



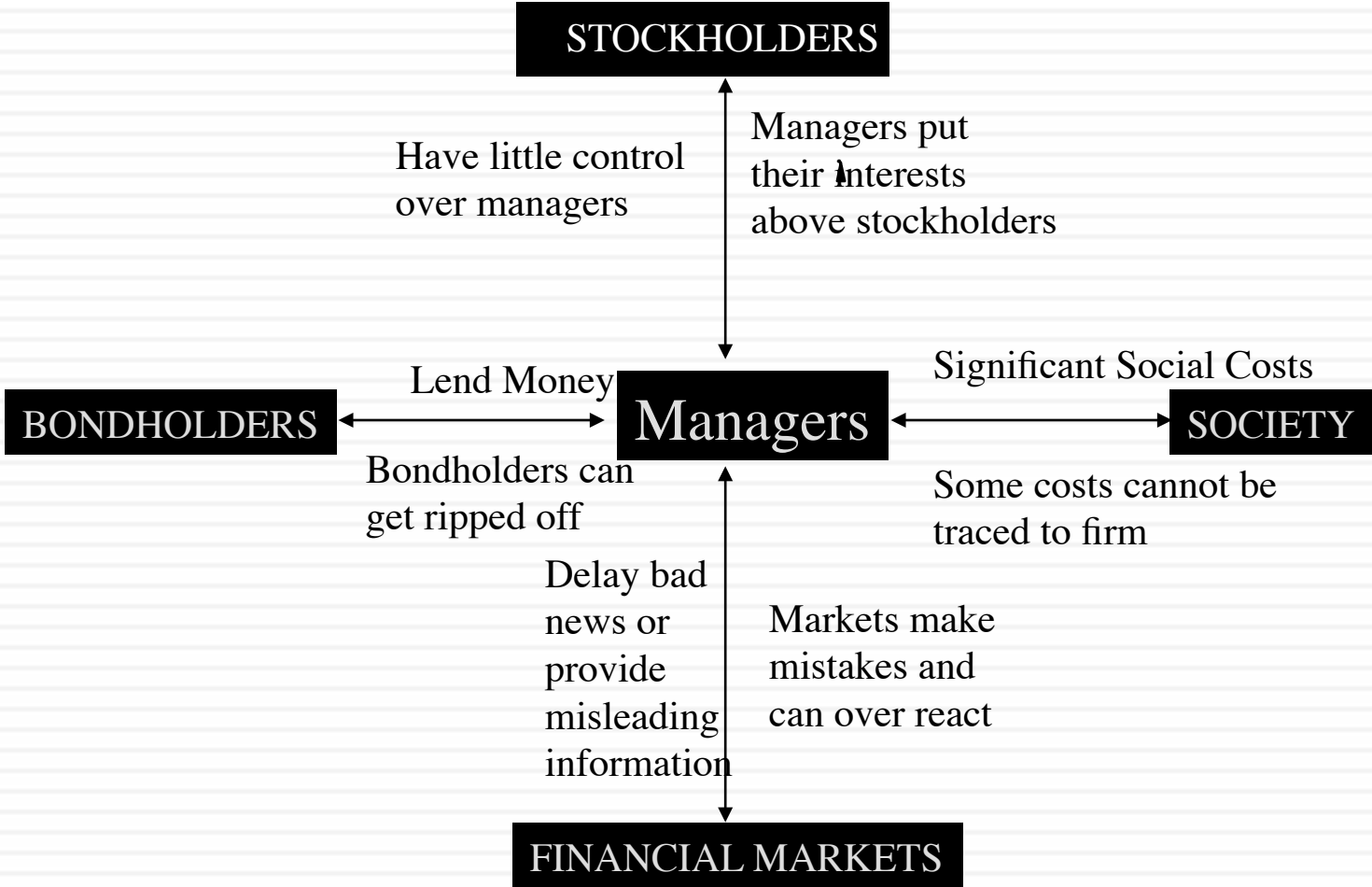
CORPORATE FINANCE: SPRING 2015

Aswath Damodaran

Ponderous Thoughts, or maybe not

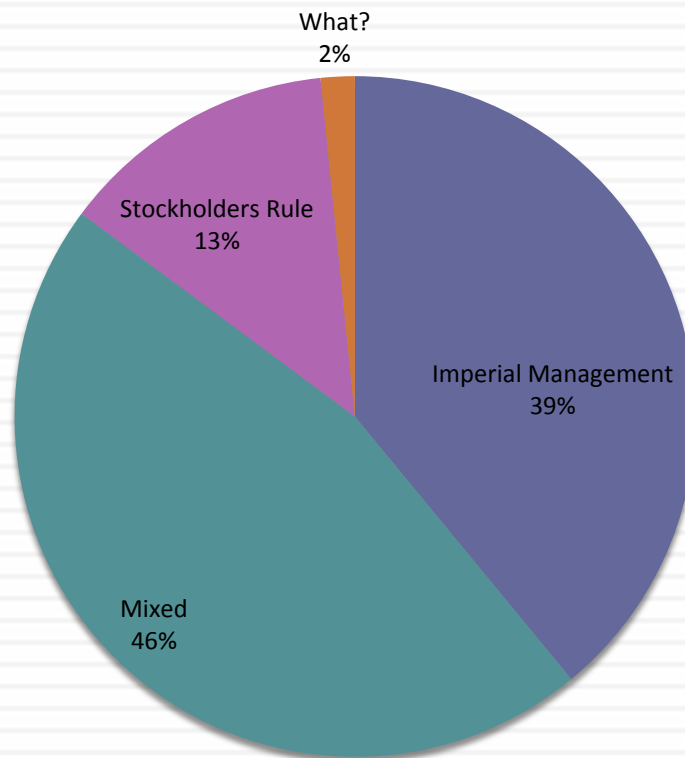
1. There are few facts and lots of opinions.
 - a. Even the givens (cash & risk free rate) are not.
 - b. With accounting and market numbers, all bets are off.
2. The real world is a messy place.
 - a. Money making firms can become money losers
 - b. Companies can be restructured/ given facelifts
3.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

The Breakdown in the Classical Objective Function

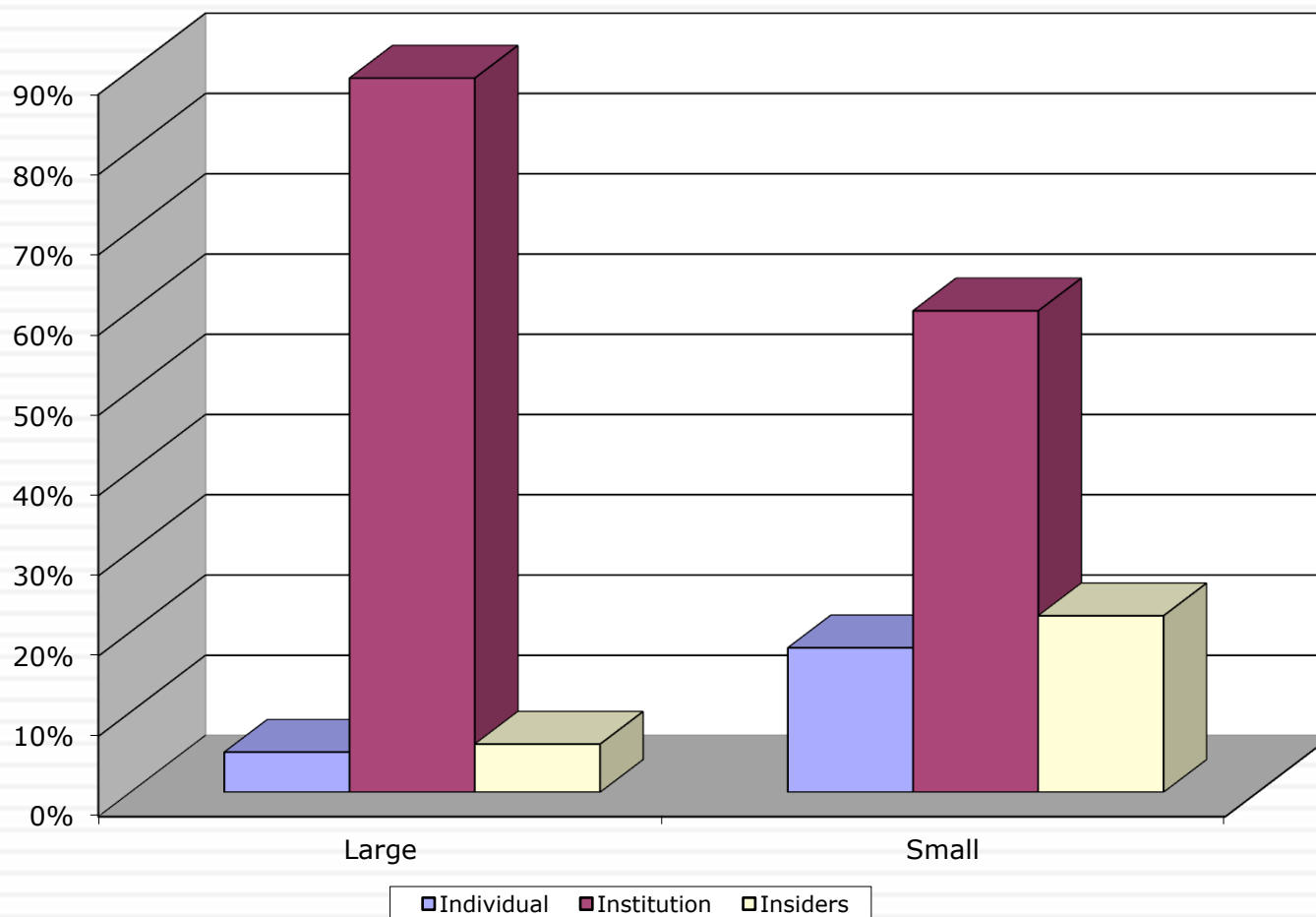


I. Where does the power lie?

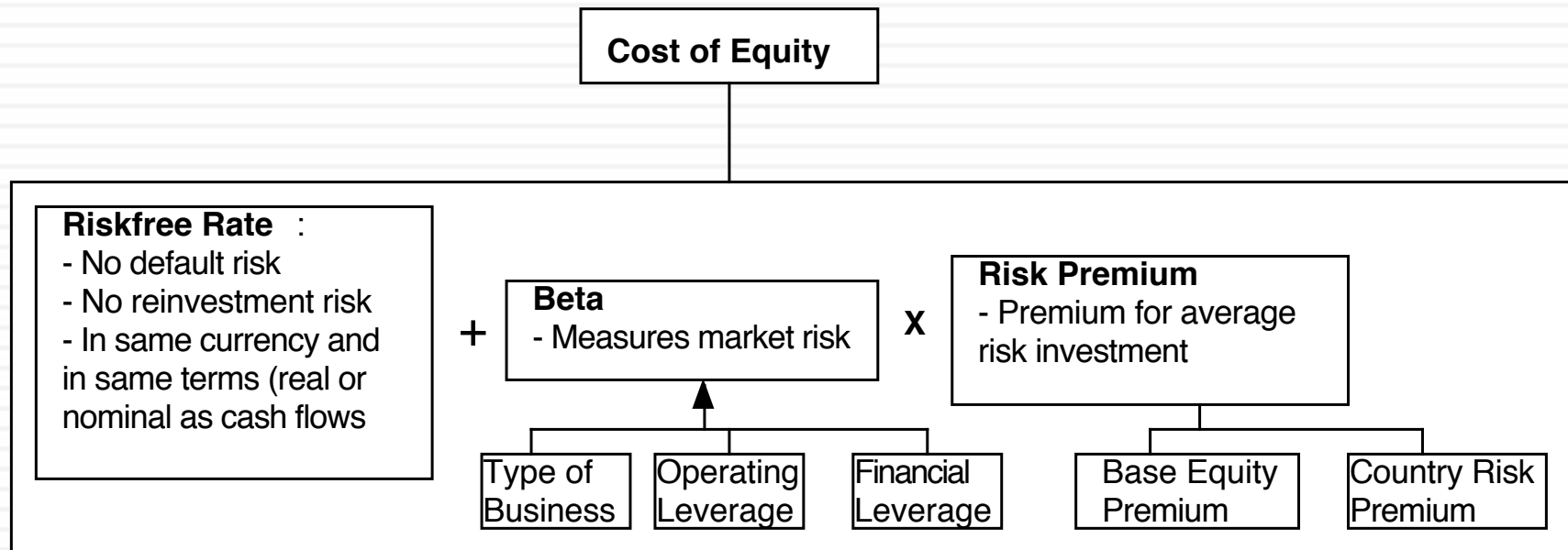
The Power in your Companies



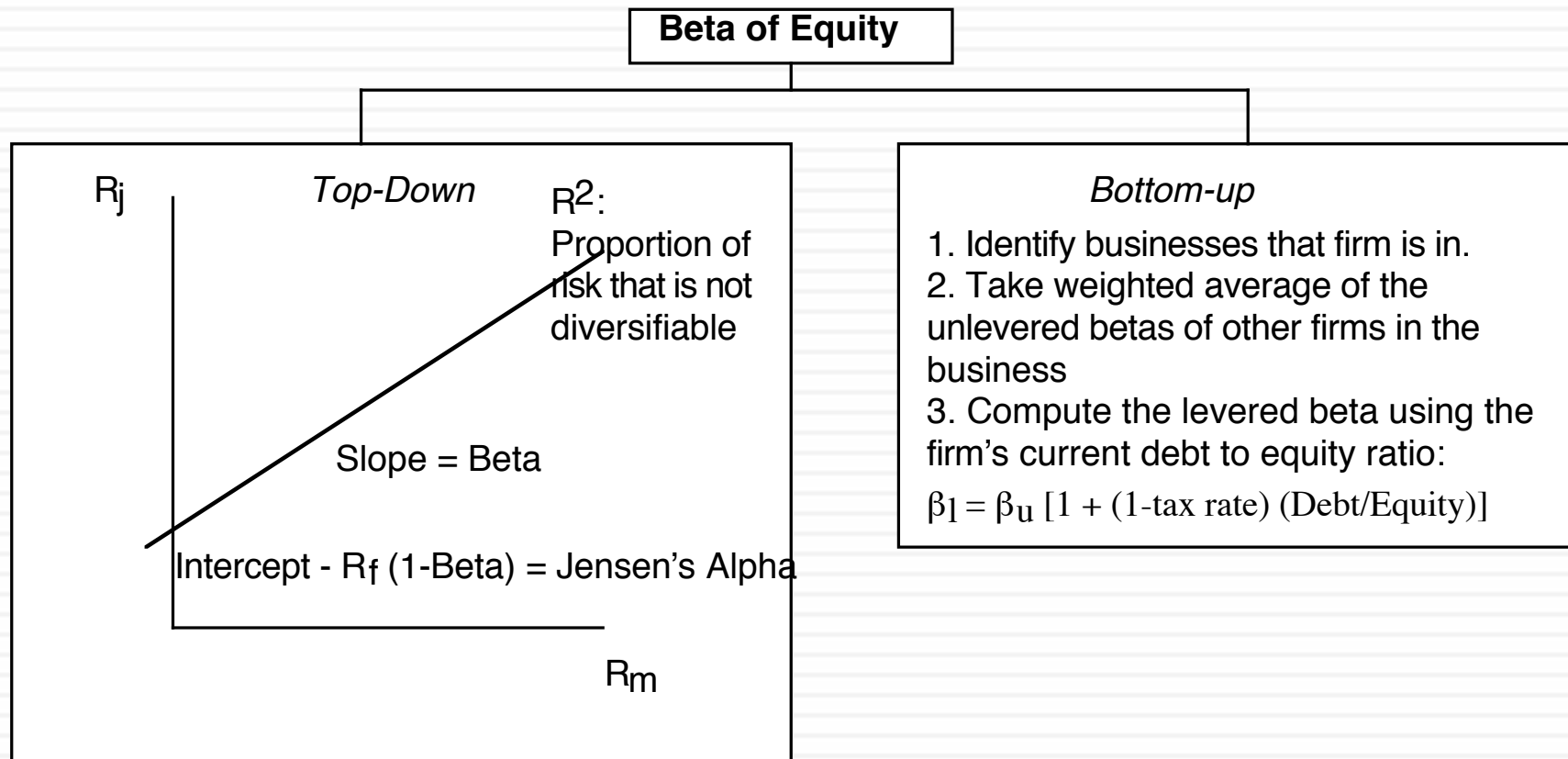
II. Who is your marginal investor? From Spring 2014



III. Risk Profiles and Costs of Equity

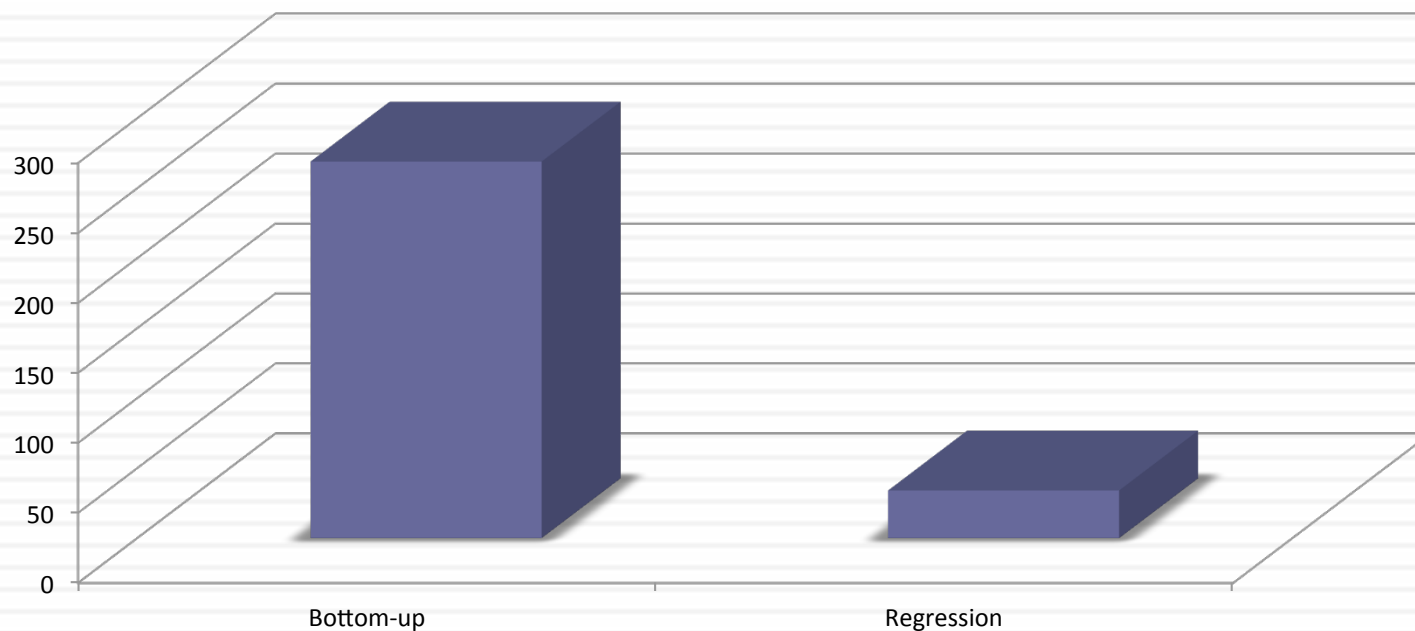


Beta: The Standard Approach



Regression Estimation Approaches

Beta Approach: Spring 2015

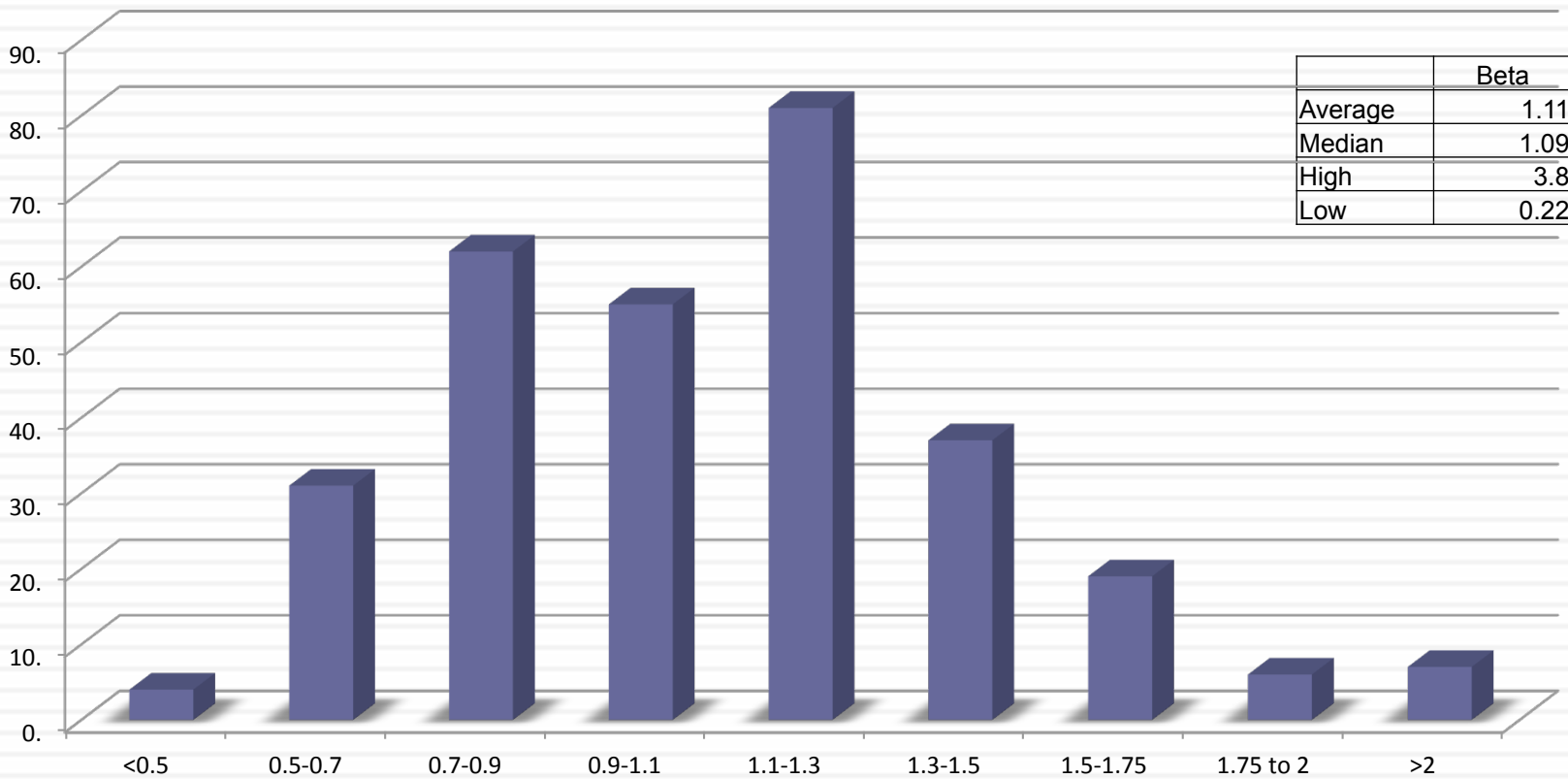


Typical reasons

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

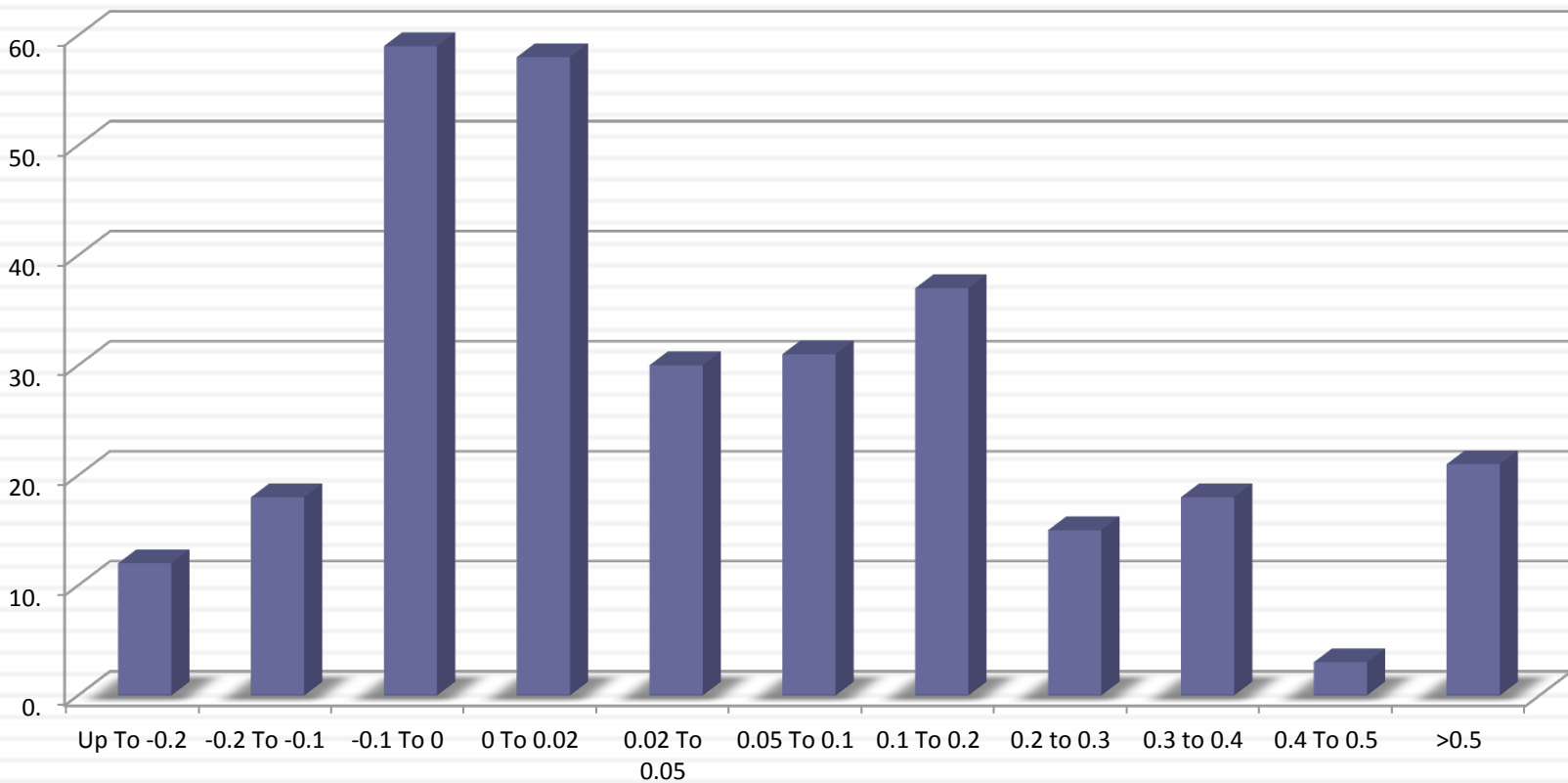
Beta Distribution

Beta: Spring 2015

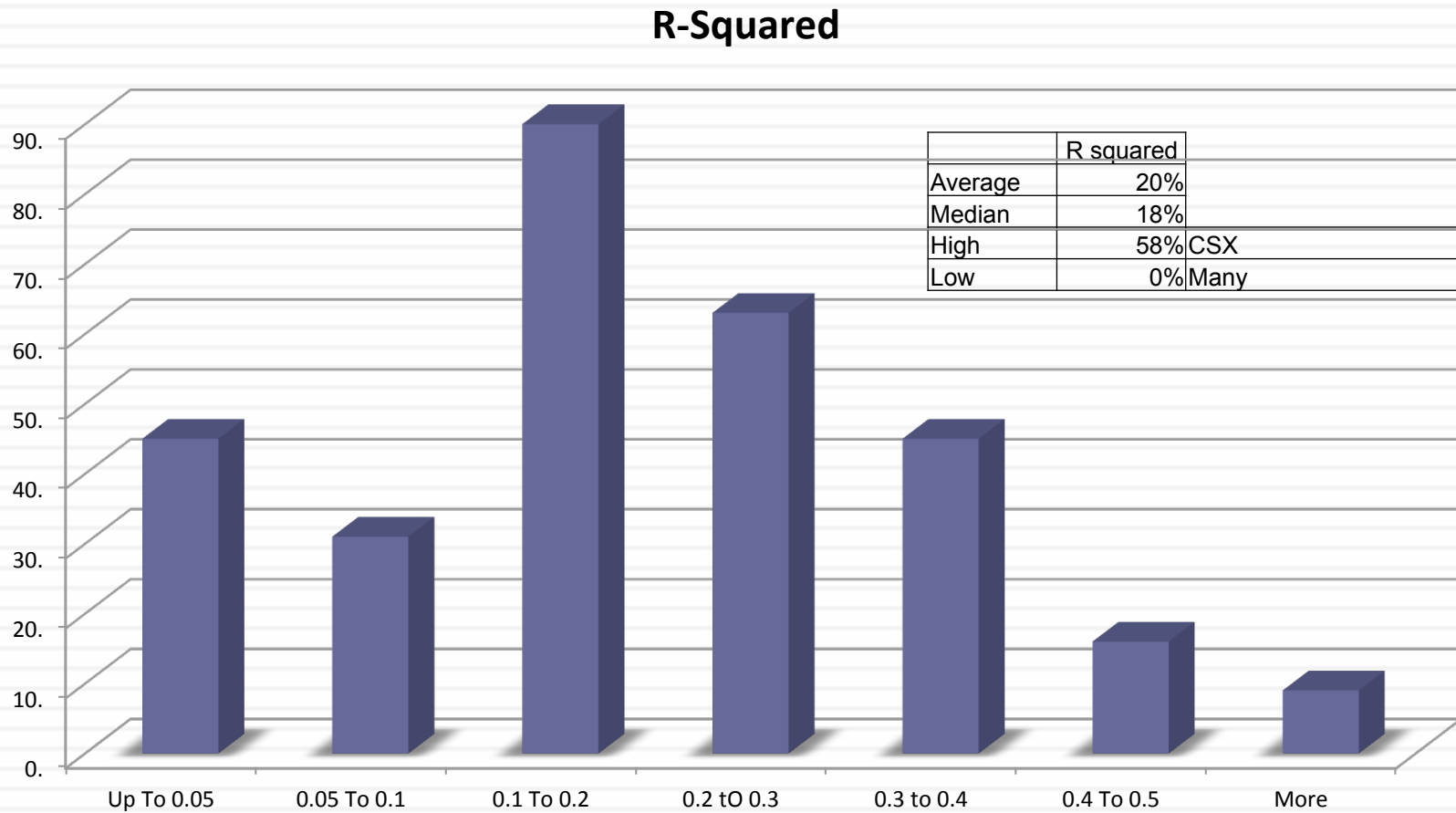


Jensen's Alpha Distribution

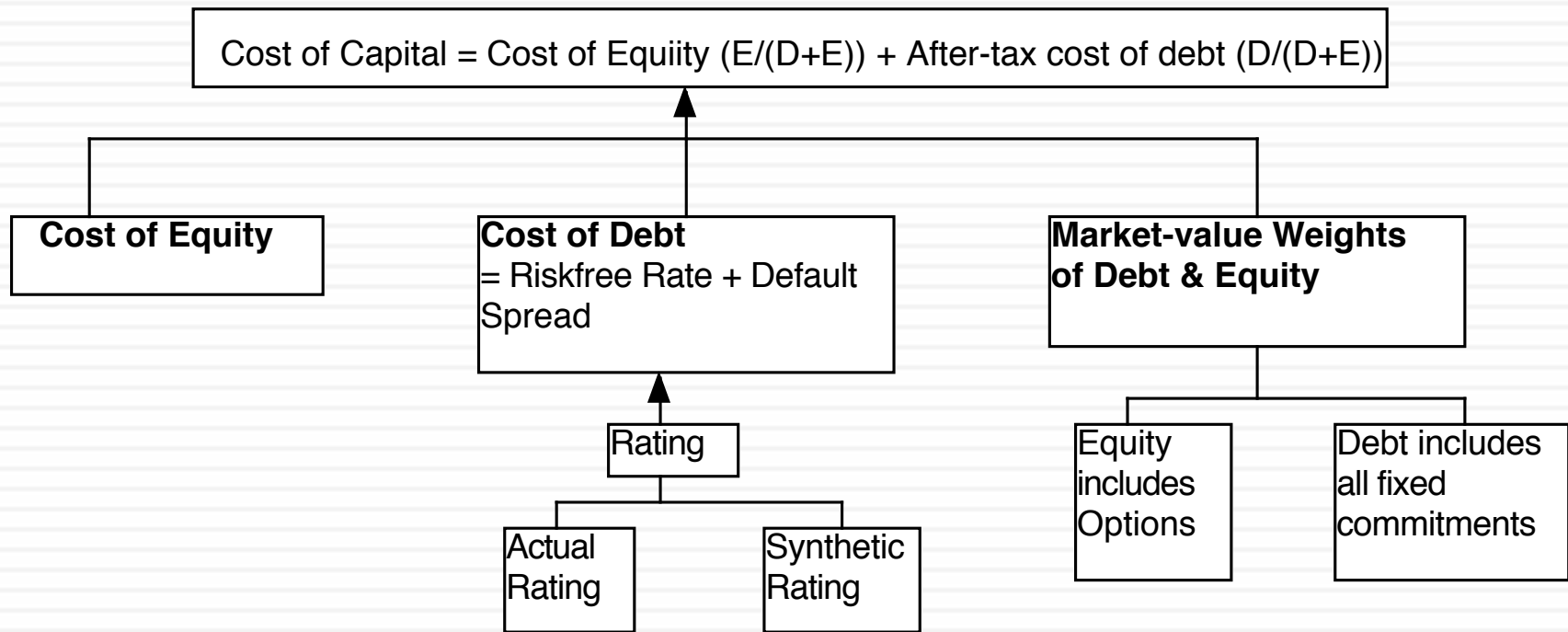
Jensen's Alpha: Spring 2015



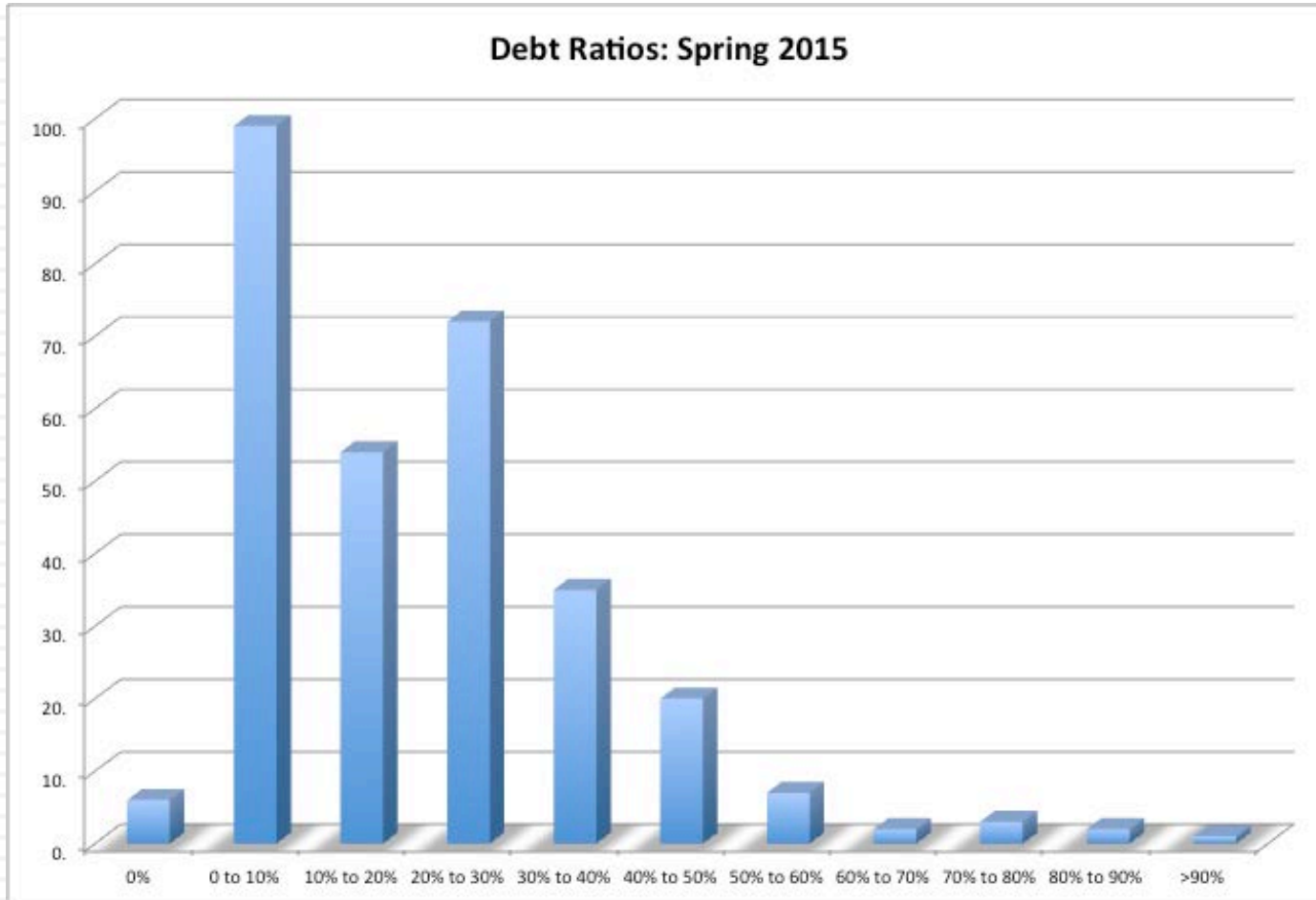
R Squared



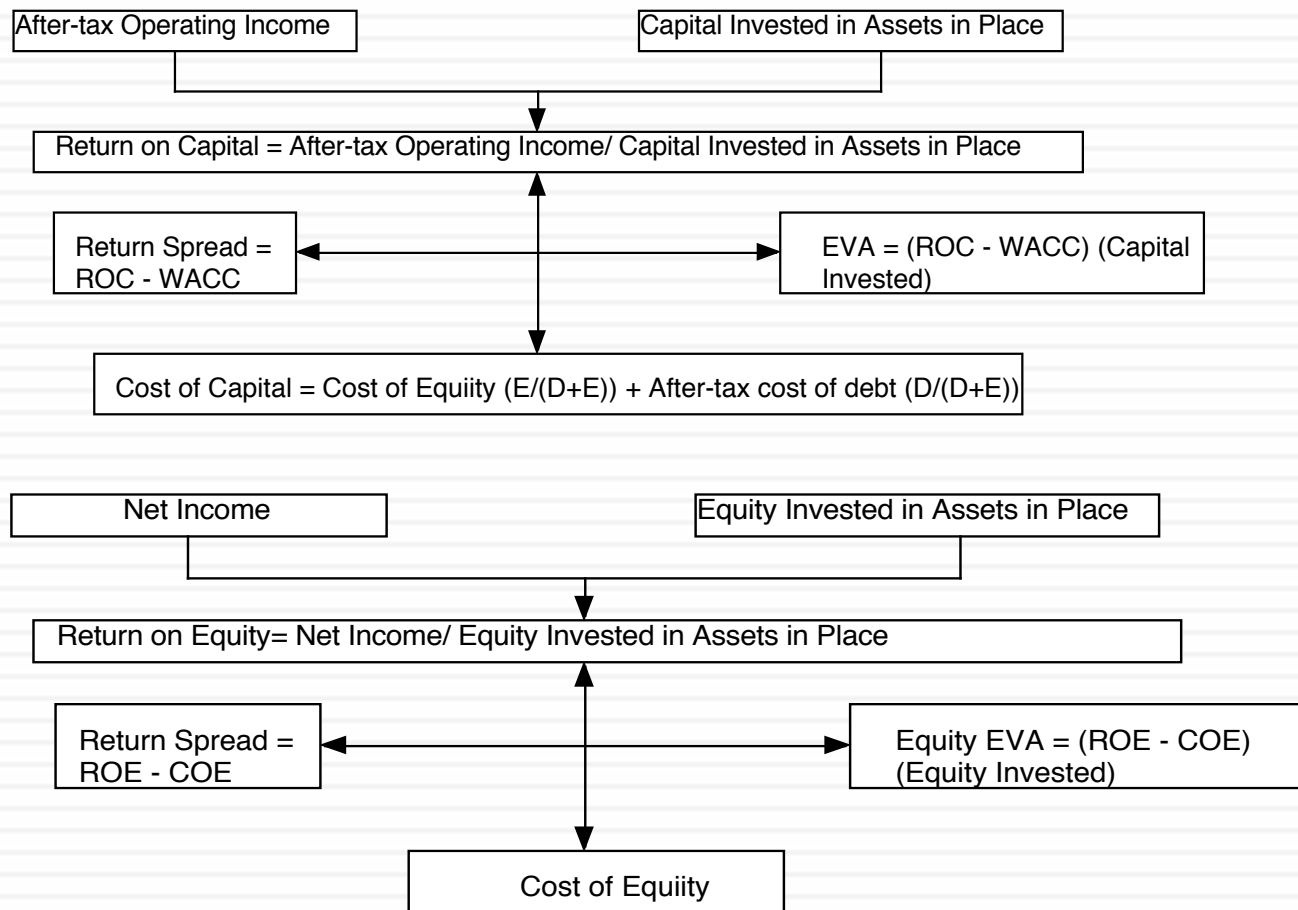
Cost of Capital



Distribution of Current Market Value Debt Ratios

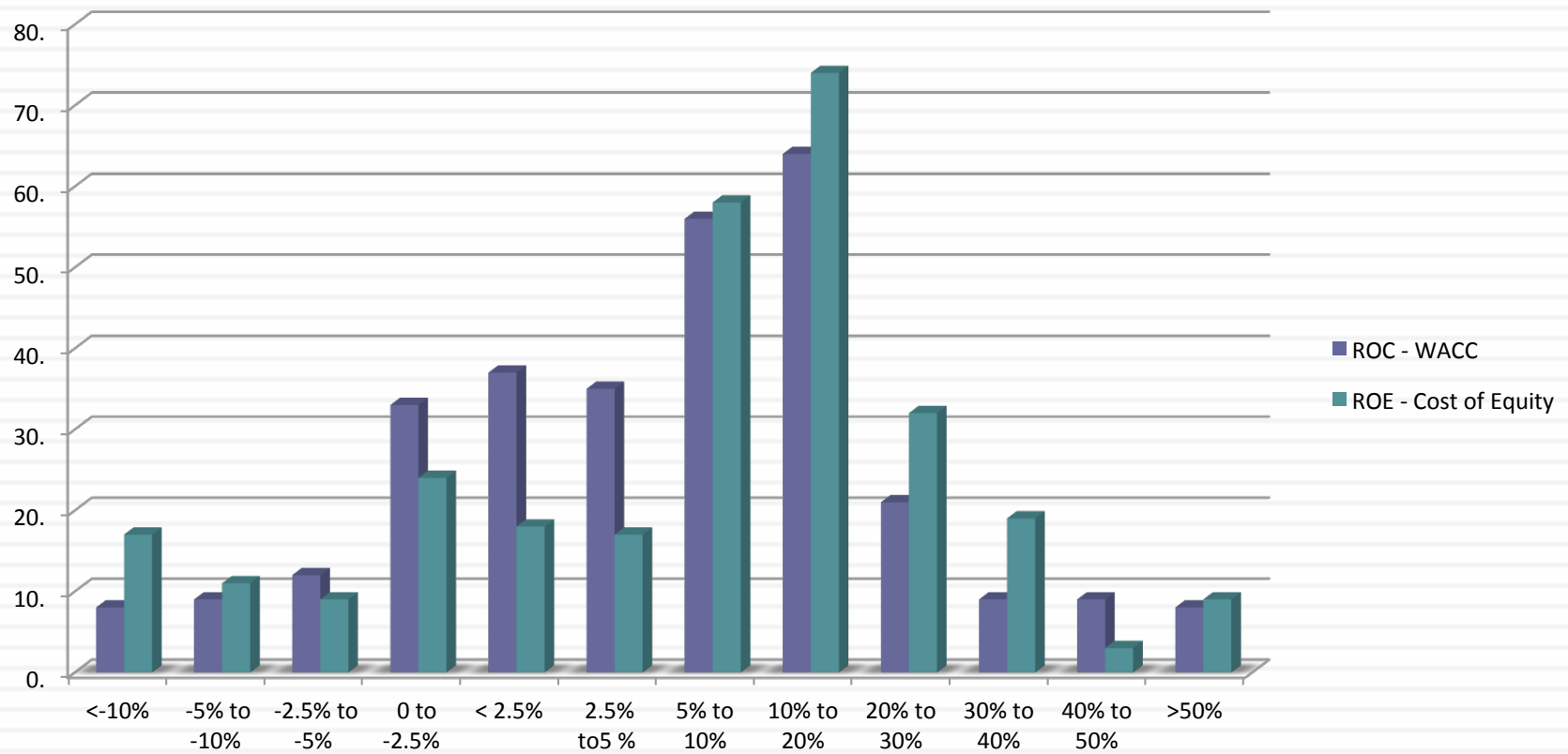


IV. The Quality of Investments: The Firm View



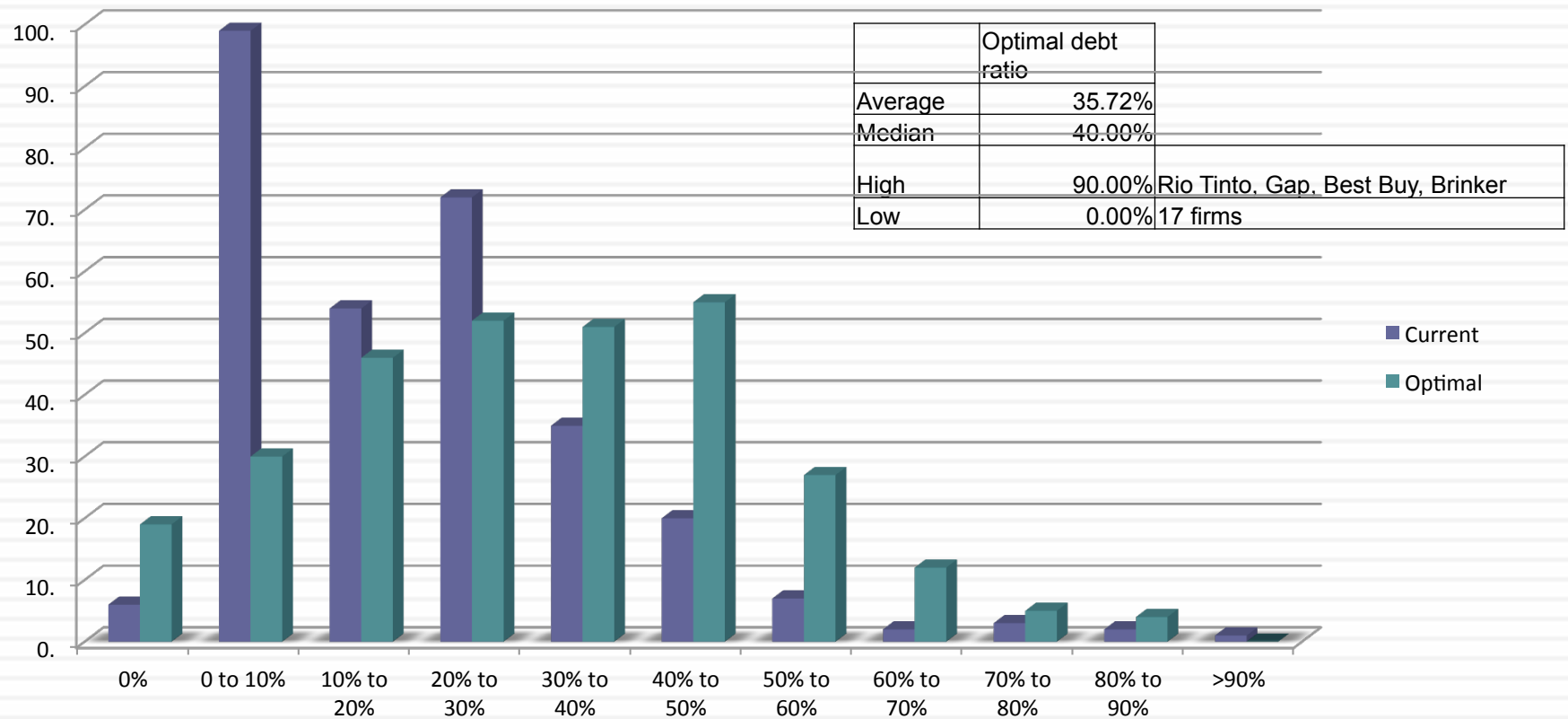
Return Spreads

Return Spreads: Spring 2015



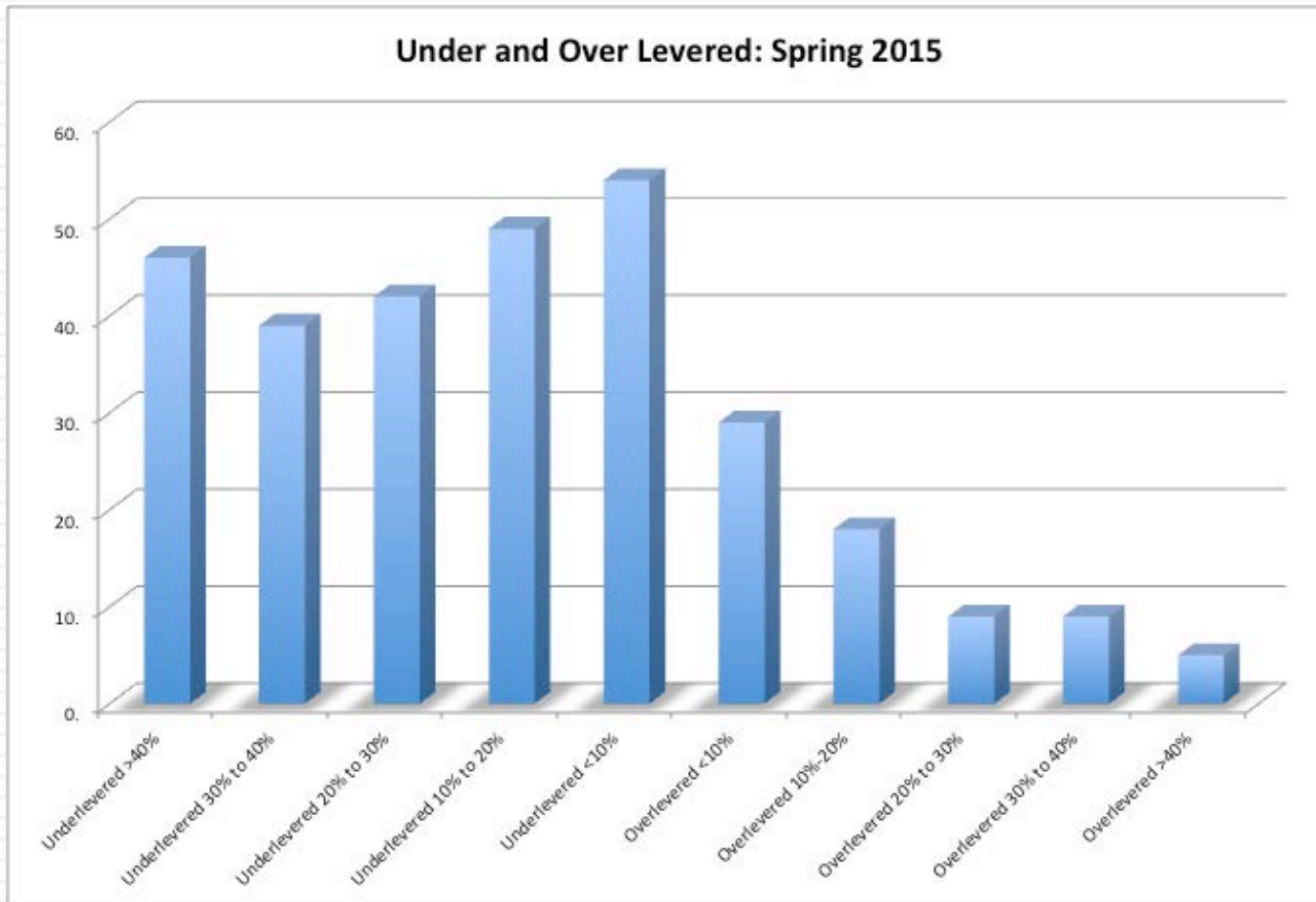
VI. The Optimal Financing Mix

Debt Ratios: Spring 2015

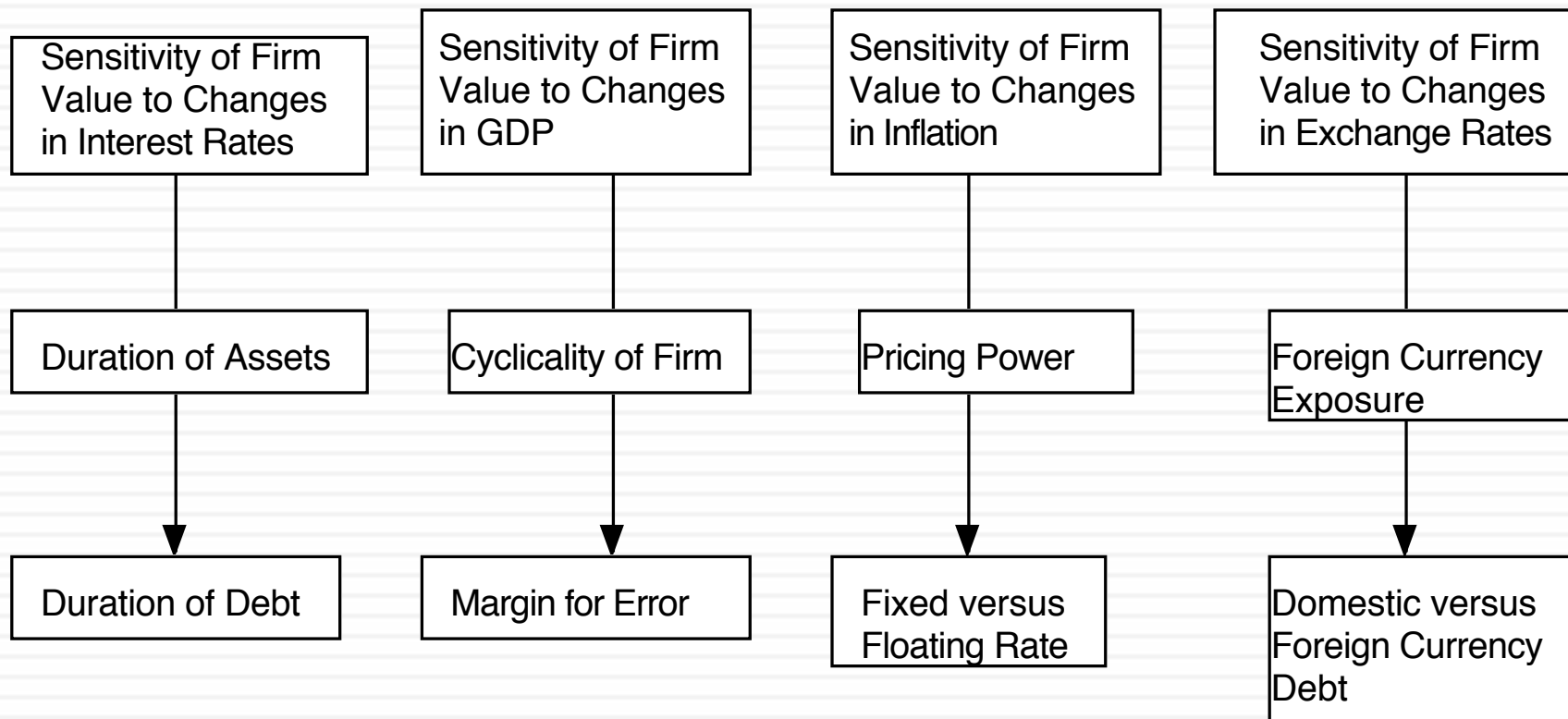


Under versus Over Levered Firms

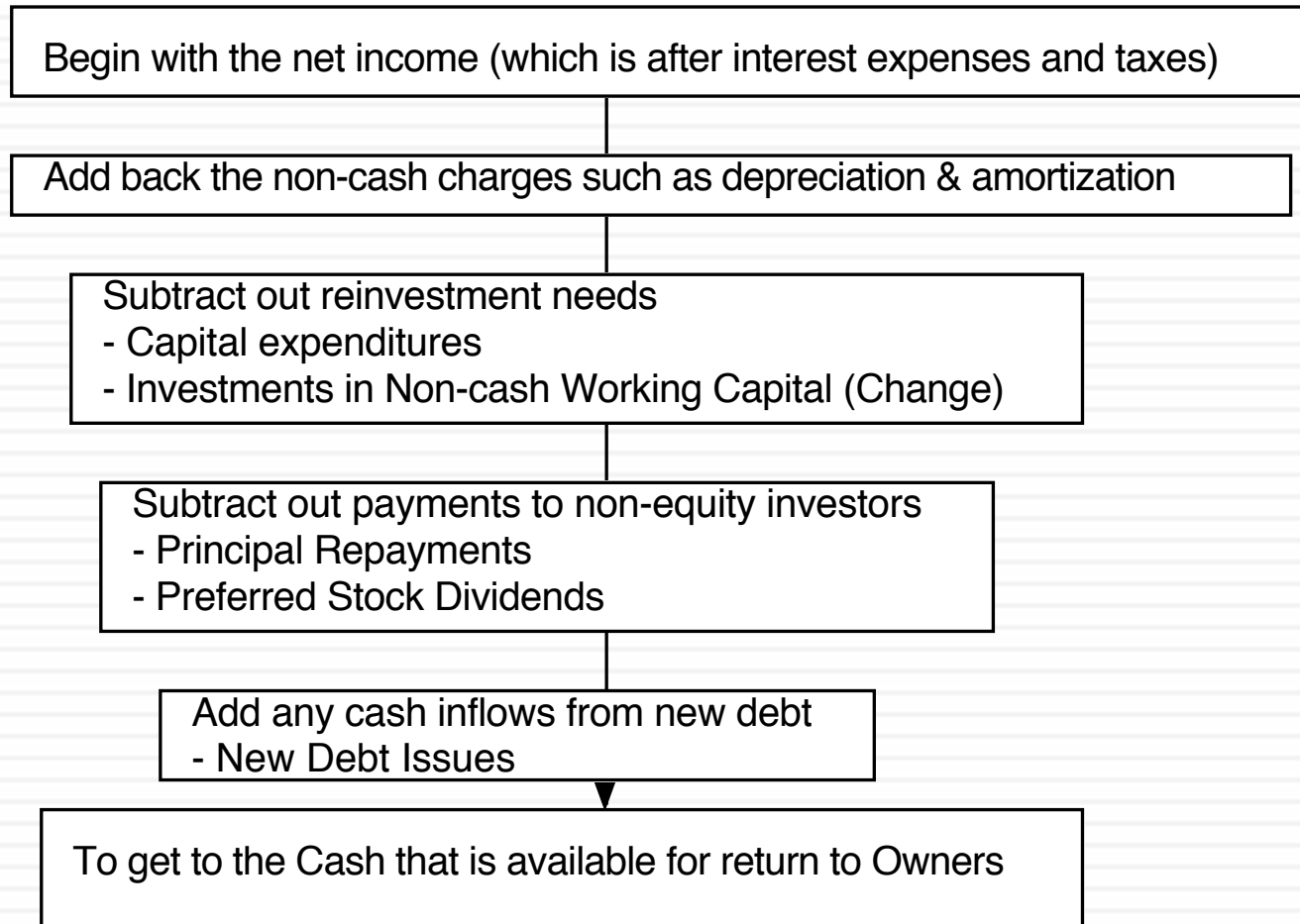
	Under or over levered	
Average	-15.35%	
Median	-15.14%	
Low	-79%	KDE
High	+80%	Lionsgate



VIII. The Right Kind of Financing

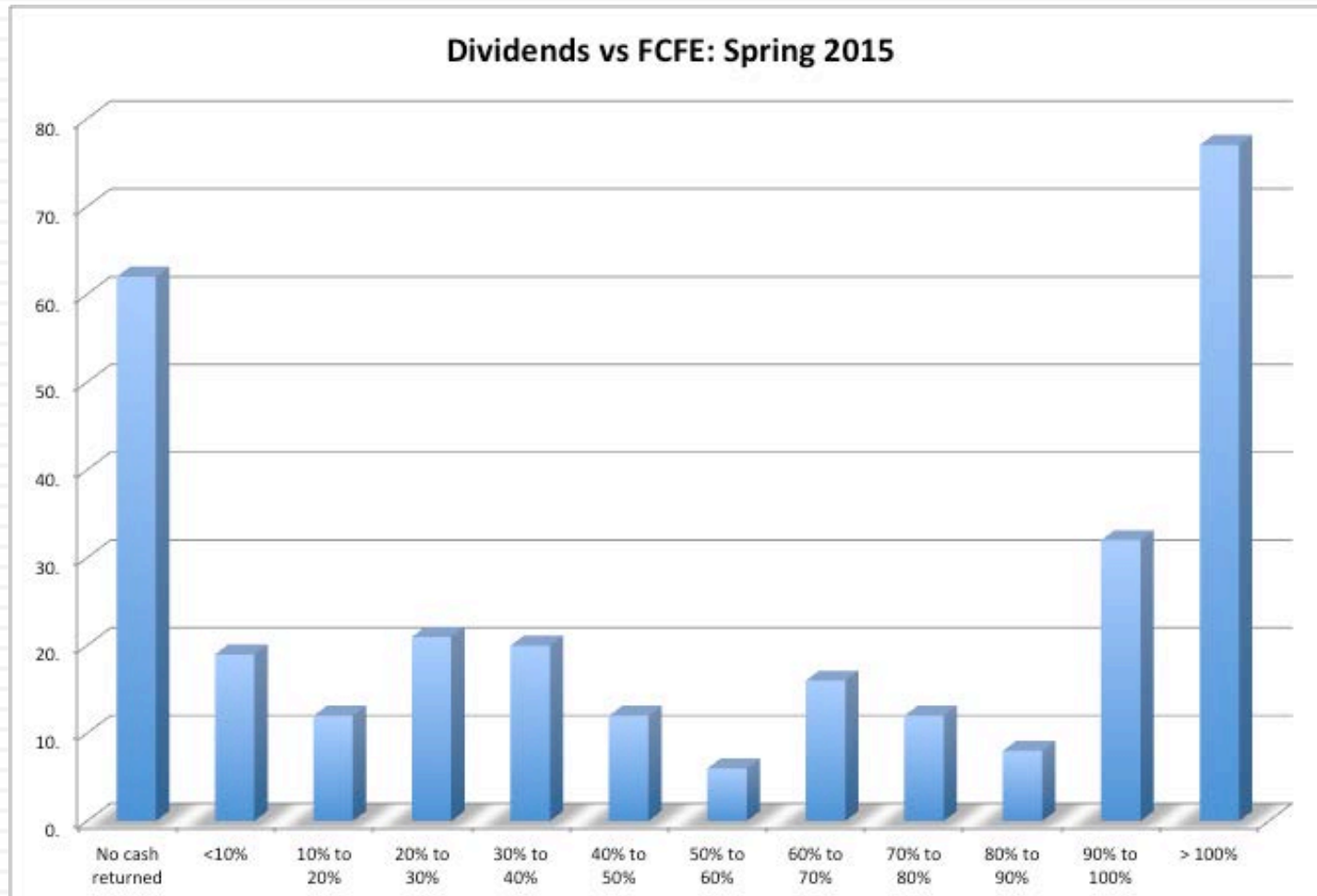


IX. Measuring Potential Dividends

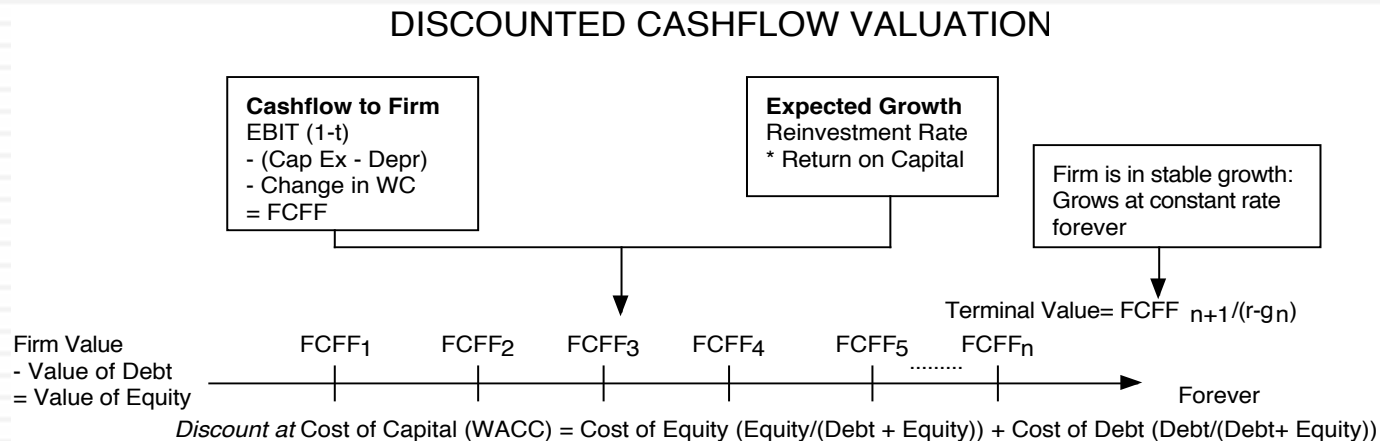
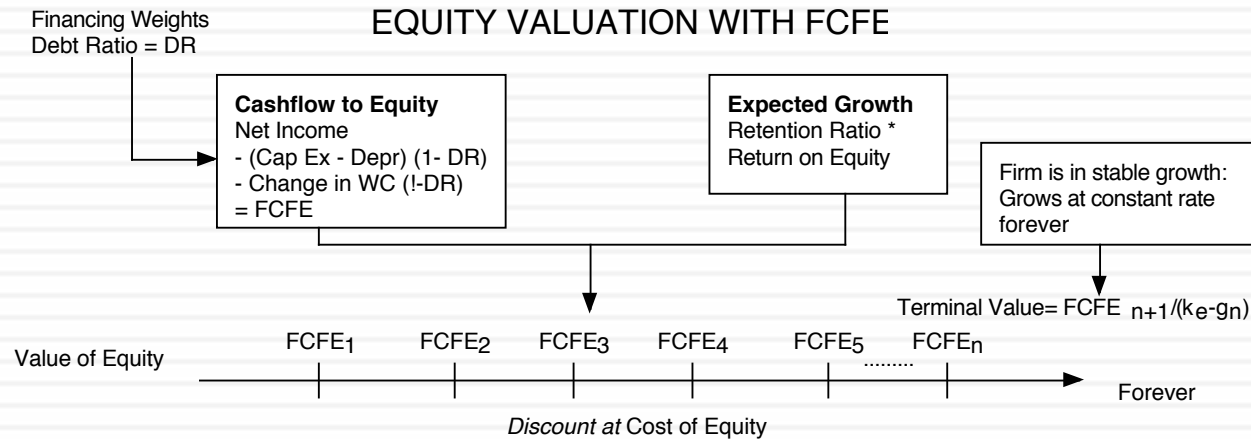


Dividends versus FCFE

	FCFE/Dividends
Average	87%
Median	55%



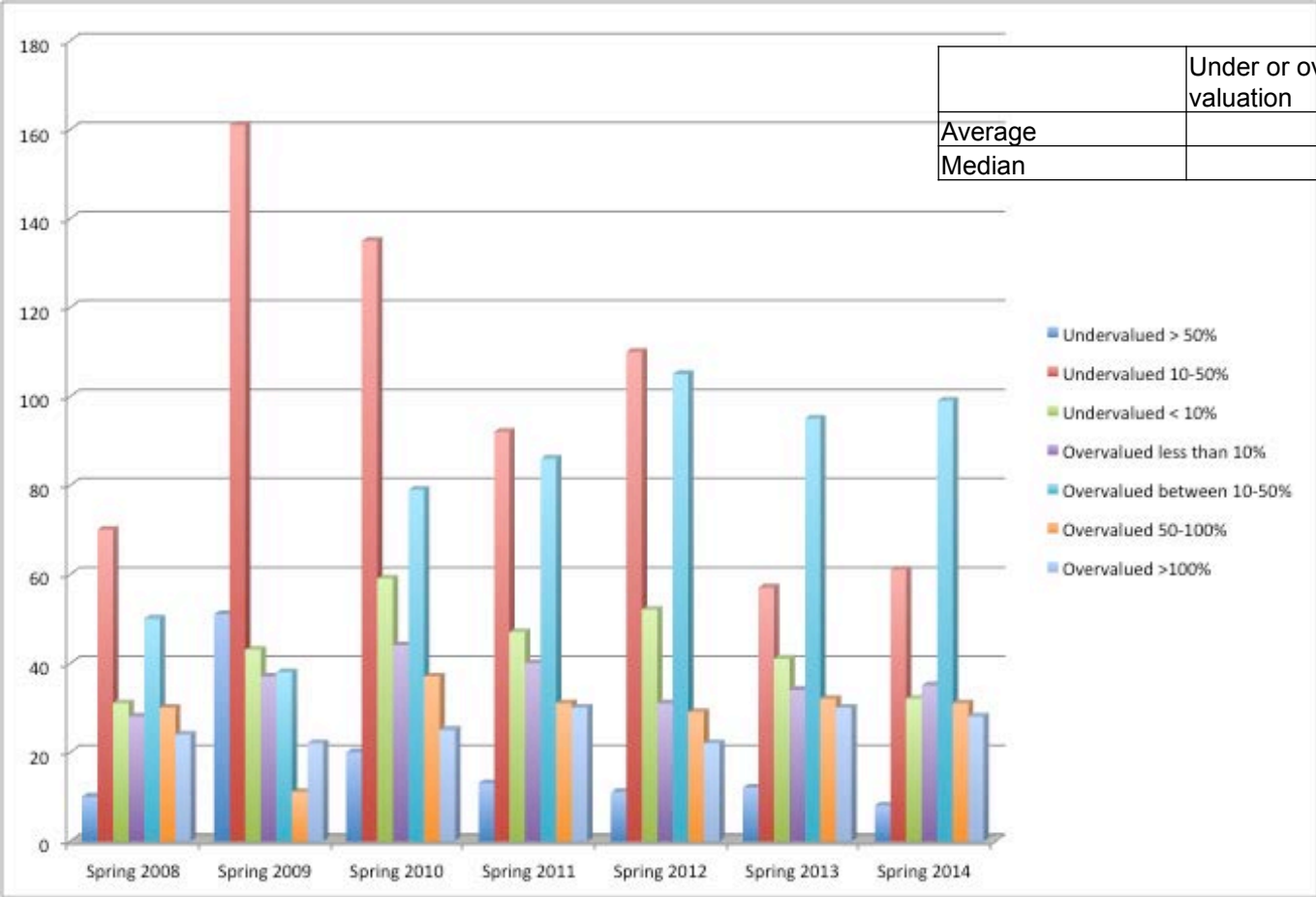
X. Valuation: Match up cashflows and discount rates...



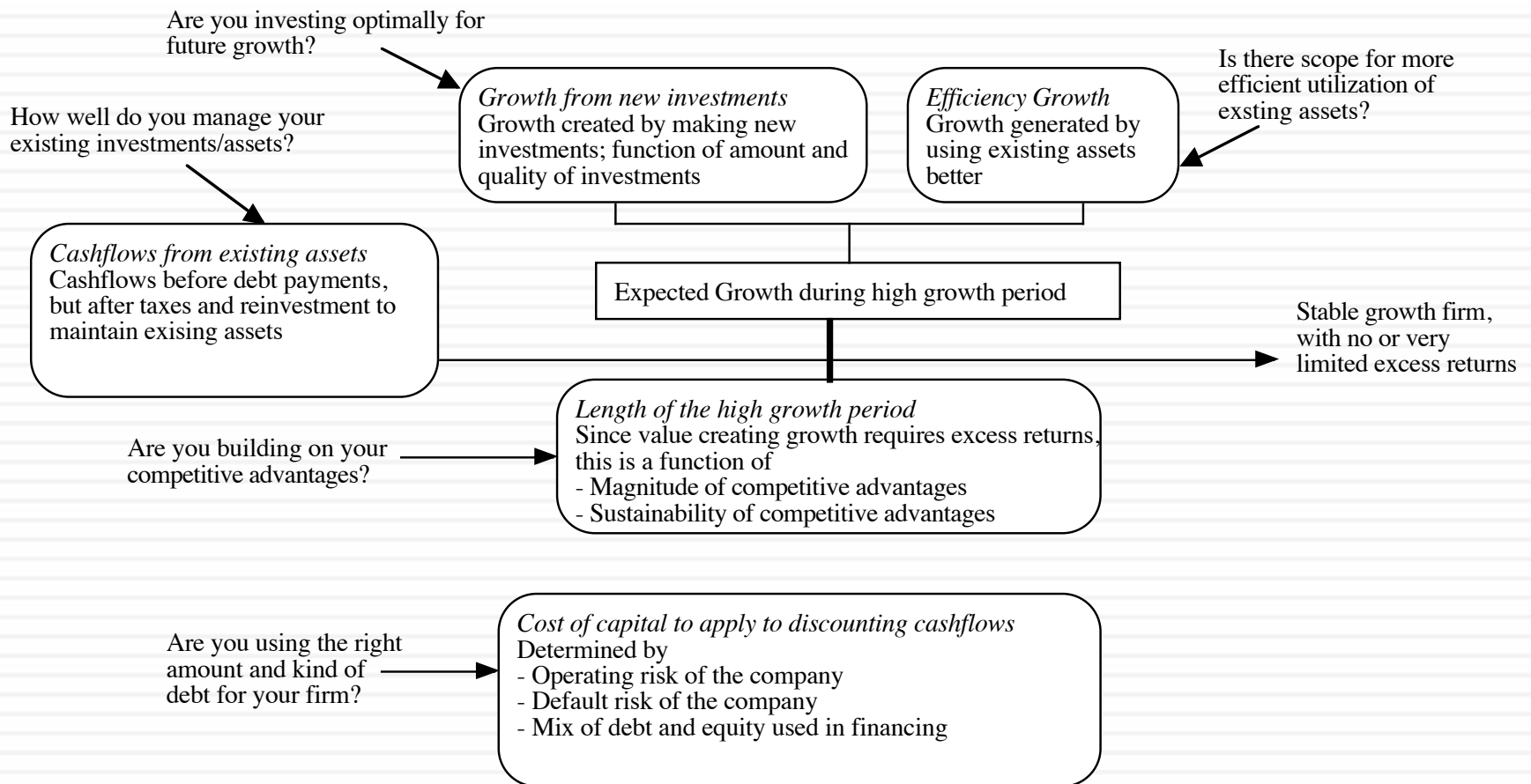
Getting to equity value per share

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	$\begin{aligned} \text{PV} &= \text{Value of operating assets} \\ &+ \text{Cash \& Near Cash investments} \\ &+ \text{Value of minority cross holdings} \\ &- \text{Debt outstanding} \\ &= \text{Value of equity} \\ &- \text{Value of equity options} \\ &= \text{Value of equity in common stock} \\ &/ \text{Number of shares} \end{aligned}$

Value versus Price



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 Value₁₀ = 7,980 / (.0729 - .025) = 165,323

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

Term Yr
10,639
2,660
7,980

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%

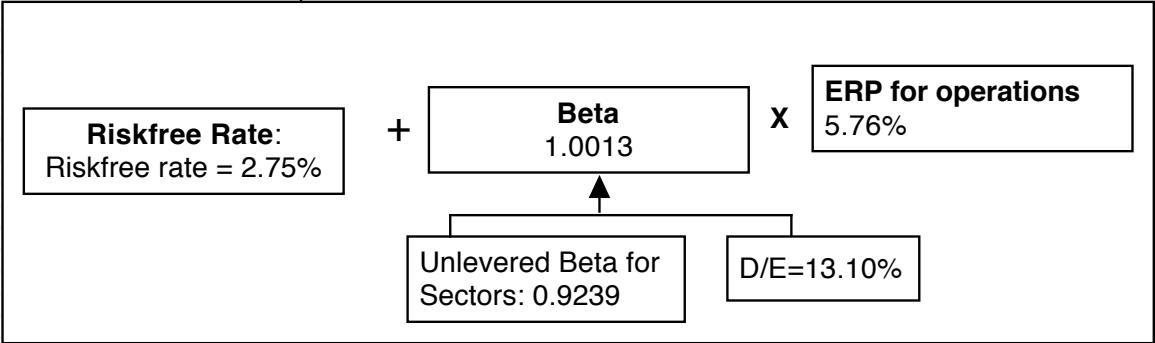
Cost of capital declines gradually to 7.29%

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%

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



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%

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

	First 5 years					Growth declines gradually to 2.75%				
	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

Terminal Value₁₀ = 9,206 / (.0676 - .025) = 216,262

Term Yr
 12,275
 3,069
 9,206

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

Cost of capital declines gradually to 6.76%

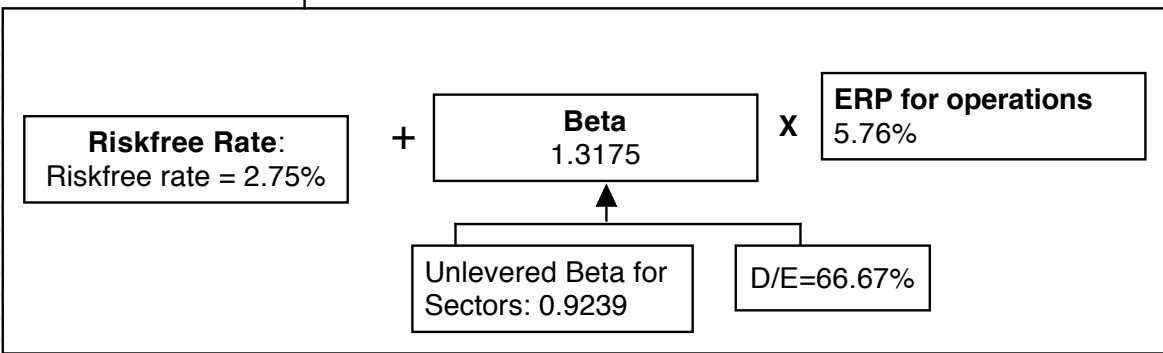
Cost of Equity
10.34%

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

Weights
 E = 60% D = 40%

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

Move to optimal debt ratio, with higher beta.



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

<i>Company Name</i>	<i>Ticker Symbol</i>	<i>PE</i>	<i>Expected Growth Rate</i>	<i>PEG</i>
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!!

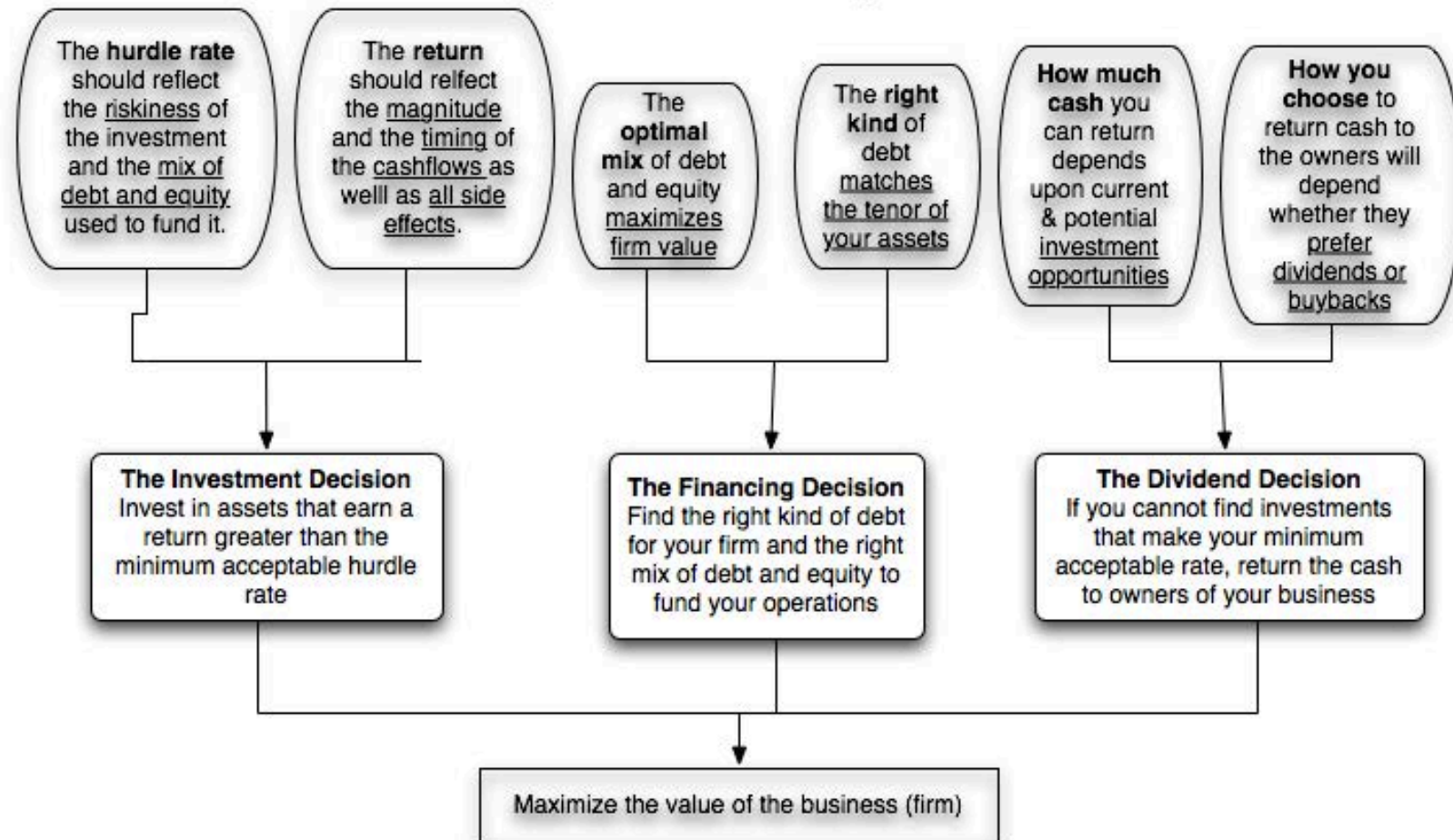
<i>Company</i>	<i>Value/share</i>	<i>Price/Share</i>	<i>Price/Value</i>
DirecTV	\$ 81.84	\$ 7.50	9.16%
Asics	\$ 156.03	\$ 25.61	16.41%
GoPro	\$ 59.81	\$ 16.11	26.94%
Time Warner	\$ 62.83	\$ 21.40	34.06%
Panera Bread Company	\$ 470.13	\$ 184.36	39.21%
Facebook	\$ 55.15	\$ 23.38	42.39%
Dreamworks	\$ 16.72	\$ 7.52	44.98%
Apple	\$ 222.09	\$ 105.11	47.33%
Abercrombie and Fitch	\$ 44.43	\$ 22.31	50.21%
Mind CTI	\$5.85	\$3.07	52.48%
Apple	\$ 216.77	\$ 127.60	58.86%

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

Company	ROE - COE	ROC - WACC	EVA	Current Debt ratio	Optimal Debt Rat	Dividends	FCFE	Value/share	Price/Share
Container Store	9.69%	7.99%	-\$ 6.74	25.65%	40.00%	\$ -	\$ 7.42	-\$ 1.56	\$ 18.42
Youngone Corp	2.69%	7.63%	\$ 51.80	2.31%	30.00%	7.56	23.5	\$ 1,614.57	\$ 60.93
Asics	1.40%	-0.89%	\$ 3.62	14.83%	30.00%	\$ 22.68	\$ 513.50	\$ 156.03	\$ 25.61
Facebook	9.77%	59.12%	\$ 2,377.00	0.53%	20.00%	0	2901	\$ 55.15	\$ 23.38
Apple	27.39%	21.49%	\$ 27,229.00	5.43%	60.00%	11,126	31,108.44	\$ 222.09	\$ 105.11
Abercrombie and Fitch	-8.87%	-3.53%	\$ (1.83)	55.58%	70%	0.8	57.4	\$ 44.43	\$ 22.31
Apple	28.88%	30.59%	\$ 32,214.00	4.99%	40.00%	16,739	34,344	\$ 216.77	\$ 127.60
Apple	35.73%	27.09%	\$14,962	3.98%	30.00%	92038	228924	\$ 202.32	\$127.62
Michael Kors	38.16%	65.58%	\$ 616.20	12.35%	60.00%	135.23	311.66	\$ 95.62	\$ 62.51
Diageo	27.68%	53.01%	\$ 1,980.91	23%	50.00%	\$236.42	\$593.34	\$ 178.20	\$ 122.30
Whole Foods	11.23%	0.46%	\$ 50.29	26.34%	40.00%	\$ 106.92	\$ 1,069.08	\$ 61.46	\$ 42.58
Whole Foods	11.23%	0.46%	\$ 50.29	26.34%	40.00%	\$ 106.92	\$ 1,069.08	\$ 61.46	\$ 42.58
Ubiquiti Networks	101.18%	98.15%	\$197.28	3.96%	40.00%	60	195	\$40.26	\$28.40
GAP	33.97%	49.87%	\$ 11,131.00	32.15%	80.00%	286	1417	\$ 51.09	\$ 39.61
Norfolk Southern	7.31%	-2.50%	\$1,850.28	29.13%	80%	\$1,446.80	\$841.30	\$127.50	\$101.10
Best Buy	14.97%	3.65%	\$ 1,101.72	29.55%	90.00%	1501	9117	\$ 44.72	\$ 36.17
Micron Technology Inc.	19.00%	4.60%	\$ 2,494.20	14.90%	30.00%	88.4	1149	\$ 34.48	\$ 28.13
Nestle	23.15%	15.00%	\$ 8,960.00	7.21%	50.00%	\$ 6,009.50	\$ 20,668.45	\$ 88.99	\$ 72.90
Brunswick	11.92%	10.11%	\$157.29	10.99%	40%	\$16.84	\$41.86	\$66.16	\$54.49
Matson	16.26%	15.12%	82.2	21.76%	40.00%	\$ 31.67	\$ 152.90	49.73	41.18
Mednax	-0.80%	0.51%	-\$ 18.05	9.08%	50.00%	0	275.8	\$ 141.34	\$ 118.43
First Solar	-0.69%	5.18%	\$ 277.00	4.41%	40.00%	0	551	\$ 67.24	\$ 56.37
Schlumberger	5.80%	3.53%	\$ 1,738.00	11.60%	60.00%	20308	28651	\$ 107.80	\$ 91.30
Lululemon	11.27%	5.37%	\$ 58.47	4.80%	30.00%	\$ 3.43	\$ 117.30	\$ 76.88	\$ 65.49
Tyson Foods	3.43%	2.76%	\$ 26.05	47.90%	70.00%	\$ 355.54	\$ 862.00	\$ 47.30	\$ 40.39
Matson, Inc.	16.27%	12.52%	\$ 78.15	21.76%	40.00%	\$95	458.7	\$ 49.73	\$ 43.02
Ralph Lauren	19.48%	19.01%	\$583.77	18.27%	70.00%	149	\$3,397.50	\$ 158.73	\$ 137.84
LVMH	14.22%	5.17%	\$ 1,636.00	13.52%	70.00%	1819	5847	\$ 200.20	\$ 180.14

First Principles

Corporate Finance: The Big Picture



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 !!!

