CORPORATE FINANCE: SPRING 2019

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Ponderous Thoughts, or maybe not

1. There are few facts and lots of opinions.
   a. Even the givens (cash & risk free rate) are not.
   b. With accounting and market numbers, all bets are off.
2. The real world is a messy place.
   a. Money making firms can become money losers
   b. Companies can be restructured/ given facelifts
3. Models don't compute values and optimal paths. You do.
4. Change is the only constant. Everything changes all the time.

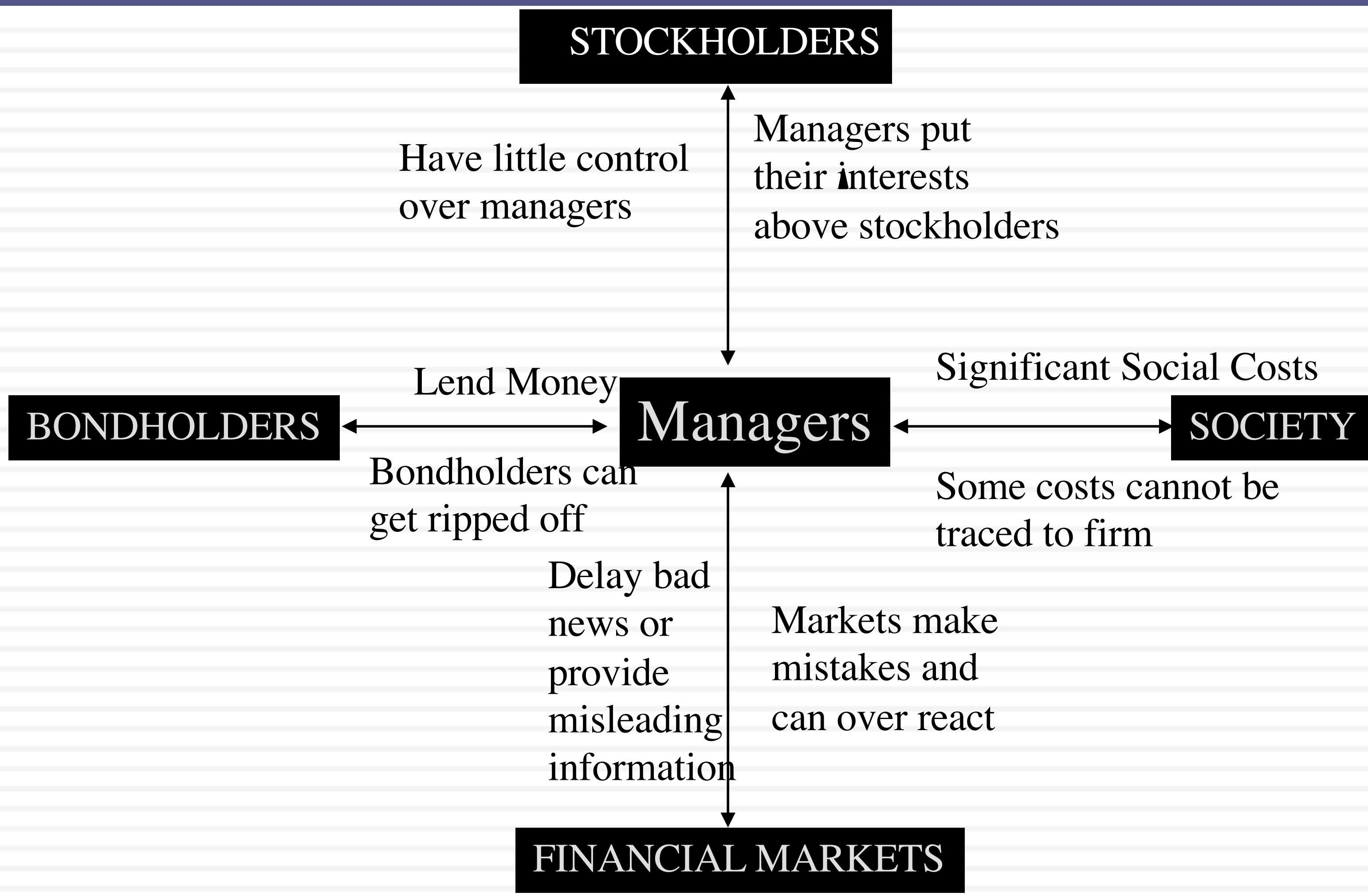
The most analyzed companies this semester were..

Company	Number of analyses
Expedia	4
EA	4
Lululemon	4
Marriott	4
Salesforce	4
Activistiion Blizzard	5
Netflix	5
Chipotle	5

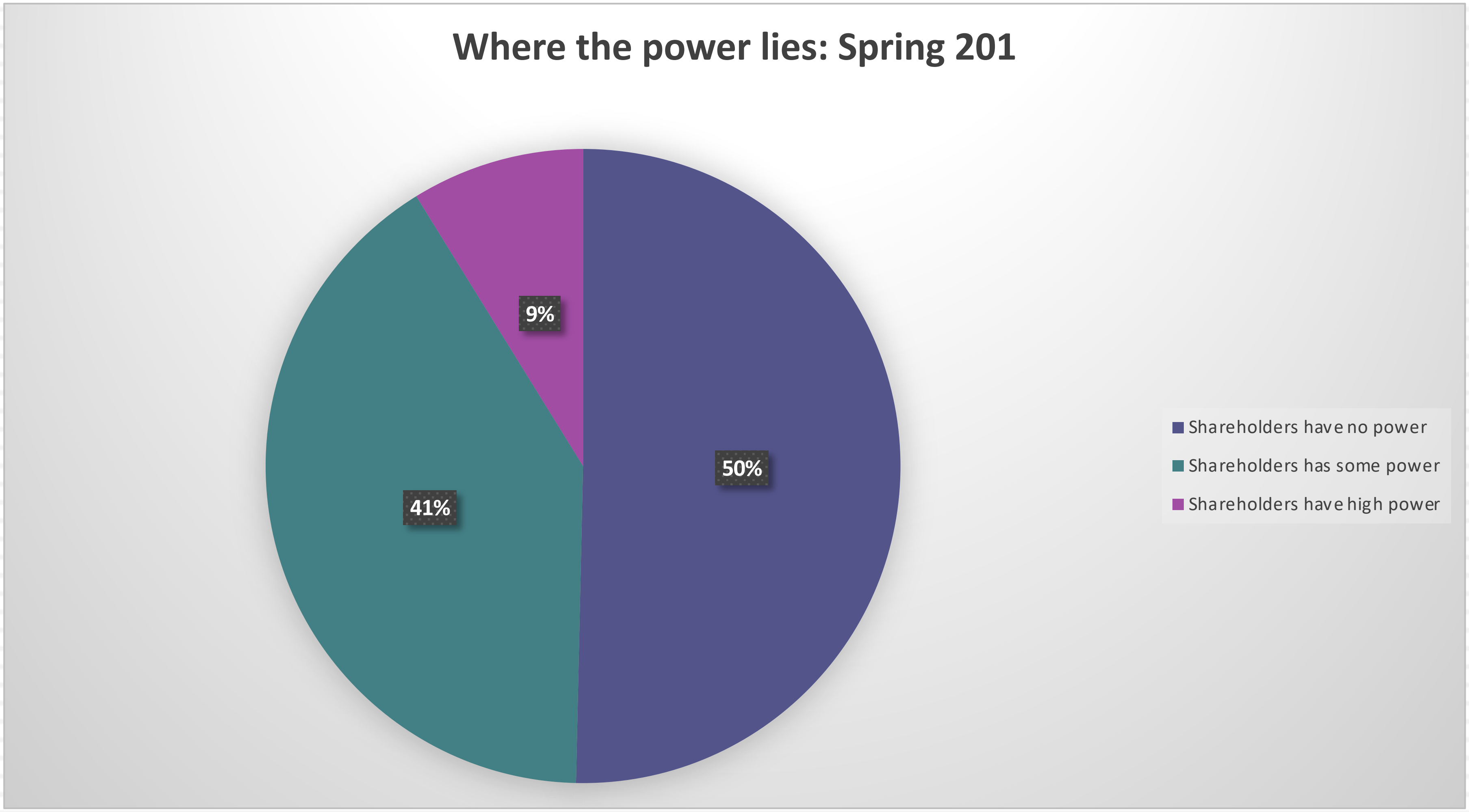
And here's why you can do the same company..

Company	Beta	Jensen's Alpha	R squared	ROE - COE	ROC - WACC	EVA	Current Debt ratio	Optimal Debt Ratio	Dividends	FCFE	Value/share	Price/Share
Activision	0.85	-2.44%	11.60%	0.09%	0.58%	$ 127.80	7.81%	10.00%	226.67	$826.67	$ 42.01	$ 48.00
Activision	1.31	14.75%	23.40%	6.41%	8.42%	$1,752	7.63%	30.00%	$259	$1,243.30	$39.34	$46.07
Activision Blizzard	1.18	-13.84%	10.00%	6.27%	10.70%	$ 980.30	6.40%	30.00%	259	1,117.90	$ 47.45	$ 49.00
Activision Blizzard	1.31	14.75%	9.90%	-4.42%	-0.19%	-$27.64	12.24%	40%	$286.40	$1,162	$46.45	$46.02
Activision Blizzard	1.06	14.86%	0.10%	7.17%	-0.69%	$ (335.00)	7.42%	40.00%	$198.00	$31,098	$ 42.80	$ 46.02

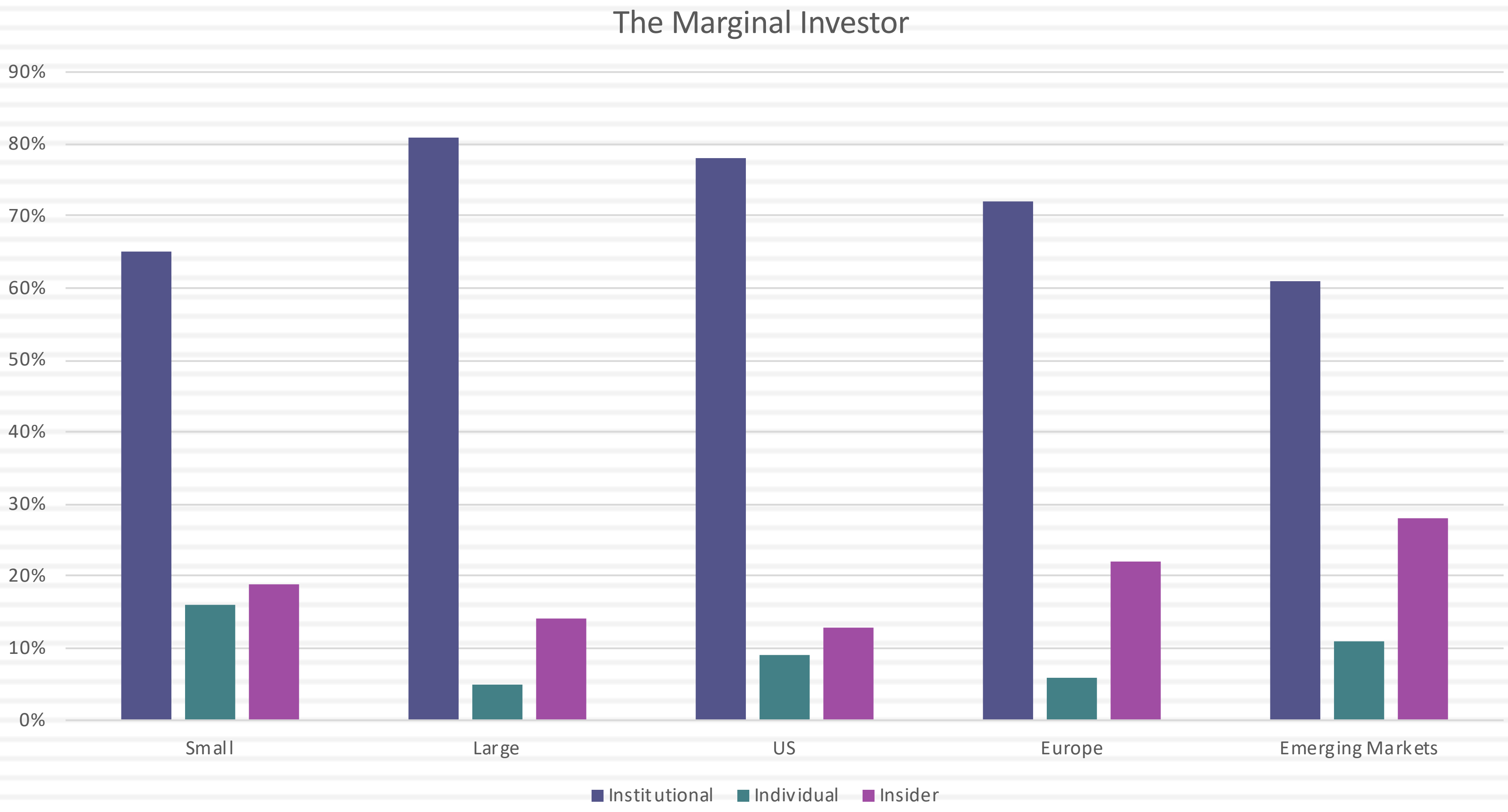
The Breakdown in the Classical Objective Function



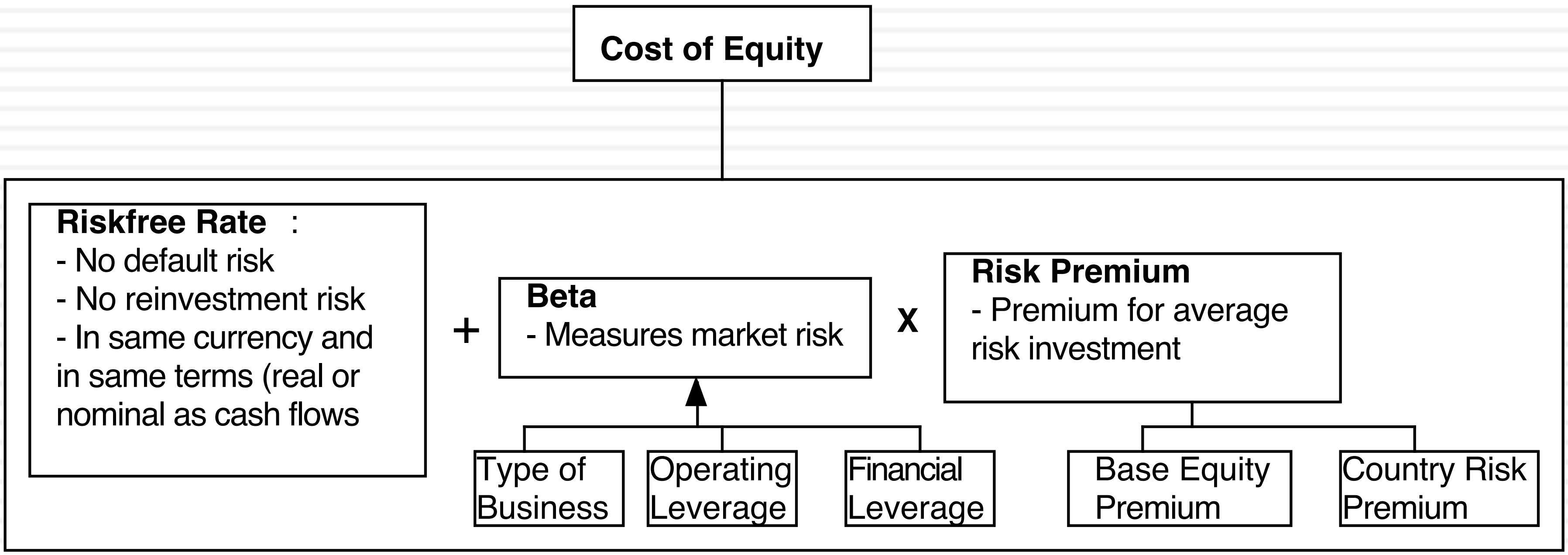
I. Where does the power lie?



II. Who is your marginal investor? From Spring 2017

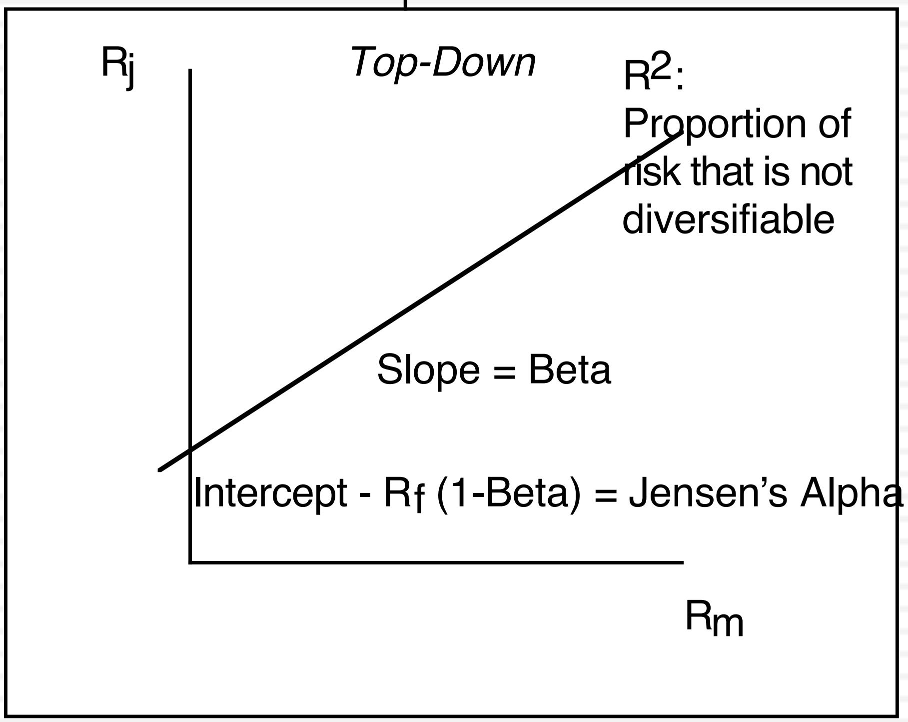


III. Risk Profiles and Costs of Equity



Beta: The Standard Approach

Beta of Equity

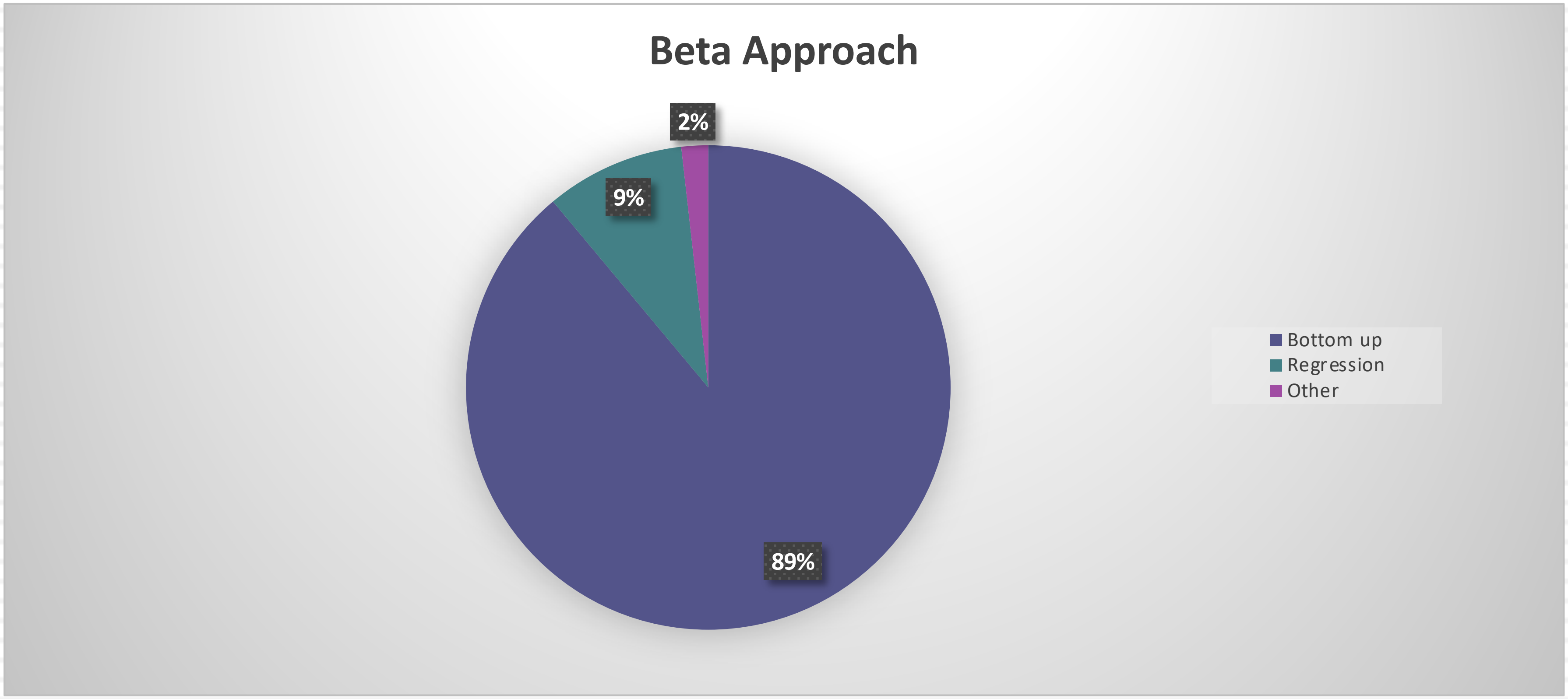


Bottom-up

1. Identify businesses that firm is in.
2. Take weighted average of the unlevered betas of other firms in the business
3. Compute the levered beta using the firm's current debt to equity ratio:

$\beta_l = \beta_u$ [1 + (1-tax rate) (Debt/Equity)]

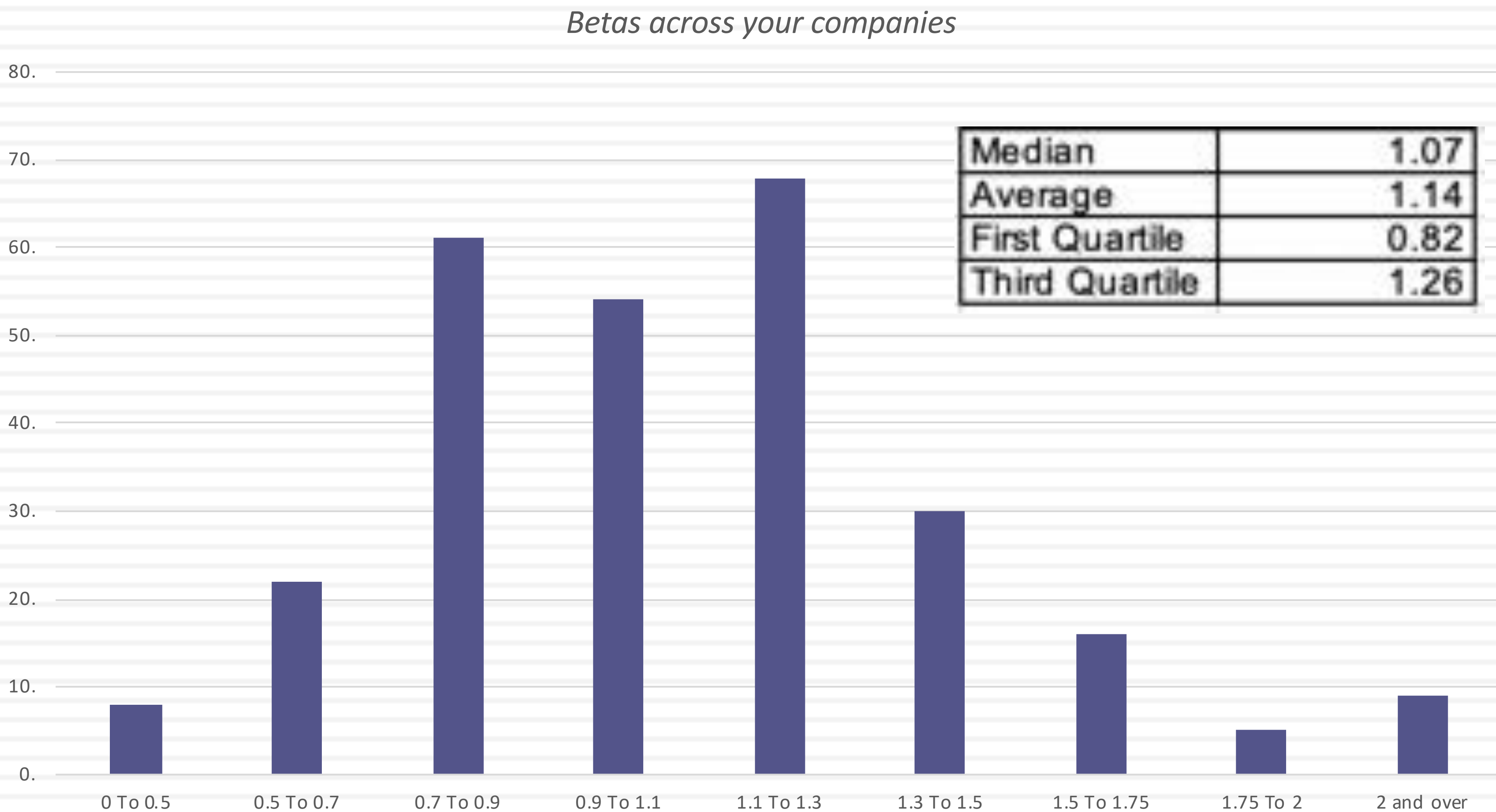
Your choice on beta approach



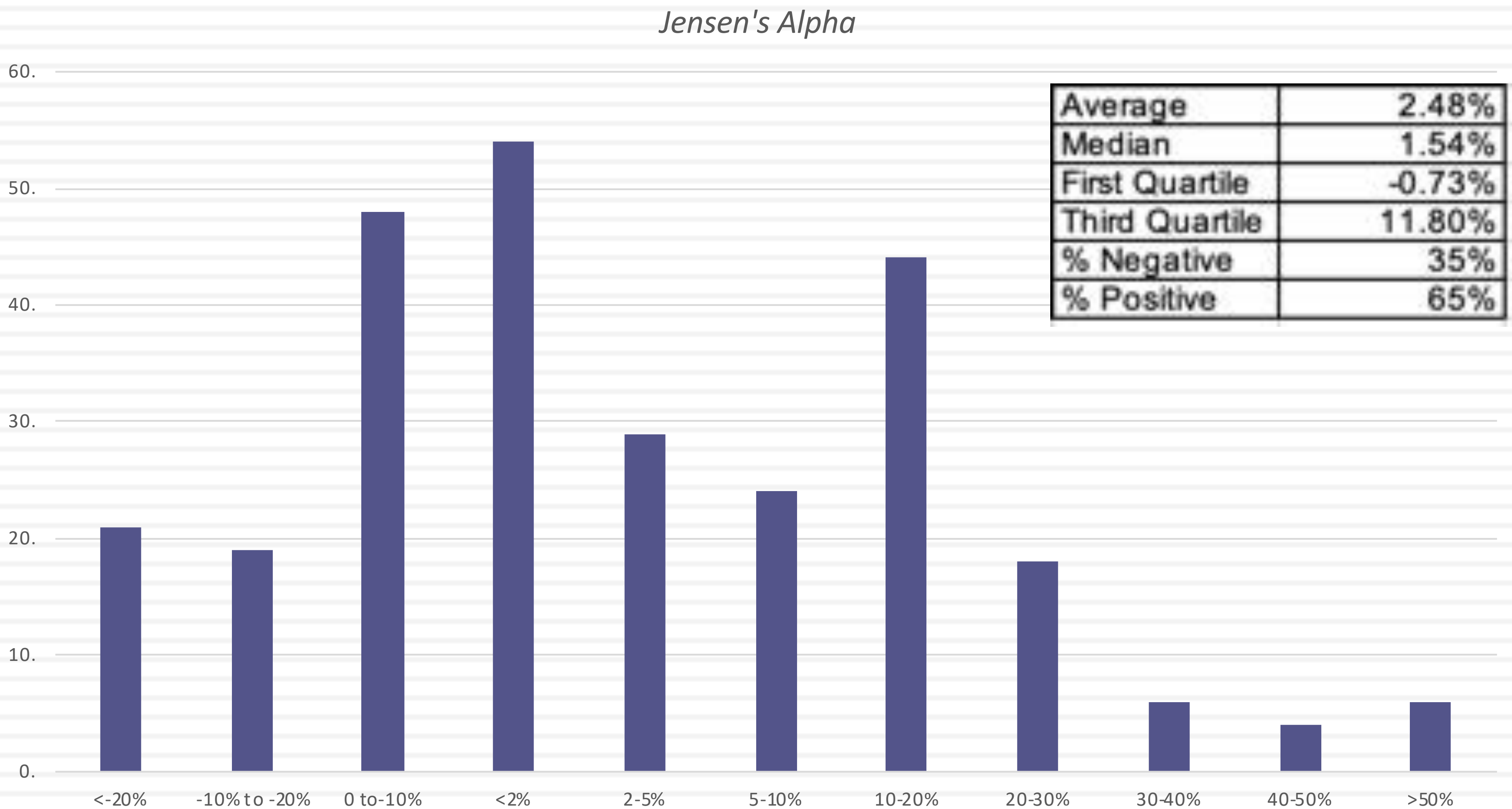
Typical reasons

1. My company is unique. I cannot find comparable firms.
2. My company is in only one line of business
3. My bottom-up beta is too different from my regression beta

Beta Distribution

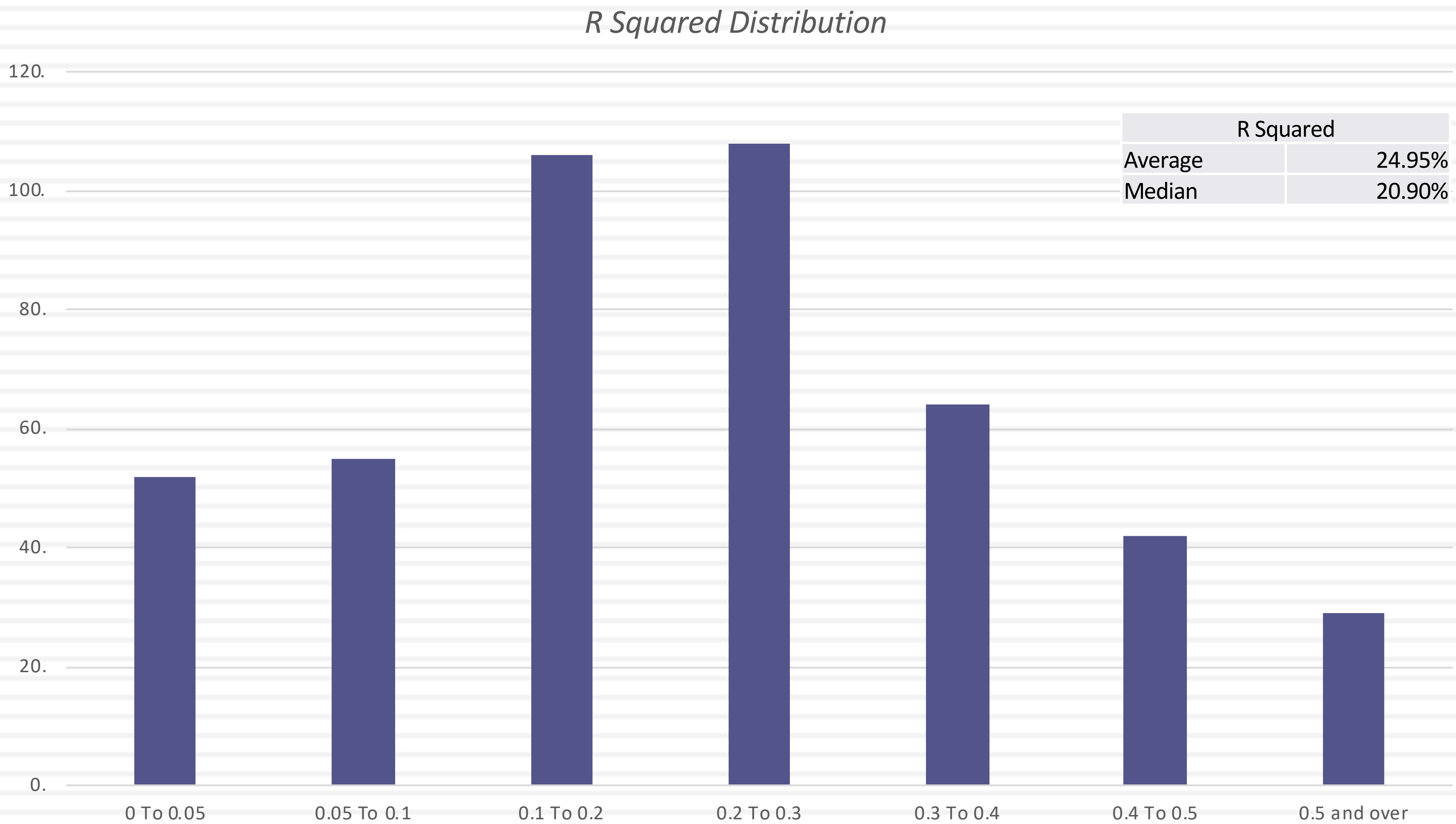


Jensen's Alpha Distribution



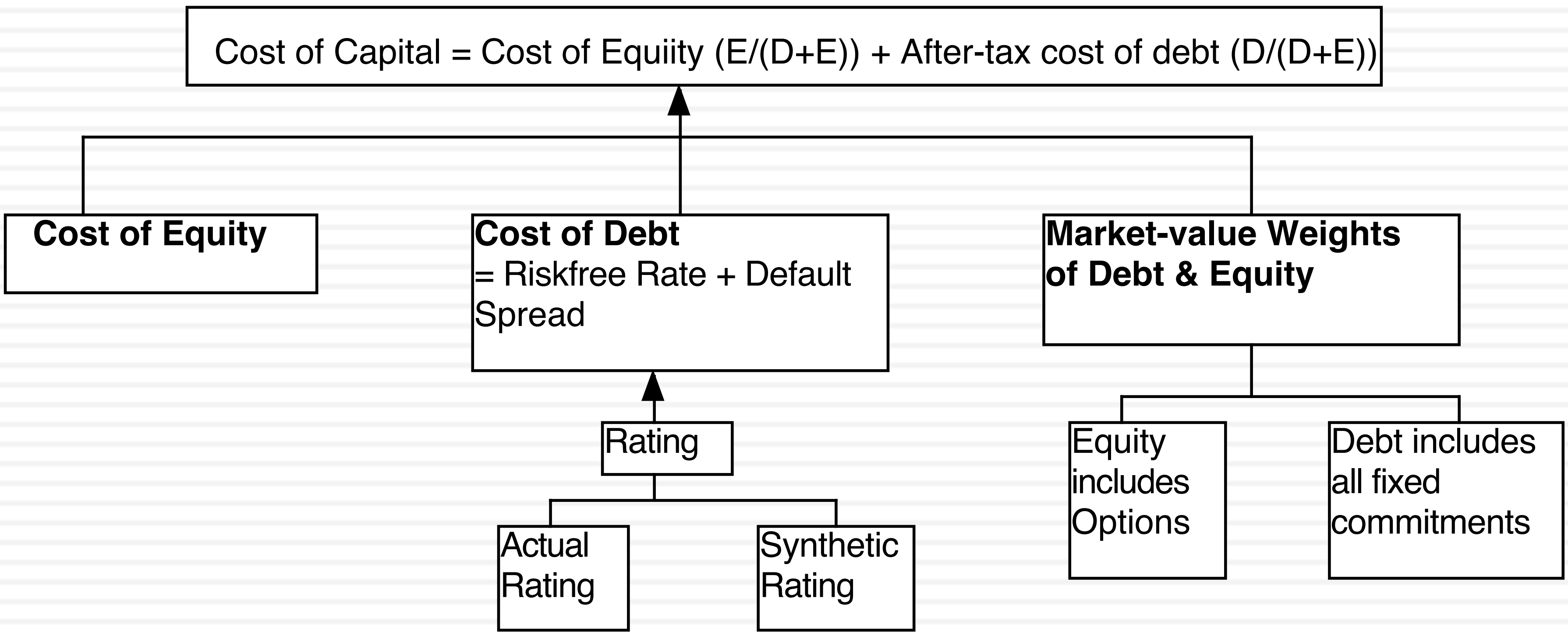
Average	2.48%
Median	1.54%
First Quartile	-0.73%
Third Quartile	11.80%
% Negative	35%
% Positive	65%

R Squared

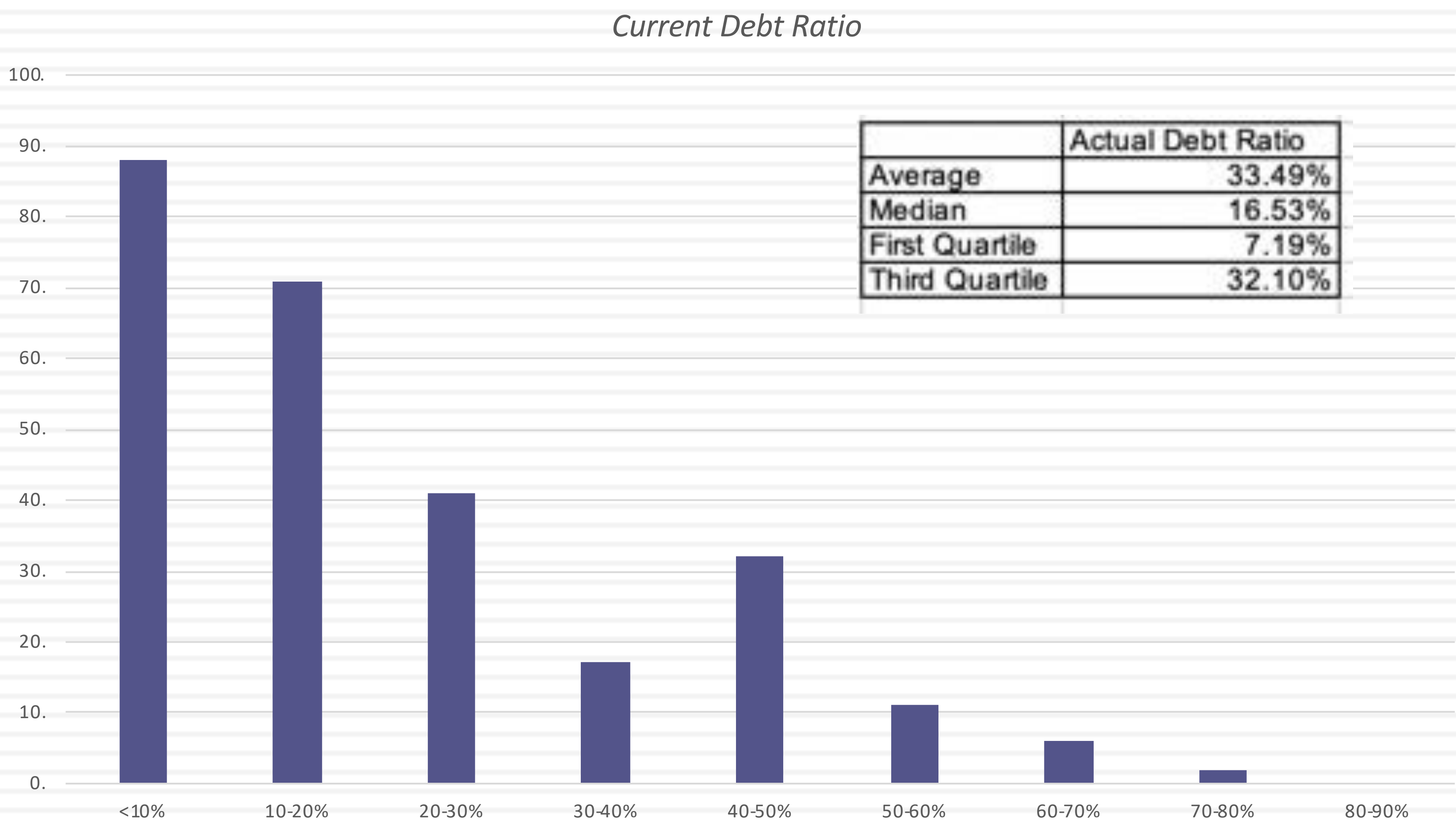


R Squared	
Average	24.95%
Median	20.90%

Cost of Capital

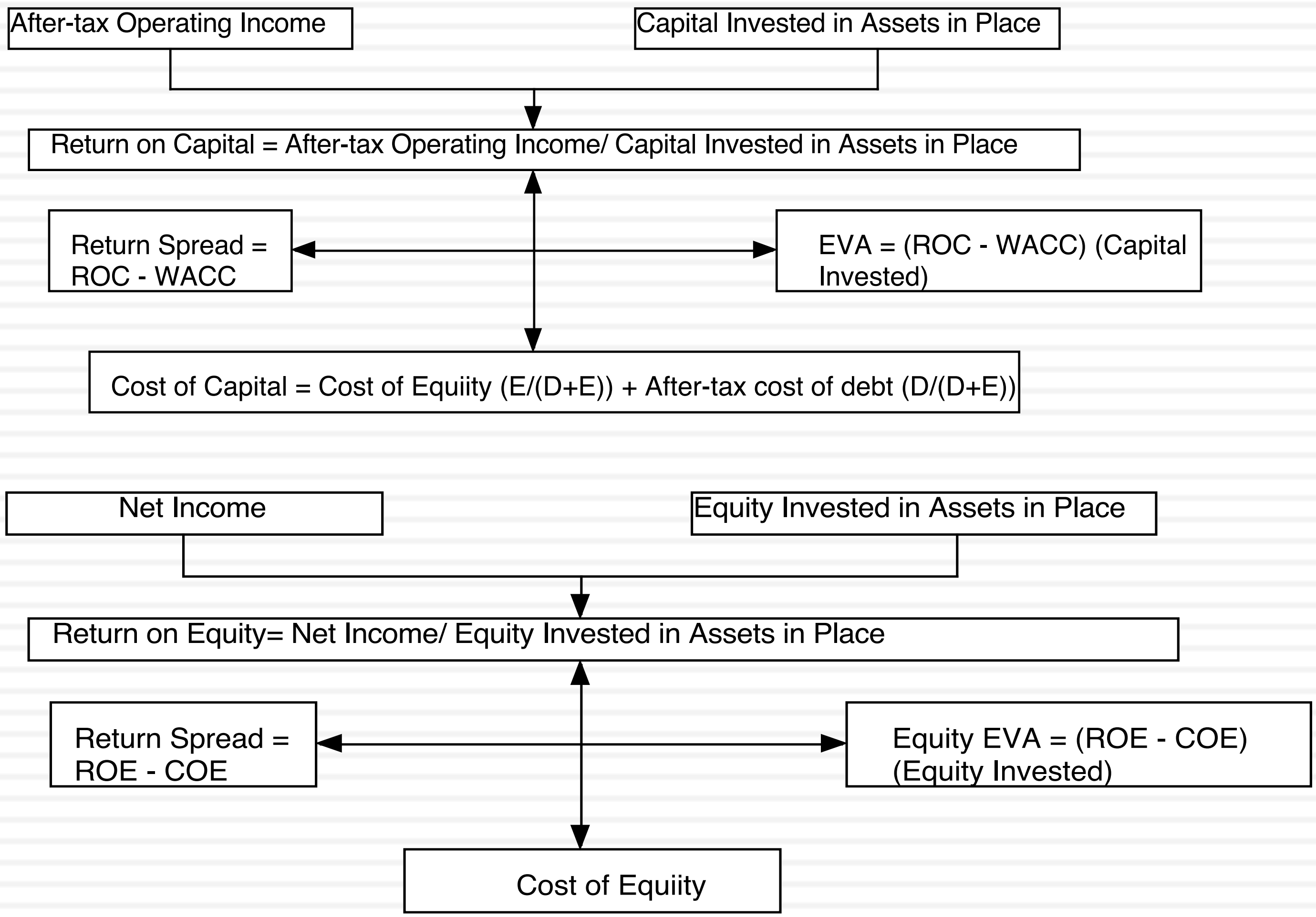


Distribution of Current Market Value Debt Ratios



	Actual Debt Ratio
Average	33.49%
Median	16.53%
First Quartile	7.19%
Third Quartile	32.10%

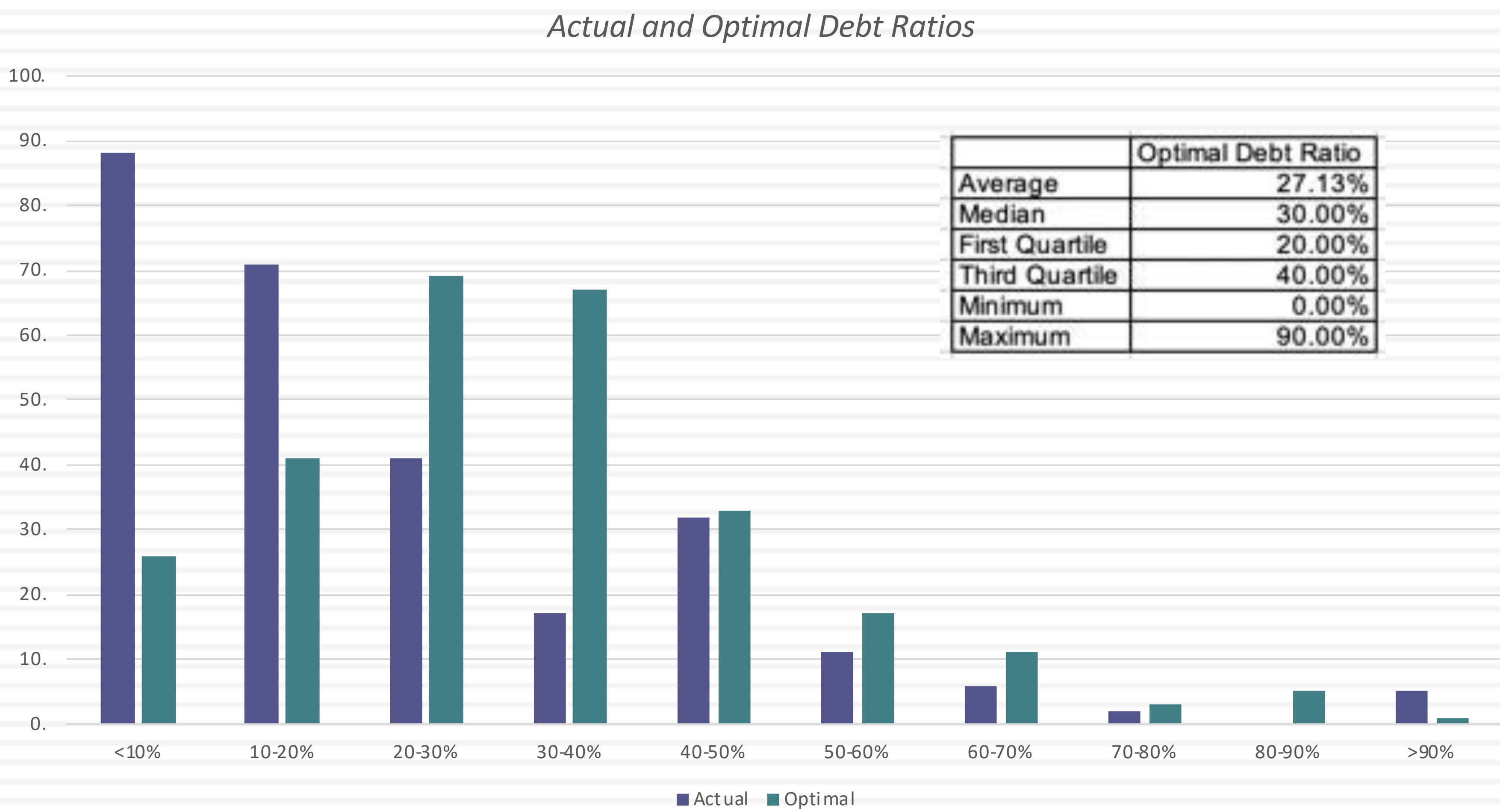
IV. The Quality of Investments: The Firm View



Return Spreads

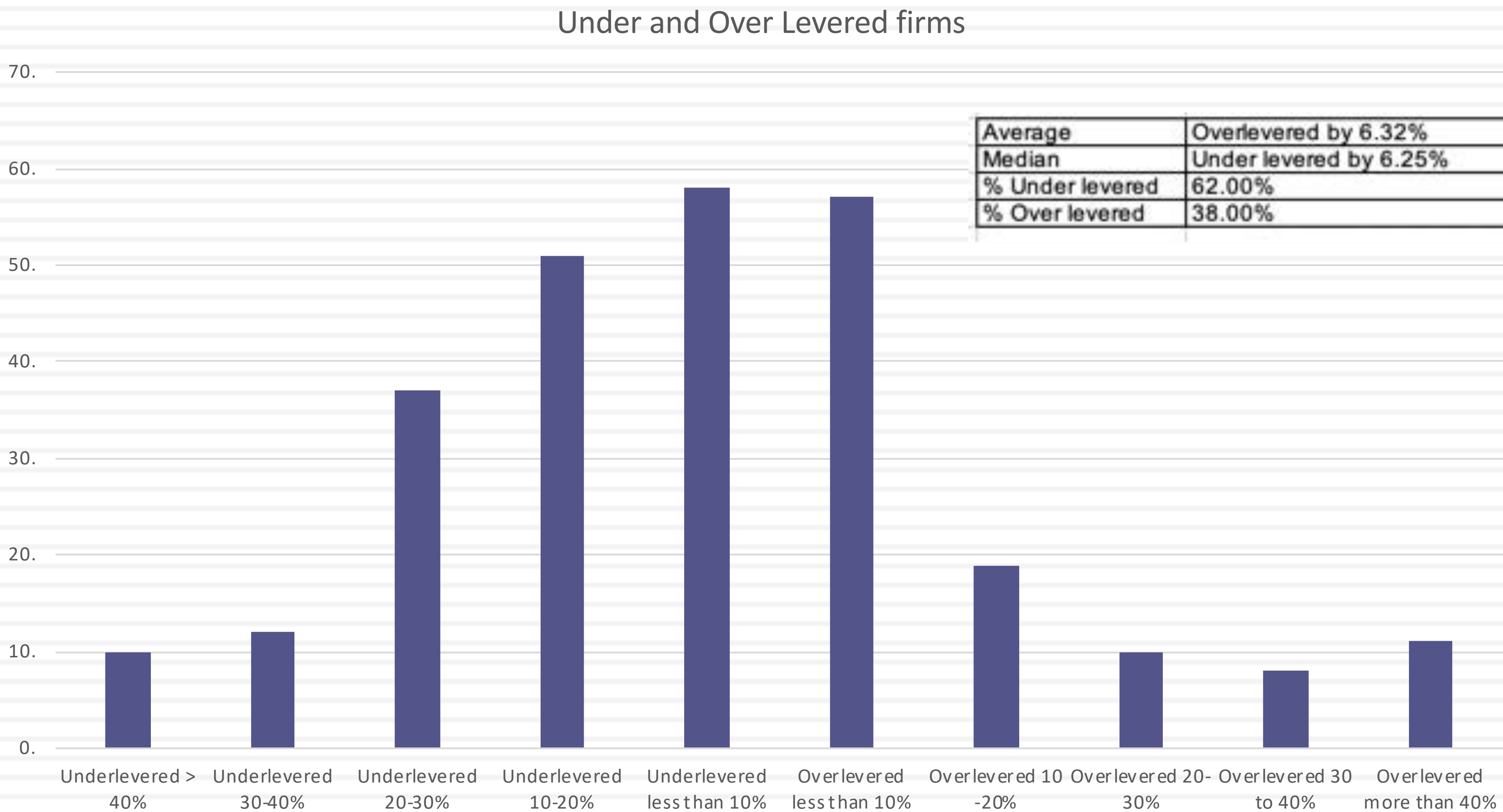
	ROC - WACC	ROE - COE
Average	3.91%	5.47%
Median	5.34%	8.20%

VI. The Optimal Financing Mix



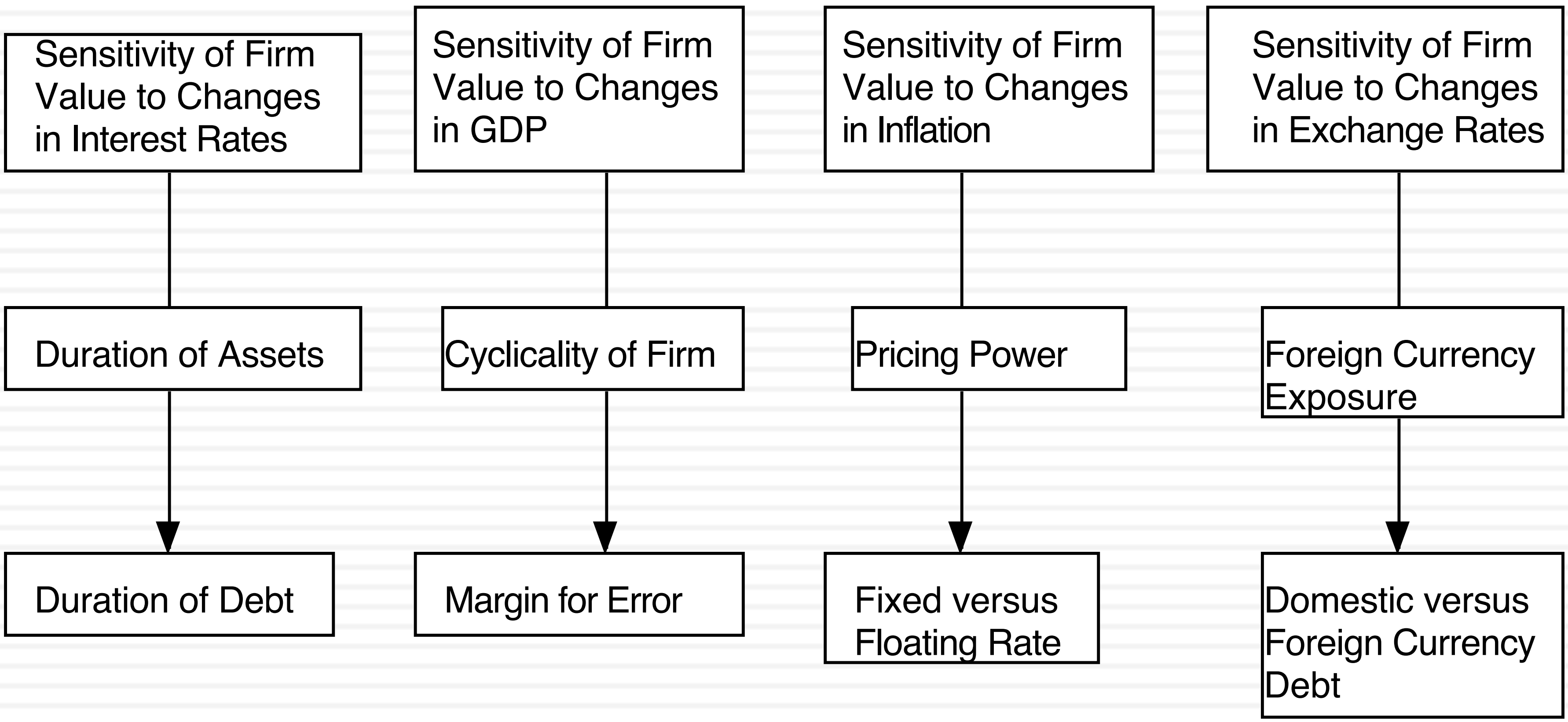
	Optimal Debt Ratio
Average	27.13%
Median	30.00%
First Quartile	20.00%
Third Quartile	40.00%
Minimum	0.00%
Maximum	90.00%

Under versus Over Levered Firms



Average	Overlevered by 6.32%
Median	Under levered by 6.25%
% Under levered	62.00%
% Over levered	38.00%

VIII. The Right Kind of Financing



IX. Measuring Potential Dividends

Begin with the net income (which is after interest expenses and taxes)

Add back the non-cash charges such as depreciation & amortization

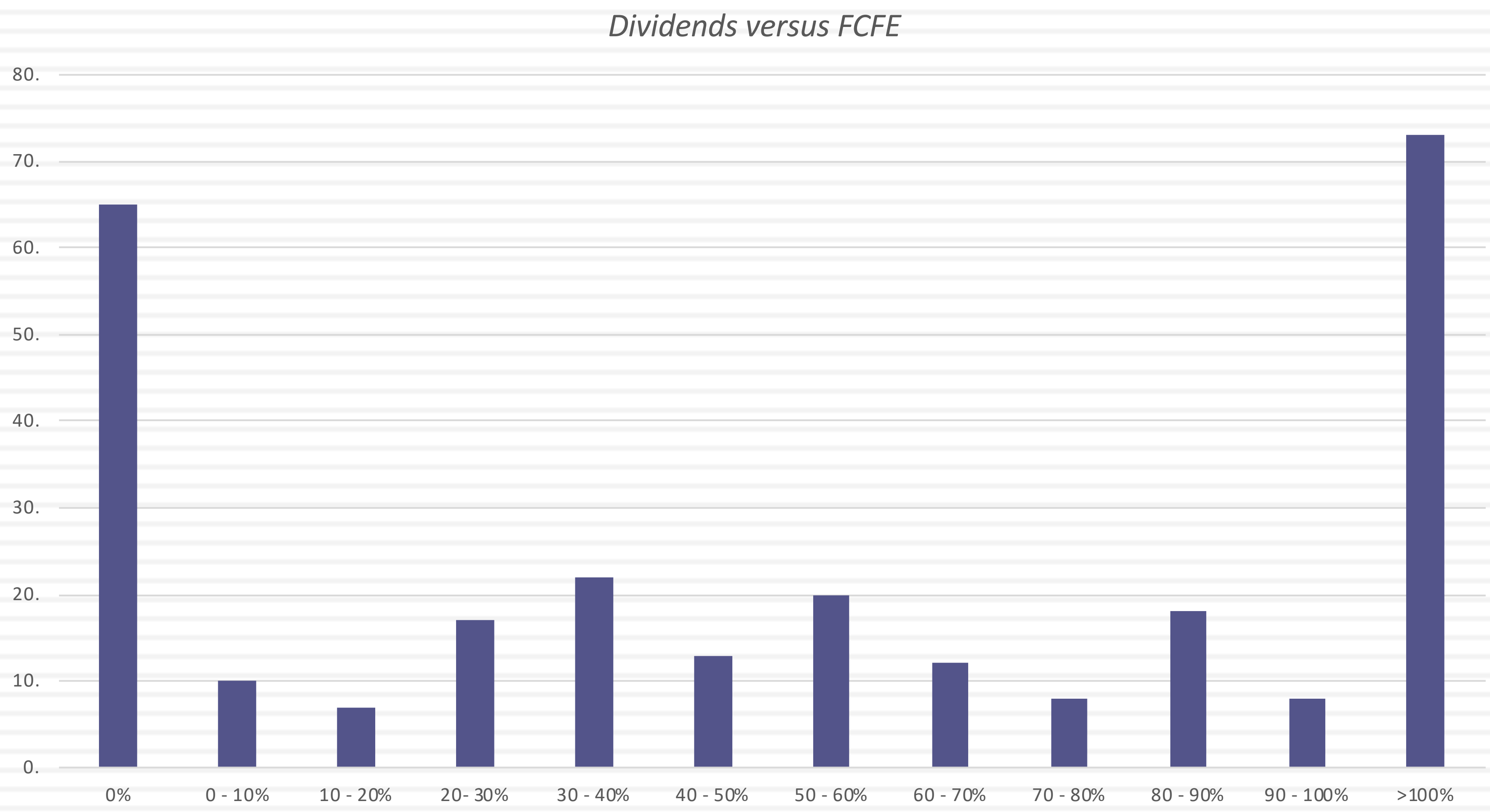
Subtract out reinvestment needs
- Capital expenditures
- Investments in Non-cash Working Capital (Change)

Subtract out payments to non-equity investors
- Principal Repayments
- Preferred Stock Dividends

Add any cash inflows from new debt
- New Debt Issues

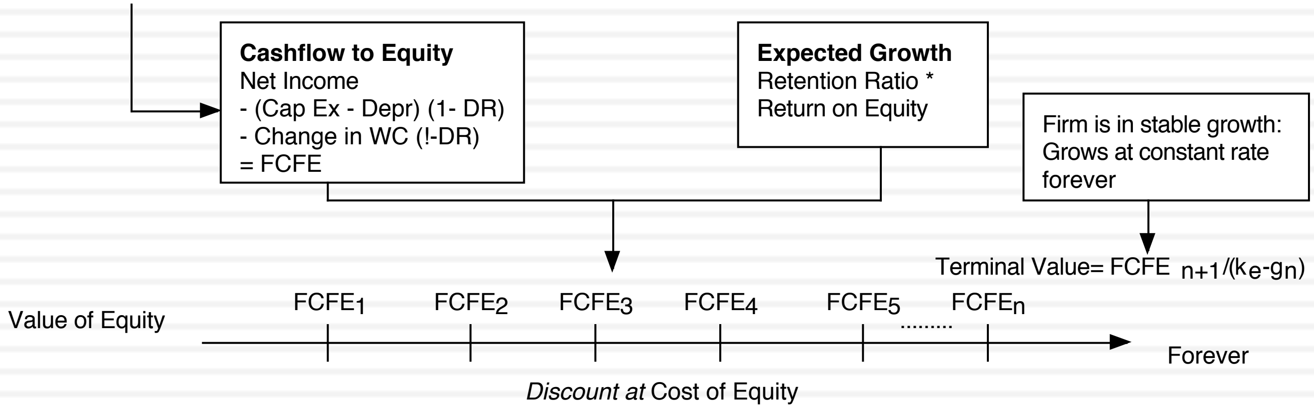
To get to the Cash that is available for return to Owners

Dividends versus FCFE

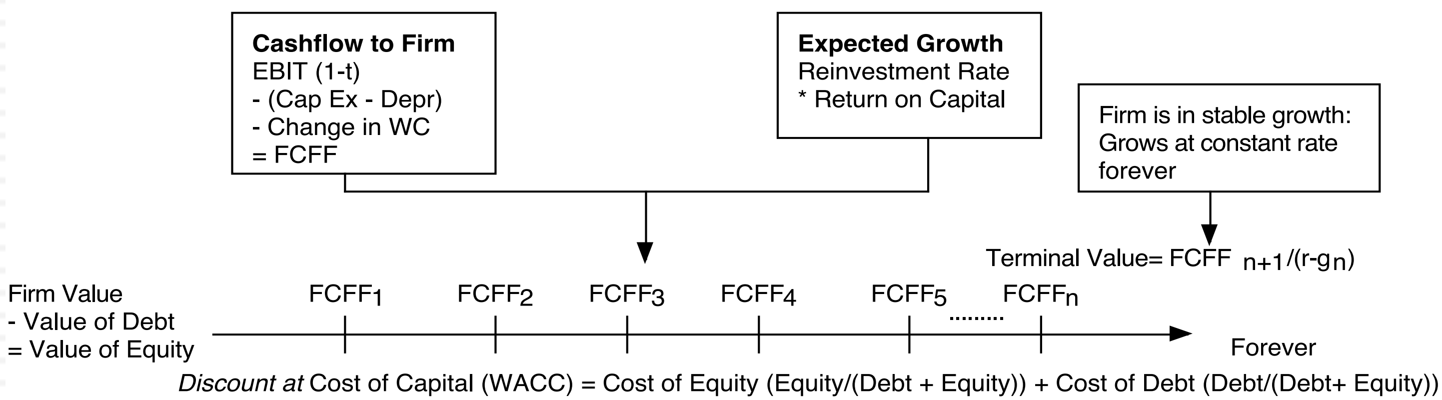


X. Valuation:
Match up cashflows and discount rates…

EQUITY VALUATION WITH FCFE



DISCOUNTED CASHFLOW VALUATION

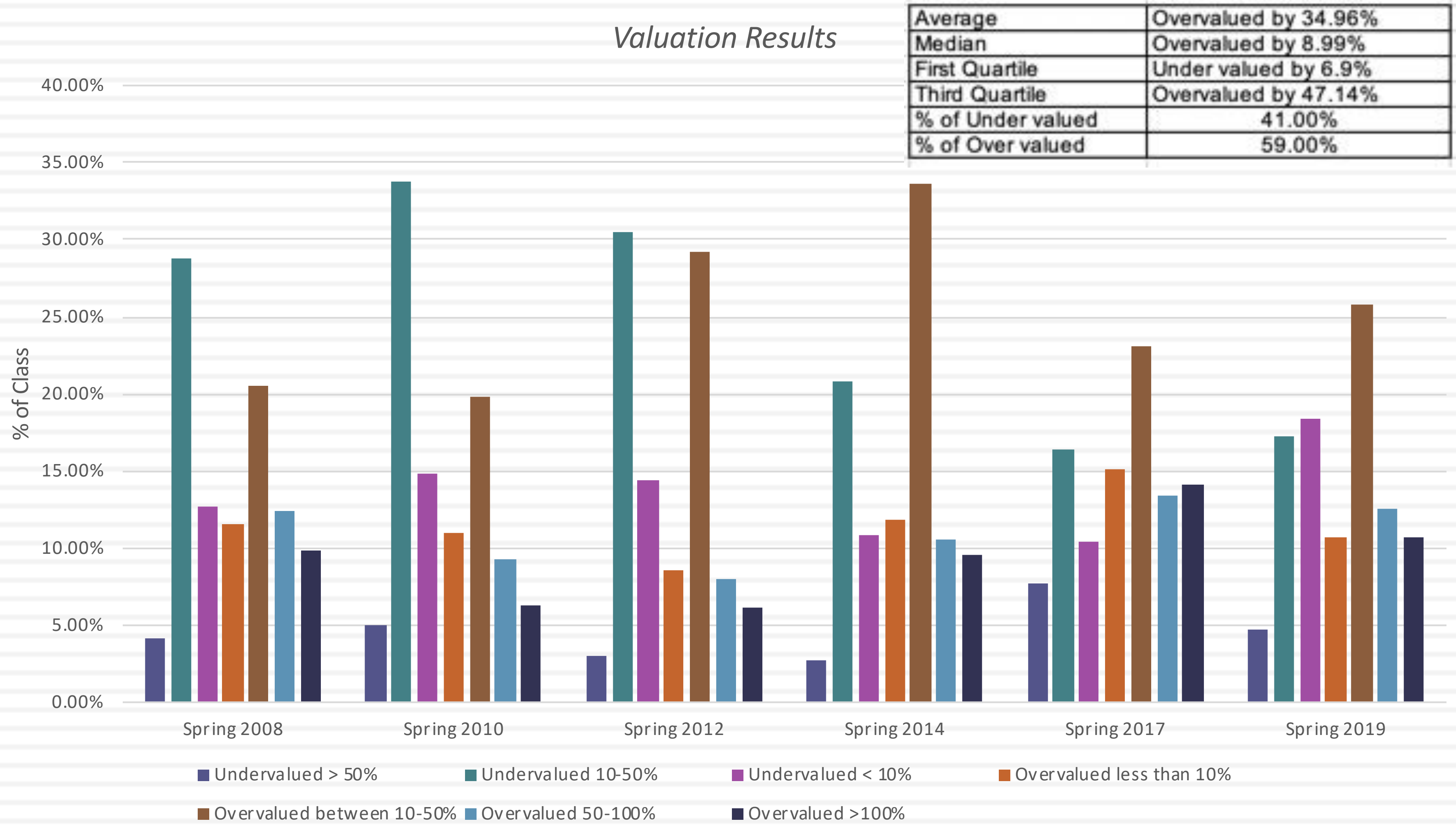


Getting to equity value per share

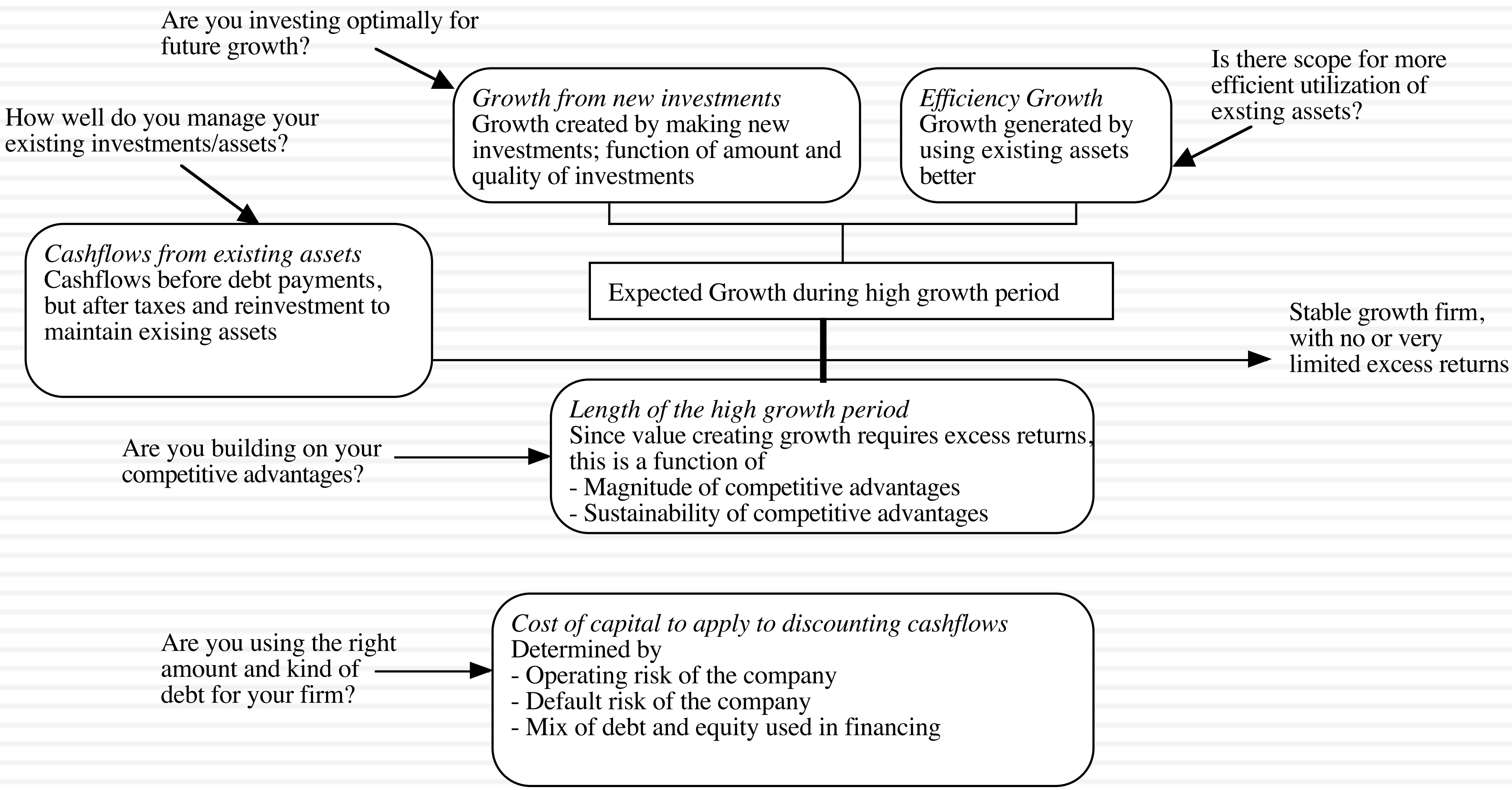
Approach used	To get to equity value per share
Discount dividends per share at the cost of equity	Present value is value of equity per share
Discount aggregate FCFE at the cost of equity	Present value is value of aggregate equity. Subtract the value of equity options given to managers and divide by number of shares.
Discount aggregate FCFF at the cost of capital	PV = Value of operating assets + Cash & Near Cash investments + Value of minority cross holdings -Debt outstanding = Value of equity -Value of equity options =Value of equity in common stock / Number of shares

Value versus Price

Average	Overvalued by 34.96%
Median	Overvalued by 8.99%
First Quartile	Under valued by 6.9%
Third Quartile	Overvalued by 47.14%
% of Under valued	41.00%
% of Over valued	59.00%



Ways of changing value…



Disney - November 2013

Current Cashflow to Firm
EBIT(1-t)= 10,032(1-.31)= 6,920
- (Cap Ex - Deprecn) 3,629
- Chg Working capital 103
= FCFF 3,188
Reinvestment Rate = 3,732/6920 =53.93%
Return on capital = 12.61%

Reinvestment Rate
53.93%

Return on Capital
12.61%

Expected Growth
.5393*.1261=.068 or 6.8%

Stable Growth
g = 2.75%; Beta = 1.00;
Debt %= 20%; k(debt)=3.75
Cost of capital =7.29%
Tax rate=36.1%; ROC= 10%;
Reinvestment Rate=2.5/10=25%

Terminal Value$_{10}$= 7,980/(.0729-.025) = 165,323

Term Yr
10,639
2,660
7,980

First 5 years

Growth declines gradually to 2.75%

	1	2	3	4	5	6	7	8	9	10
EBIT * (1 - tax rate)	$7,391	$7,893	$8,430	$9,003	$9,615	$10,187	$10,704	$11,156	$11,531	$11,819
- Reinvestment	$3,985	$4,256	$4,546	$4,855	$5,185	$4,904	$4,534	$4,080	$3,550	$2,955
FCFF	$3,405	$3,637	$3,884	$4,148	$4,430	$5,283	$6,170	$7,076	$7,981	$8,864

Op. Assets 125,477
+ Cash: 3,931
+ Non op inv 2,849
- Debt 15,961
- Minority Int 2,721
=Equity 113,575
-Options 972
Value/Share $ 62.56

Cost of Capital (WACC) = 8.52% (0.885) + 2.40% (0.115) = 7.81%

Cost of capital declines gradually to 7.29%

In November 2013, Disney was trading at $67.71/share

Cost of Equity
8.52%

Cost of Debt
(2.75%+1.00%)(1-.361)
= 2.40%
Based on actual A rating

Weights
E = 88.5% D = 11.5%

Riskfree Rate:
Riskfree rate = 2.75%

+

Beta
1.0013

X

ERP for operations
5.76%

Unlevered Beta for Sectors: 0.9239

D/E=13.10%

Disney (Restructured)- November 2013

Current Cashflow to Firm
EBIT(1-t)= 10,032(1-.31)= 6,920
- (Cap Ex - Deprecn) 3,629
- Chg Working capital 103
= FCFF 3,188
Reinvestment Rate = 3,732/6920
=53.93%
Return on capital = 12.61%

Reinvestment Rate
50.00%

More selective acquisitions & payoff from gaming

Return on Capital
14.00%

Expected Growth
.50* .14 = .07 or 7%

Stable Growth
g = 2.75%; Beta = 1.20;
Debt %= 40%; k(debt)=3.75%
Cost of capital =6.76%
Tax rate=36.1%; ROC= 10%;
Reinvestment Rate=2.5/10=25%

Terminal Value_{10}= 9,206/(.0676-.025) = 216,262

Growth declines gradually to 2.75%

First 5 years

	1	2	3	4	5	6	7	8	9	10
EBIT * (1 - tax rate)	$7,404	$7,923	$8,477	$9,071	$9,706	$10,298	$10,833	$11,299	$11,683	$11,975
- Reinvestment	$3,702	$3,961	$4,239	$4,535	$4,853	$4,634	$4,333	$3,955	$3,505	$2,994
Free Cashflow to Firm	$3,702	$3,961	$4,239	$4,535	$4,853	$5,664	$6,500	$7,344	$8,178	$8,981

Term Yr
12,275
3,069
9,206

Op. Assets 147,704
+ Cash: 3,931
+ Non op inv 2,849
- Debt 15,961
- Minority Int 2,721
=Equity 135,802
-Options 972
Value/Share $ 74.91

Cost of Capital (WACC) = 8.52% (0.60) + 2.40%(0.40) = 7.16%

Cost of capital declines gradually to 6.76%

In November 2013, Disney was trading at $67.71/share

Cost of Equity
10.34%

Cost of Debt
(2.75%+1.00%)(1-.361)
= 2.40%
Based on synthetic A rating

Weights
E = 60% D = 40%

Move to optimal debt ratio, with higher beta.

Riskfree Rate:
Riskfree rate = 2.75%

+

Beta
1.3175

x

ERP for operations
5.76%

Unlevered Beta for Sectors: 0.9239

D/E=66.67%

So, how do you explain the price? Its all relative..

Company Name	*Ticker Symbol*	*PE*	*Expected Growth Rate*	*PEG*
Point 360	PTSX	10.62	5.00%	2.12
Fox Entmt Group Inc	FOX	22.03	14.46%	1.52
Belo Corp. 'A'	BLC	25.65	16.00%	1.60
Hearst-Argyle Television Inc	HTV	26.72	12.90%	2.07
Journal Communications Inc.	JRN	27.94	10.00%	2.79
Saga Communic. 'A'	SGA	28.42	19.00%	1.50
Viacom Inc. 'B'	VIA/B	29.38	13.50%	2.18
Pixar	PIXR	29.80	16.50%	1.81
Disney (Walt)	DIS	29.87	12.00%	2.49
Westwood One	WON	32.59	19.50%	1.67
World Wrestling Ent.	WWE	33.52	20.00%	1.68
Cox Radio 'A' Inc	CXR	33.76	18.70%	1.81
Beasley Broadcast Group Inc	BBGI	34.06	15.23%	2.24
Entercom Comm. Corp	ETM	36.11	15.43%	2.34
Liberty Corp.	LC	37.54	19.50%	1.92
Ballantyne of Omaha Inc	BTNE	55.17	17.10%	3.23
Regent Communications Inc	RGCI	57.84	22.67%	2.55
Emmis Communications	EMMS	74.89	16.50%	4.54
Cumulus Media Inc	CMLS	94.35	23.30%	4.05
Univision Communic.	UVN	122.76	24.50%	5.01
Salem Communications Corp	SALM	145.67	28.75%	5.07
Average for sector		47.08	17.17%	2.74

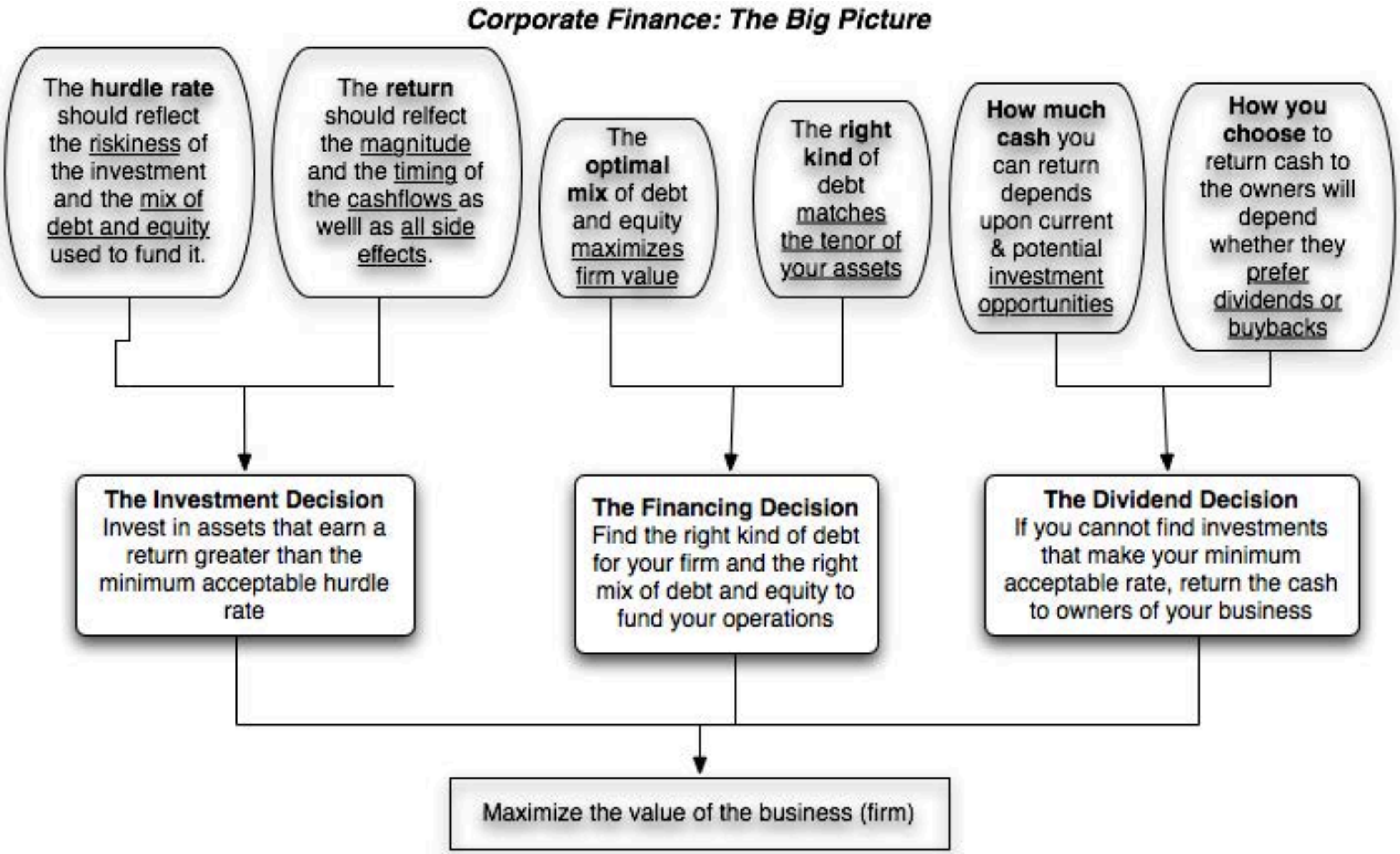
Most undervalued stocks!!

Company	Value/share	Price/Share	Price/Value
Delta Airlines	$84.24	56.62%	0.67%
SunPower	$ 65.47	$ 7.38	11.27%
Target	$ 193.49	$ 75.98	39.27%
The Gap	$ 55.31	$ 24.36	44.04%
Pioneer Natural	$ 326.67	$ 151.65	46.42%
Southwest (USD)	$116.64	$54.23	46.49%
Nautilus	$ 8.42	$ 4.10	48.69%
Macy's	$ 45.72	$ 23.43	51.25%
Best Buy	$ 141.13	$ 74.96	53.11%
Total SA	$ 102.24	$ 55.18	53.97%
Chuy's	$38.12	$22.82	59.86%
Expedia	$ 195.22	$ 118.78	60.84%
Potbelly	$ 10.72	$ 6.54	61.01%
Analog Devices	$179.29	$110.60	61.69%
Jetblue	$ 29.46	$ 18.44	62.59%
United (USD)	$140.30	$88.86	63.34%

The Triple Whammy: Underlevered, Cash Build-up and Under valued?

Company	Jensen's Alpha	ROE - COE	ROC - WACC	Current Debt ratio	Optimal Debt Ratio	Dividends	FCFE	Value/share	Price/Share
Southwest (USD)	8.1%	18.5%	11.5%	14.0%	30.0%	332	2337	$116.64	$54.23
Best Buy	16.62%	36.26%	25.39%	16.49%	30.00%	$ 497.00	$ 1,395.91	$ 141.13	$ 74.96
Total SA	-2.67%	6.25%	4.66%	27.38%	40.00%	$5,542.00	$14,775.00	$ 102.24	$ 55.18
Jetblue	-0.261	-3.71%	-3.10%	31.44%	50%	0	109	$ 29.46	$ 18.44
Samsung	4.42%	9.06%	9.08%	4.90%	70.00%	$4,563.90	$23,242.98	$ 58.31	$ 41.17
Viacom	-1.25	12.88%	1.95%	48.58%	60.00%	$2,147.67	$2,198.67	$41.15	$30.15
Supernus Pharmaceuticals	-0.85%	16.54%	19.42%	14.61%	30.00%	0	$2,608.00	$48.82	$36.41
Facebook	3.19%	14.56%	7.36%	0.00%	20.00%	14855	$40,163	$ 245.32	$ 188.34
Walgreens	-0.59%	44.32%	17.69%	36.96%	50.00%	1385	6182.2	$ 68.20	$ 53.42
Planet Fitness	1.10%	n/a	13.51%	21.10%	40.00%	139.51	288.96	$ 84.98	$74.17
Intel	11.30%	30.62%	14.33%	10.20%	50%	$10,412.20	$12,188.20	$ 55.26	$ 49.24

First Principles



Objectives of this class

- If you get the big picture, the details will come (sooner or later)
- Tools are useful but only in the larger context of answering bigger questions.
- Corporate finance is not so bad !!!

And have a great summer!