity Value:	\$ 2,253,971

Terminal Value - Liquidation Value Method:

Final Projection Year Liquidation Value:	\$ 1,431,523
Cumulative FCF Beyond Final Year:	1,541,716
Terminal Value Based on Asset Liquidation:	2,973,239
Terminal Value After Discount:	2,973,239
PV of Terminal Value:	744,980
Sum of PV of Free Cash Flows:	1,272,949
Implied Enterprise Value:	2,017,929
% of Implied EV from Terminal Value:	36.9%
Plus: Cash & Cash-Equivalents:	407,072
Plus: Equity Investments:	-
Plus: Other Non-Core Assets, Net:	-
Plus: Net Operating Losses:	-
Less: Total Debt:	-
Less: Noncontrolling Interests:	-
Implied Equity Value:	\$ 2,425,001

Terminal Value - "Cease Operations" Method:

FCF Growth / (Decline) Rate:	(10.0%)
Sum of PV of FCF Beyond Year 15:	290,933
Sum of PV of Free Cash Flows:	1,272,949
Implied Enterprise Value:	1,563,882
% of Implied EV from FCF Beyond Year 15:	18.6%
Plus: Cash & Cash-Equivalents:	407,072
Plus: Equity Investments:	-
Plus: Other Non-Core Assets, Net:	-
Plus: Net Operating Losses:	-
Less: Total Debt:	-
Less: Noncontrolling Interests:	-
Implied Equity Value:	\$ 1,970,954

- **End Result:** The company will *not* be worth as much as a public company, particularly far into the future

Final Thoughts

- **Private Companies:** What *type* of company is it, and what is the *purpose* of your analysis?
- **Empire Business:** Few differences; minor discounts
- **Meth Business:** Greater discounts/adjustments
- **Money Business:** Significant discounts to comps' multiples, Terminal Value in a DCF, etc.



Final Thoughts

- **No new methodologies**, multiples, etc. – just variations and tweaks of old ones
- **Basic Point:** Private companies < Public companies
- **Accounting:** Tweak and reclassify the statements
- **Valuation / DCF:** Illiquidity discounts, rough estimates for Discount Rate, and discounted Terminal Value

