THE GRAND FINALE

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M & A

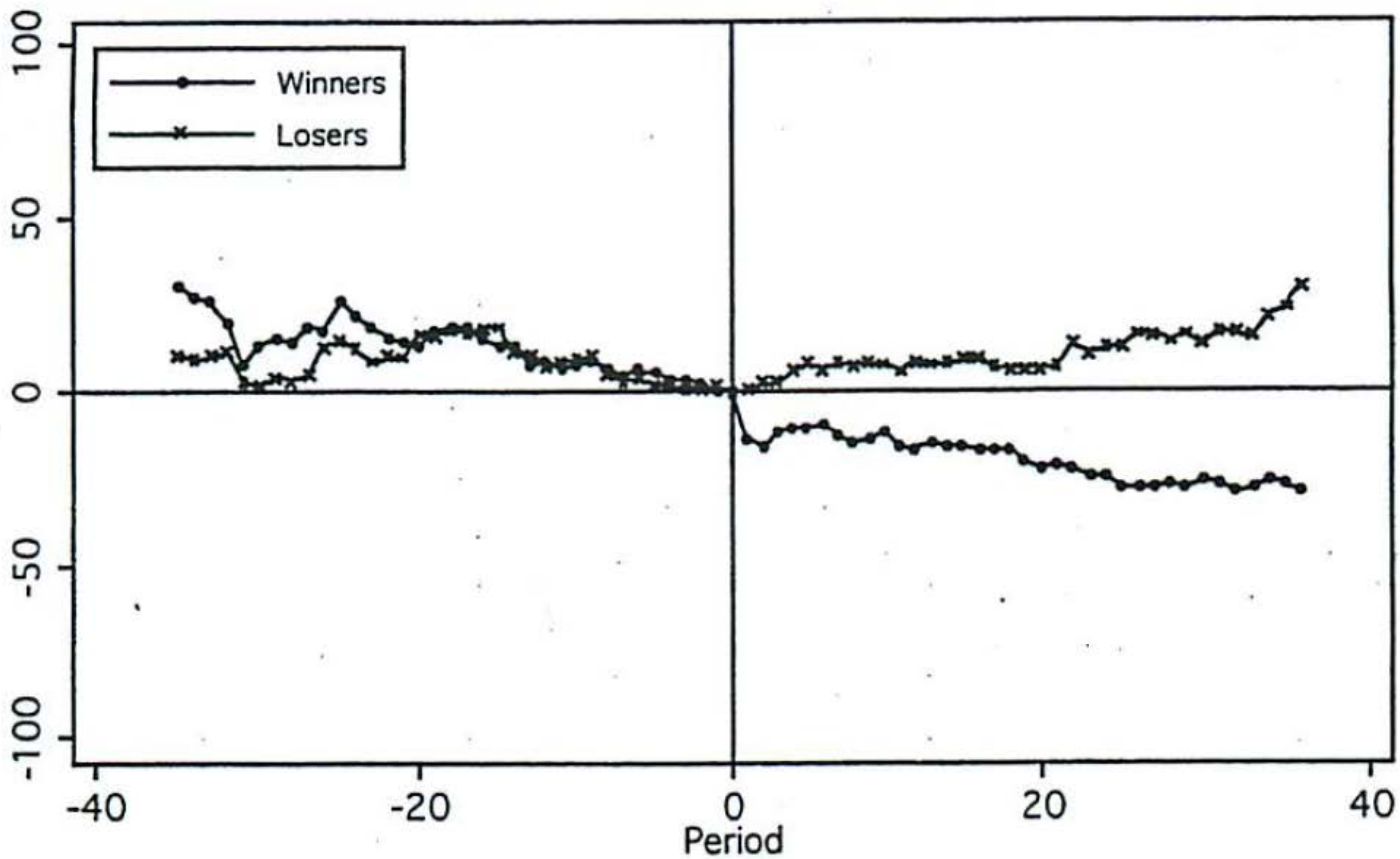
Rays of hope… in a bleak setting..

Acquisitions: Improving the Odds

- The odds seem to be clearly weighted against success in acquisitions. If you were to create a strategy to grow, based upon acquisitions, which of the following offers your best chance of success?

This	Or this
Sole Bidder	Bidding War
Public target	Private target
Pay with cash	Pay with stock
Small target	Large target
Cost synergies	Growth synergies

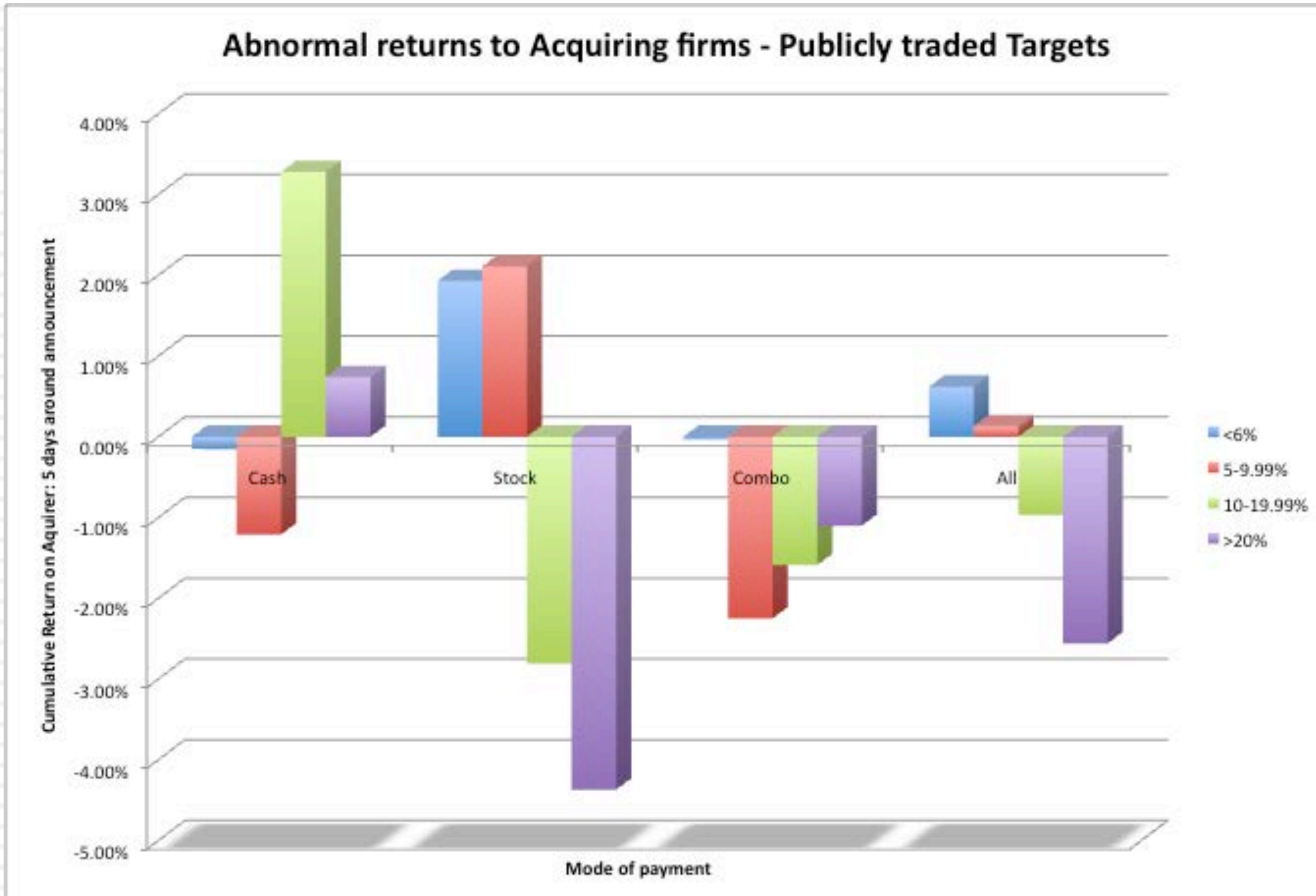
Better to lose a bidding war than to win one…



(a) Market-adjusted CARs

Returns in the 40 months before & after bidding war
Source: Malmendier, Moretti & Peters (2011)

You are better off buying small rather than large targets… with cash rather than stock

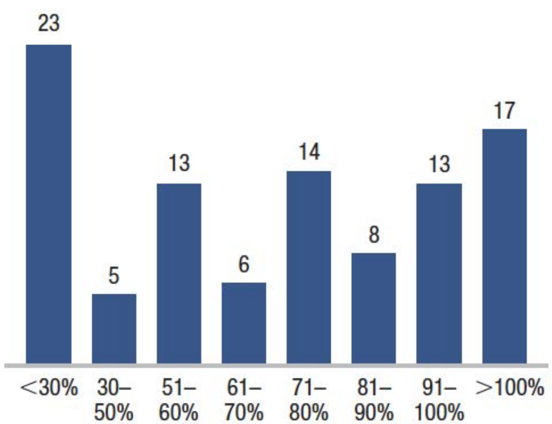


And focusing on private firms and subsidiaries, rather than public firms…

Growth vs Cost Synergies

Top-line trouble: 70 percent of mergers failed to achieve expected revenue synergies

Mergers achieving stated percentage of expected revenue synergies, percent $N = 77$



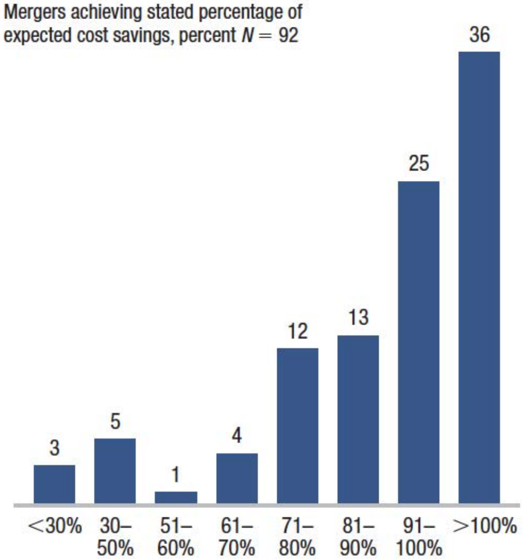
Typical sources of estimation error

- Ignoring or underestimating customer losses (typically 2% to 5%) that result from the integration
- Assuming growth or share targets out of line with overall market growth and competitive dynamics (no "outside view" calibration)

Source: McKinsey (2002) Postmerger Management Practice client survey; client case studies

Cost-synergy estimation is better, but there are patterns emerging in the errors

Mergers achieving stated percentage of expected cost savings, percent $N = 92$



Typical sources of estimation error

- Underestimating one-time costs
- Using benchmarks from noncomparable situations
- Not sanity-checking management estimates against precedent transactions
- Failing to ground estimates in bottom-up analysis (e.g., location-by-location review of overlaps)

Source: McKinsey (2002) Postmerger Management Practice client survey; client case studies

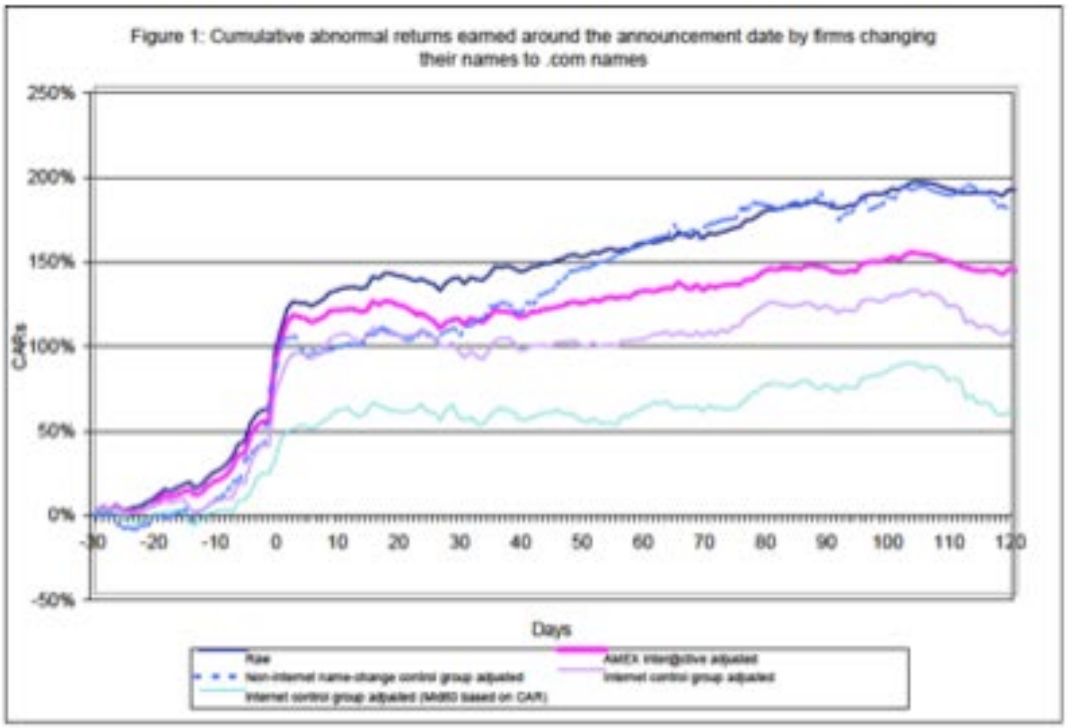
For acquisitions to create value, you have to stay disciplined..

1. If you have a successful acquisition strategy, stay focused on that strategy. Don't let size or hubris drive you to "expand" the strategy.
2. Realistic plans for delivering synergy and control have to be put in place before the merger is completed. By realistic, we have to mean that the magnitude of the benefits have to be reachable and not pipe dreams and that the time frame should reflect the reality that it takes a while for two organizations to work as one.
3. The best thing to do in a bidding war is to drop out.
4. Someone (preferably the person pushing hardest for the merger) should be held to account for delivering the benefits.
5. The compensation for investment bankers and others involved in the deal should be tied to how well the deal works rather than for getting the deal done.

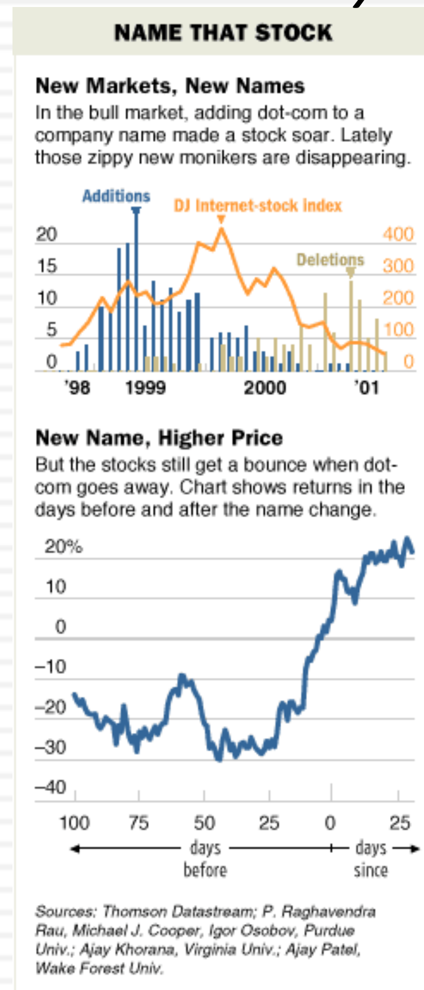
Value Enhancement and the Value of Control

Price Enhancement versus Value Enhancement

The market gives…



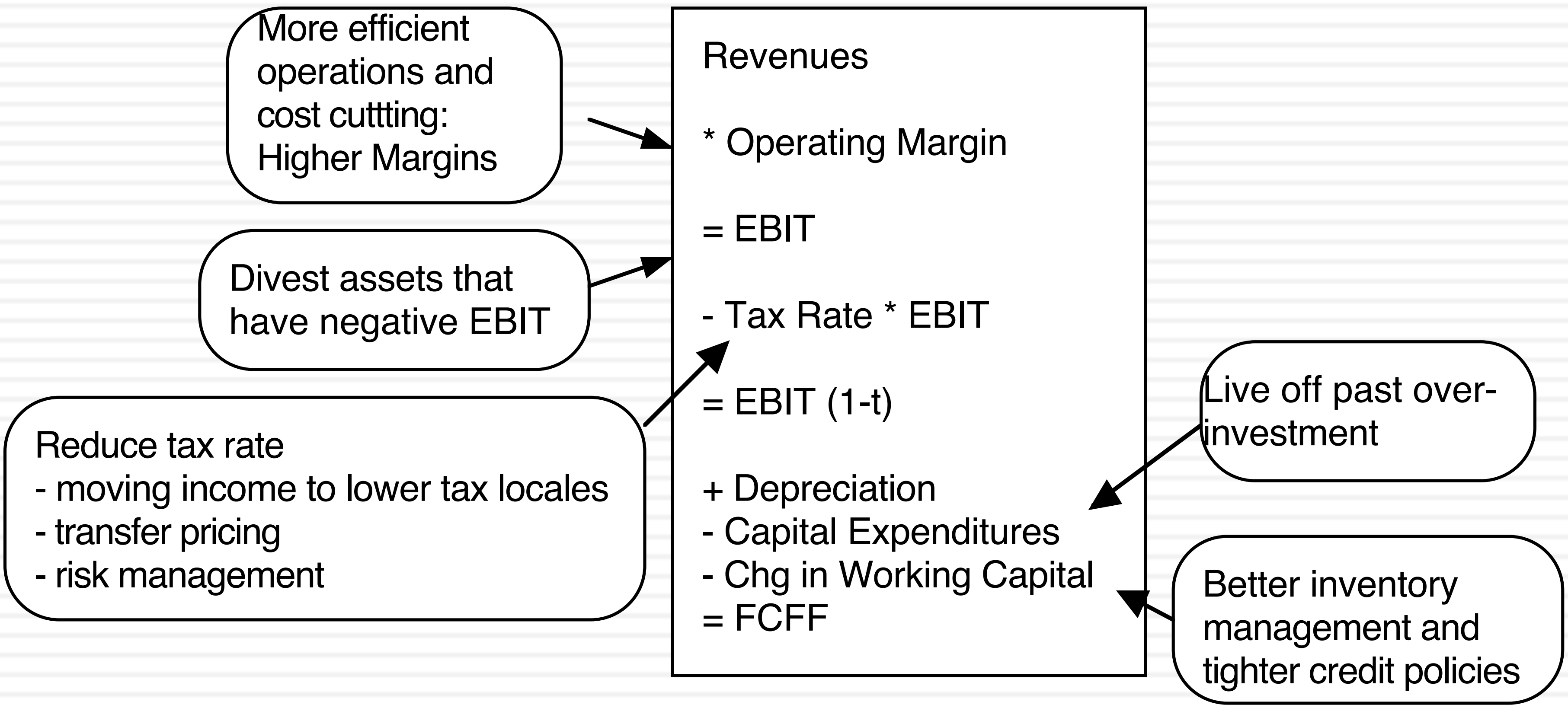
And takes away….



The Paths to Value Creation

- Using the DCF framework, there are four basic ways in which the value of a firm can be enhanced:
  - The cash flows from existing assets to the firm can be increased, by either
    - increasing after-tax earnings from assets in place or
    - reducing reinvestment needs (net capital expenditures or working capital)
  - The expected growth rate in these cash flows can be increased by either
    - Increasing the rate of reinvestment in the firm
    - Improving the return on capital on those reinvestments
  - The length of the high growth period can be extended to allow for more years of high growth.
  - The cost of capital can be reduced by
    - Reducing the operating risk in investments/assets
    - Changing the financial mix
    - Changing the financing composition

Value Creation 1: Increase Cash Flows from Assets in Place

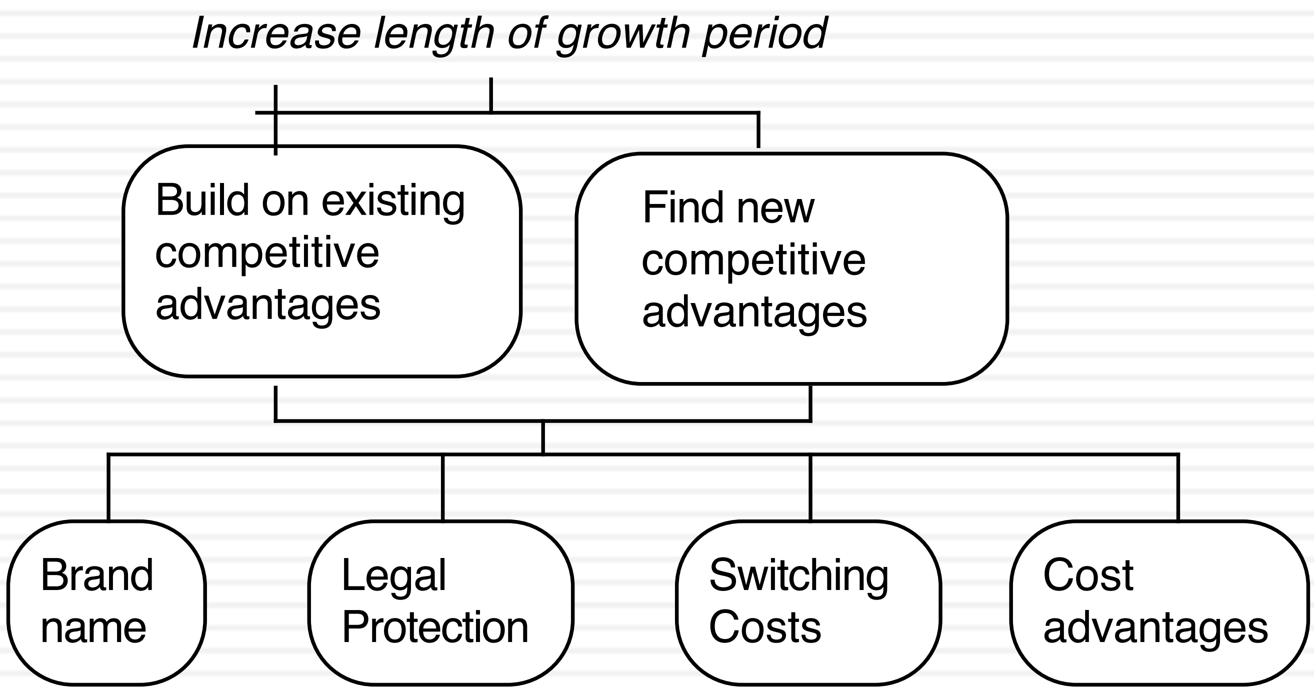


Value Creation 2: Increasing Value from Growth

- If you are in a good business, i.e., you are capable of earning more than your cost of capital, you can try to increase value from growth
  - By reinvesting more, either internally or externally, to increase your growth rate
  - By reinvesting better, by improving your return on capital on new projects.
- If you are in a bad business, i.e., it is difficult to earn more than your cost of capital, your value will increase if you reinvest less and grow less.

Bottom line: Don’t glorify growth for the sake of growth.

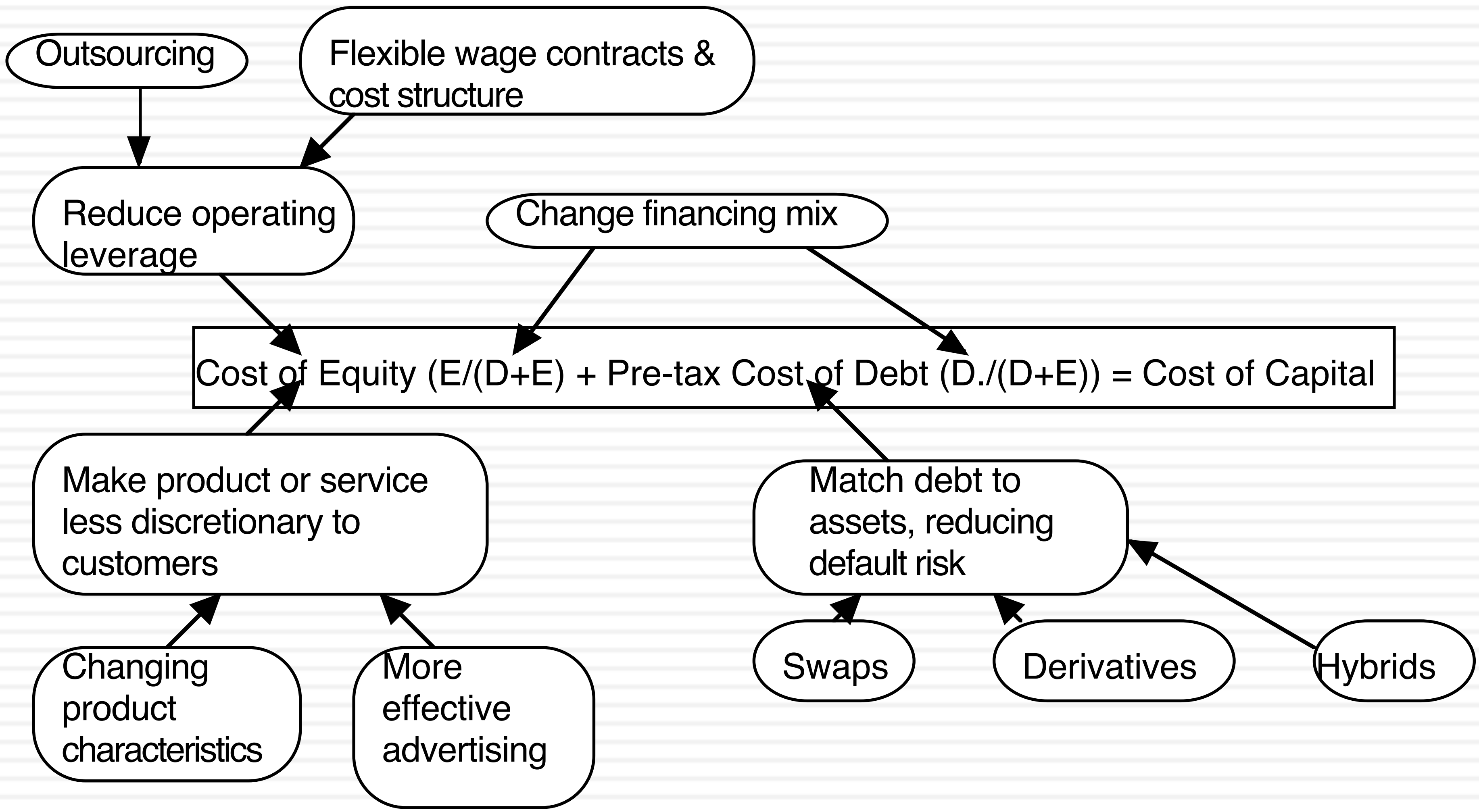
Value Creation 3: . Building Competitive Advantages



Higher return on capital on investments -> Higher value

Longer high growth periods -> Higher value

Value Creation 4: Reduce Cost of Capital



The Value of Control

- The value of the control premium that will be paid to acquire a block of equity will depend upon two factors -
  - Probability that control of firm will change: This refers to the probability that incumbent management will be replaced. this can be either through acquisition or through existing stockholders exercising their muscle.
  - Value of Gaining Control of the Company: The value of gaining control of a company arises from two sources - the increase in value that can be wrought by changes in the way the company is managed and run, and the side benefits and perquisites of being in control
  - Value of Gaining Control = Present Value (Value of Company with change in control - Value of company without change in control) + Side Benefits of Control

Adris Grupa (Status Quo): 4/2010

Current Cashflow to Firm
EBIT(1-t) : 436 HRK
- Nt CpX 3 HRK
- Chg WC -118 HRK
= FCFF 551 HRK
Reinv Rate = (3-118)/436= -26.35%;
Tax rate = 17.35%
Return on capital = 8.72%

Average from 2004-09
70.83%

Reinvestment Rate
70.83%

Expected Growth from new inv.
.7083*.0969 =0.0686 or 6.86%

Average from 2004-09
9.69%

Return on Capital
9.69%

Stable Growth
g = 4%; Beta = 0.80
Country Premium= 2%
Cost of capital = 9.92%
Tax rate = 20.00%
ROC=9.92%;
Reinvestment Rate=g/ROC
=4/9.92= 40.32%

Terminal Value$_5$= 365/(.0992-.04) =6170 HRK

HKR Cashflows

Year	1	2	3	4	5
EBIT (1-t)	HRK 466	HRK 498	HRK 532	HRK 569	HRK 608
- Reinvestment	HRK 330	HRK 353	HRK 377	HRK 403	HRK 431
FCFF	HRK 136	HRK 145	HRK 155	HRK 166	HRK 177

612
246
365

Op. Assets 4312
+ Cash: 1787
- Debt 141
- Minority int 465
=Equity 5,484
/ (Common + Preferred shares)
Value non-voting share
335 HRK/share

Discount at $ Cost of Capital (WACC) = 10.7% (.974) + 5.40% (0.026) = 10.55%

On May 1, 2010
AG Pfd price = 279 HRK
AG Common = 345 HRK

Cost of Equity
10.70%

Cost of Debt
(4.25%+ 0.5%+2%)(1-.20)
= 5.40 %

Weights
E = 97.4% D = 2.6%

Riskfree Rate:
HRK Riskfree Rate= 4.25%

+

Beta
0.70

X

Mature market premium
4.5%

+

Lambda
0.68

X

CRP for Croatia
(3%)

Lambda
0.42

X

CRP for Central Europe
(3%)

Unlevered Beta for Sectors: 0.68

Firm's D/E Ratio: 2.70%

Country Default Spread
2%

X

Rel Equity Mkt Vol
1.50

Adris Grupa: 4/2010 (Restructured)

Current Cashflow to Firm
EBIT(1-t) : 436 HRK
- Nt CpX 3 HRK
- Chg WC -118 HRK
= FCFF 551 HRK
Reinv Rate= (3-118)/436=-26.35%;
Tax rate = 17.35%
Return on capital = 8.72%

Reinvestment Rate
70.83%

Expected Growth from new inv.
.7083*.01054=0.0747 or 7.47%

Increased ROIC to cost of capital

Return on Capital
10.54%

Stable Growth
g = 4%; Beta = 0.80
Country Premium= 2%
Cost of capital = 9.65%
Tax rate = 20.00%
ROC=9.65%;
Reinvestment Rate=g/ROC
=4/9.65%= 41.47%

Terminal Value$_5$= 367/(.0965-.04) =6508 HRK

HKR Cashflows

Year	1	2	3	4	5
EBIT (1-t)	HRK 469	HRK 503	HRK 541	HRK 581	HRK 623
- Reinvestment	HRK 332	HRK 356	HRK 383	HRK 411	HRK 442
FCFF	HRK 137	HRK 147	HRK 158	HRK 169	HRK 182

628
246
367

Op. Assets 4545
+ Cash: 1787
- Debt 141
- Minority int 465
=Equity 5,735
Value/non-voting 334
Value/voting 362

Discount at $ Cost of Capital (WACC) = 11.12% (.90) + 8.20% (0.10) = 10.54%

Changed mix of debt and equity to optimal

On May 1, 2010
AG Pfd price = 279 HRK
AG Common = 345 HRK

Cost of Equity
11.12%

Cost of Debt
(4.25%+ 4%+2%)(1-.20)
= 8.20%

Weights
E = 90 % D = 10 %

Riskfree Rate:
HRK Riskfree Rate= 4.25%

+

Beta
0.75

X

Mature market premium
4.5%

+

Lambda
0.68

X

CRP for Croatia
(3%)

Lambda
0.42

CRP for Central Europe
(3%)

Unlevered Beta for Sectors: 0.68

Firm's D/E Ratio: 11.1%

Country Default Spread
2%

X

Rel Equity Mkt Vol
1.50

Manifestations of the Value of Control

- Hostile acquisitions: In hostile acquisitions which are motivated by control, the control premium should reflect the change in value that will come from changing management.
- Valuing publicly traded firms: The market price for every publicly traded firm should incorporate an expected value of control, as a function of the value of control and the probability of control changing.
  - Market value = Status quo value + (Optimal value – Status quo value)* Probability of management changing
- Voting and non-voting shares: The premium (if any) that you would pay for a voting share should increase with the expected value of control.
- Minority Discounts in private companies: The minority discount (attached to buying less than a controlling stake) in a private business should be increase with the expected value of control.

Voting and Non-voting Shares: An Example

- Adris Grupa has two classes of shares outstanding: 9.616 million voting shares and 6.748 million non-voting shares.
- To value a non-voting share, we assume that all non-voting shares essentially have to settle for status quo value. All shareholders, common and preferred, get an equal share of the status quo value.

  Status Quo Value of Equity = 5,484 million HKR

  Value for a non-voting share = 5484/(9.616+6.748) = 334 HKR/share
- To value a voting share, we first value control in Adris Grup as the difference between the optimal and the status quo value:

  Value of control at Adris Grupa = 5,735 – 5484 = 249 million HKR

  Value per voting share =334 HKR + 249/9.616 = 362 HKR

Alternative Approaches to Value Enhancement

- Maximize a variable that is correlated with the value of the firm. There are several choices for such a variable. It could be
  - an accounting variable, such as earnings or return on investment
  - a marketing variable, such as market share
  - a cash flow variable, such as cash flow return on investment (CFROI)
  - a risk-adjusted cash flow variable, such as Economic Value Added (EVA)
- The advantages of using these variables are that they
  - Are often simpler and easier to use than DCF value.
- The disadvantage is that the
  - Simplicity comes at a cost; these variables are not perfectly correlated with DCF value.

The bottom line…

- The value of a firm is not going to change just because you use a different metric for value. All approaches that are discounted cash flow approaches should yield the same value for a business, if they make consistent assumptions.
- If there are differences in value from using different approaches, they must be attributable to differences in assumptions, either explicit or implicit, behind the valuation.
- If you adopt a metric as a short cut, it is almost inevitable that there will be game playing by managers on that metric.

YOUR NUMBERS/FINDINGS

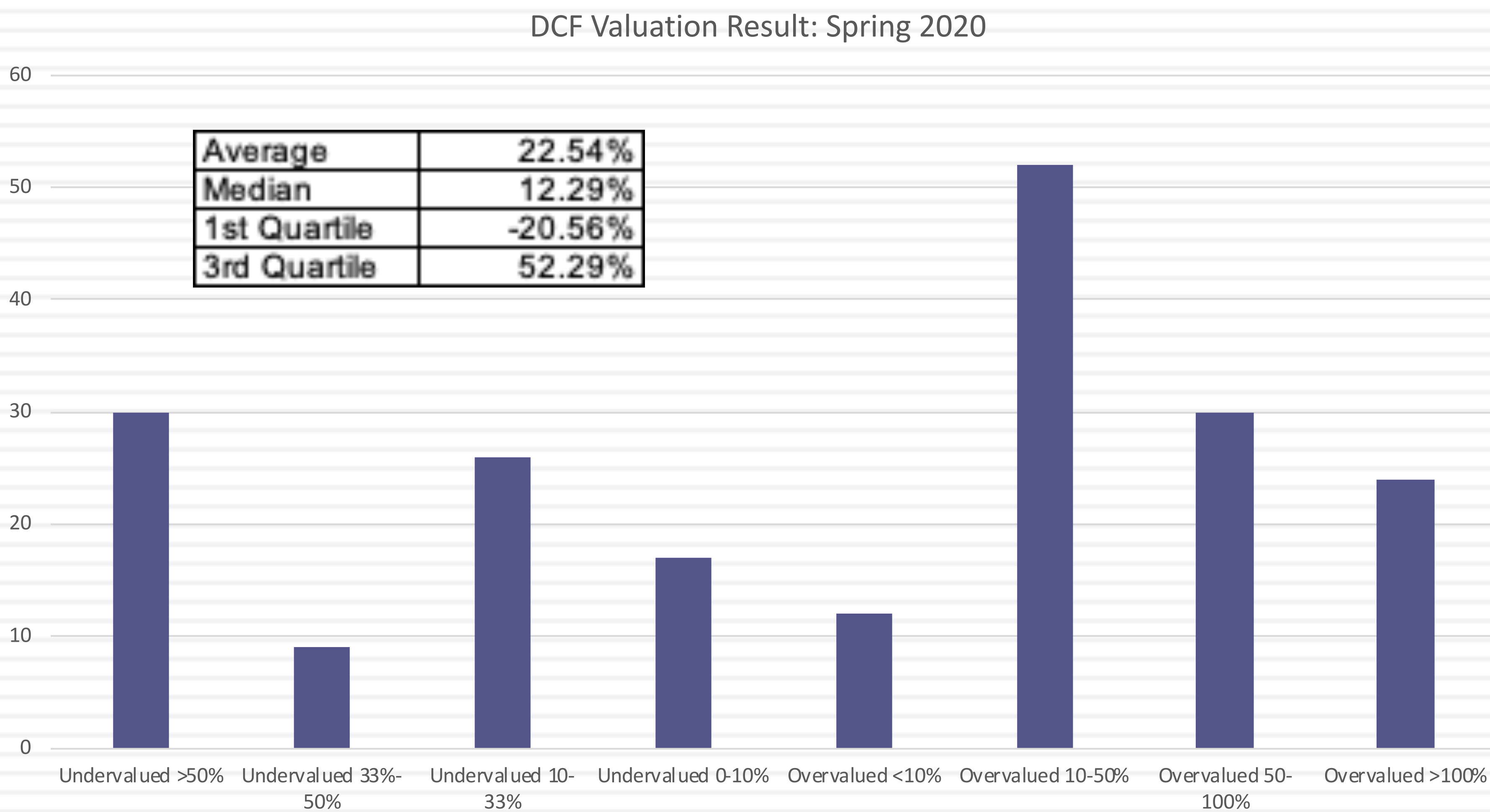
"The truth shall set you free".

The Most Valued Company (Companies)..

Company	*Number of analyses*
Peloton	5
Zoom	4
Netflix	4
Beyond Meat	4
Square	4
Uber	4

	Price	DCF value	Pricing	Recommendation
Uber	$28.07	$38.26	$29.73	Buy
Uber	32.36	48.41	50.48	Buy
Uber	$22.40	$20.47	$38.24	Hold
Uber	32.79	19.5	50.11	Sell

What you found…



Average	22.54%
Median	12.29%
1st Quartile	-20.56%
3rd Quartile	52.29%

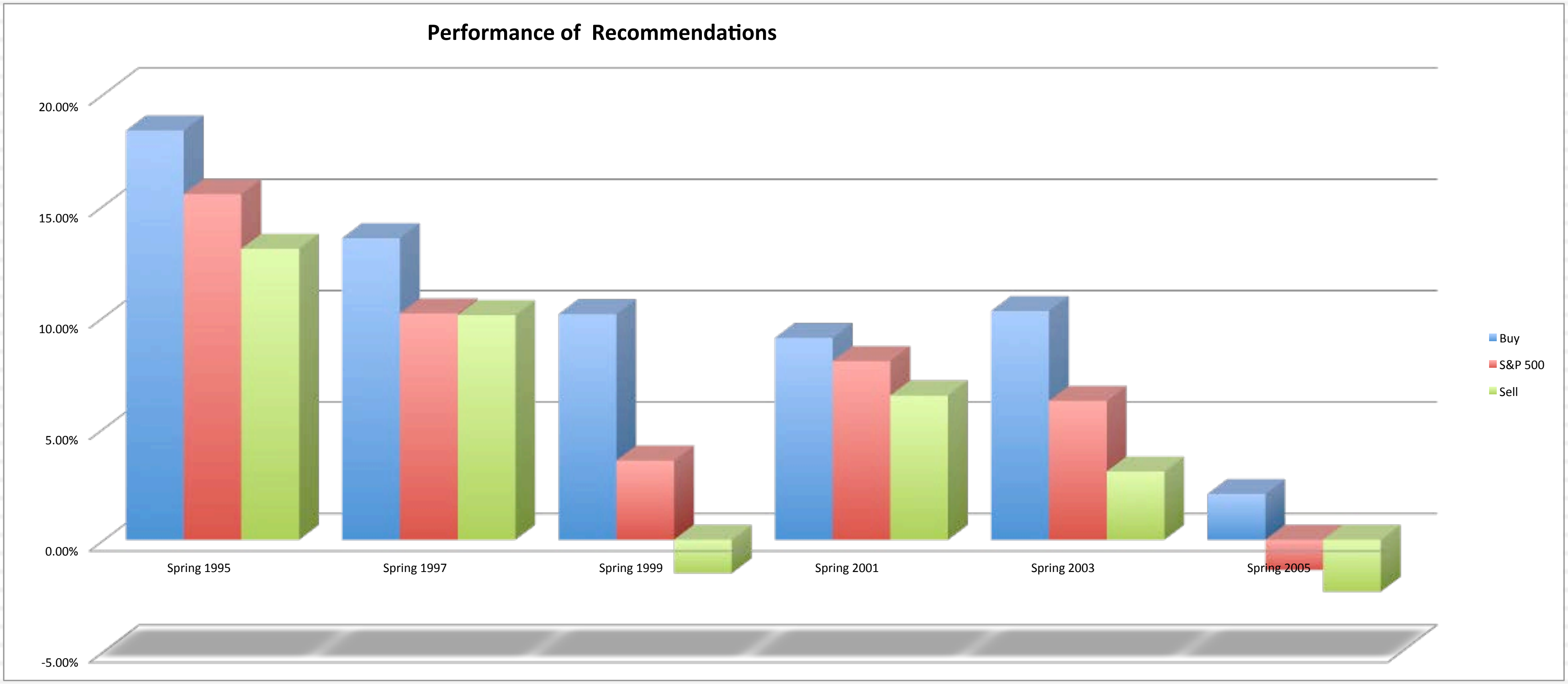
The most undervalued stocks…

Company	Price	DCF	Pricing (based on multiple)	Recommendation
ASOS plc. LSE: ASC.L	£11.30	£38.25	£38.52	Buy
China Mobile Limited (HK)	$7.62	$19.78	$21.70	Buy
Lufthansa	€7.95	€16.37	€31.85	Buy
United Airlines	25.42	50.55	32.77	Buy
Capital One	$60.75	$113.05	$77.10	Buy
Bed Bath & Beyond	$5.64	$10.11	21.66	Buy
Cardinal Health	$47.42	$80.99	99.83	Buy
The Cheeseckae Factory	22.53	37.86	56.63	Buy
Virgin Galactic	$20.18	$31.89	$4.08	Hold
Lufthansa	8.19	12.89	8.9	Buy

The Most Overvalued stocks are...

Company	Price	DCF	Pricing (based on multiple)	Recommendation
Shopify	$708.97	$121.44	$350.33	Sell
Marriott	87.18	18.04	34.24	Sell
Amarin. NASDAQ: AMRN	$7.72	$1.90	$1.74	Sell
Shopify	$708.97	$184.05	$162.54	Sell
Schrödinger Inc	46.4	12.34	15.24	Sell
AMD	$49.88	$14.54	$15.06	Sell
Netflix	$428.15	$125.59	$215.77	Sell
Wingstop Inc.	127.55	39.42	33.87	Sell
Nio	$3.77	$1.17	$0.26	Sell
Hexcell	29.34	9.22	82.4	Sell

The ultimate test… Did undervalued stocks make money?



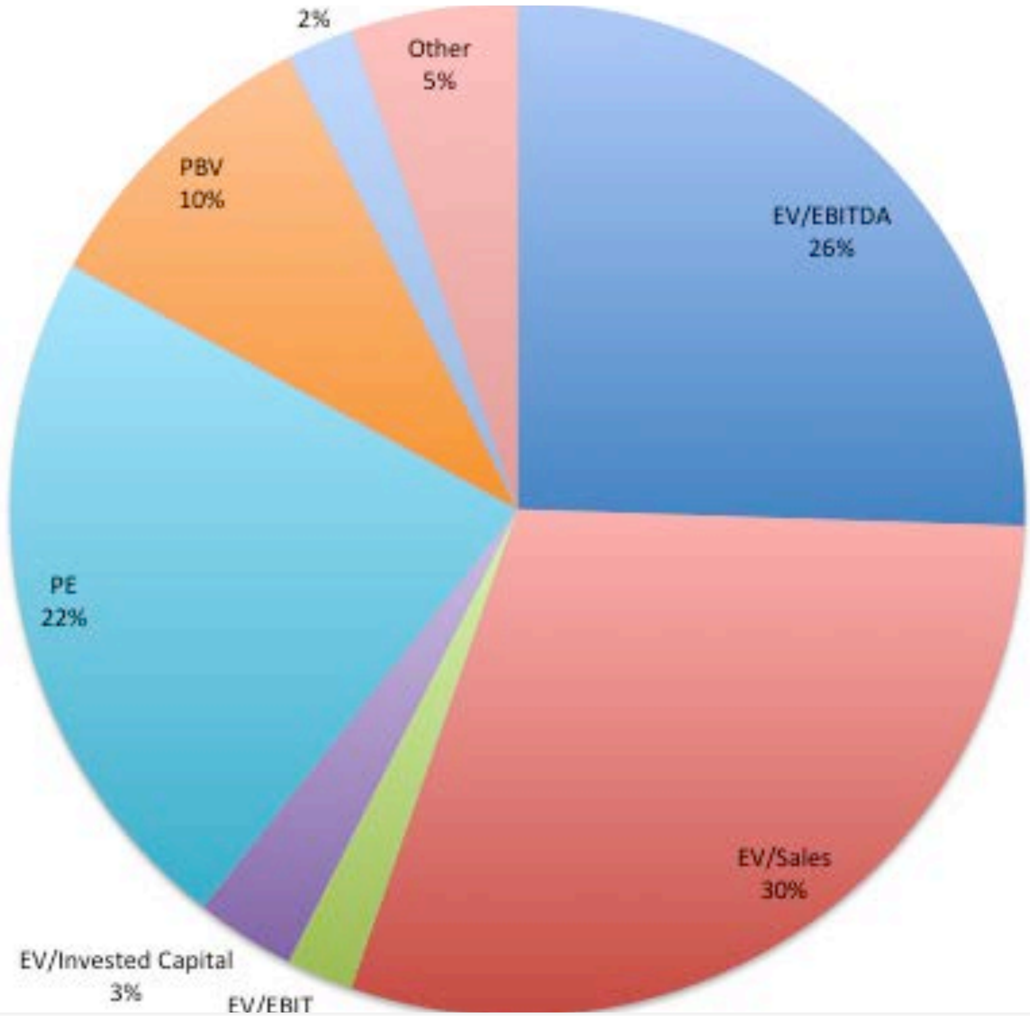
More on the winners...

- <u>On average, right</u>: About 60% of all buy recommendations make money; about 45% of sell recommendations beat the market. The average return on buy recommendations was about 4% higher, on an annualized basis, than the average return on sell recommendations.
- <u>More so on some</u>: The excess returns on buy recommendations on small cap and emerging market companies is higher than the excess returns on large market cap companies, with higher mistakes in both directions on the former.
- <u>Skewed payoffs</u>: There are two or three big winners in each period, but the payoff was not always immediate. Buying Apple in 1999 would have led to negative returns for a year or more, before the turnaround occurred.
- <u>Double whammy</u>: Stocks that are under valued on both a DCF and relative valuation basis do better than stocks that are under valued on only one approach.

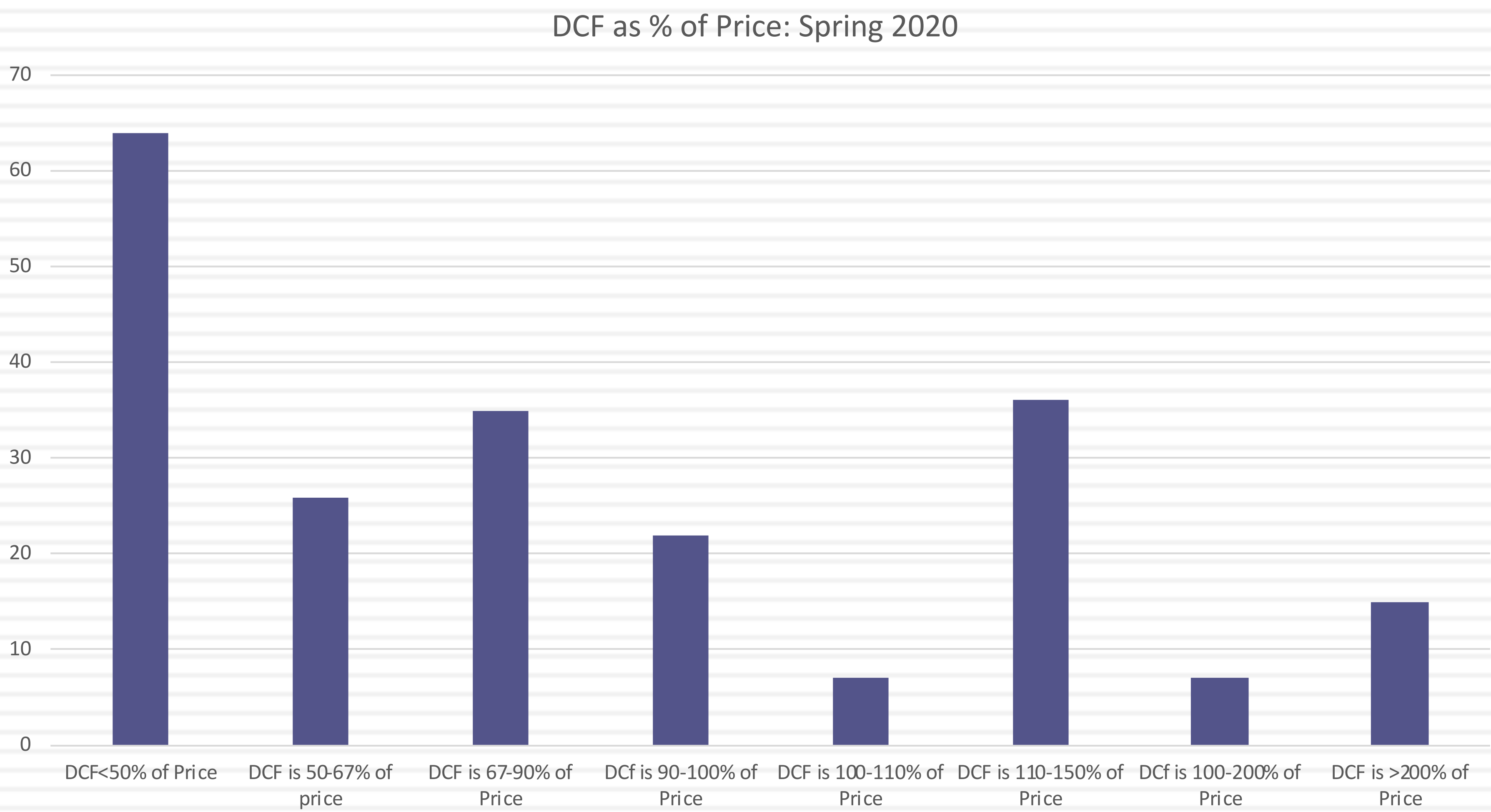
Relative Valuation: The Four Steps to Understanding Multiples

- Anna Kournikova knows PE…. Or does she?
  - In use, the same multiple can be defined in different ways by different users. When comparing and using multiples, estimated by someone else, it is critical that we understand how the multiples have been estimated
- 8 times EBITDA is not always cheap…
  - Too many people who use a multiple have no idea what its cross sectional distribution is. If you do not know what the cross sectional distribution of a multiple is, it is difficult to look at a number and pass judgment on whether it is too high or low.
- You cannot get away without making assumptions
  - It is critical that we understand the fundamentals that drive each multiple, and the nature of the relationship between the multiple and each variable.
- There are no perfect comparables
  - Defining the comparable universe and controlling for differences is far more difficult in practice than it is in theory.

The Multiples you used were ...



DCF vs Relative Valuation



Most underpriced on a relative basis…

Company	Price	DCF Value	Multiple	Pricing	Recommendation
Wayfair	$47.24	$52.83	Other	237.94	Buy
The One Group Hospitality Inc.	1.54	1	EV to EBITDA	7.4	Sell
Lufthansa	€7.95	€16.37	Other	€31.85	Buy
Bed Bath & Beyond	$5.64	$10.11	EV to Sales	21.66	Buy
ASOS plc. LSE: ASC.L	£11.30	£38.25	Other	£38.52	Buy
Rolls Royce	313.1	409.8	EV to Sales	1027	Buy
AB InBev	$41.30	$37.09	Price to Book	$129.87	Sell
China Mobile Limited (HK)	$7.62	$19.78	PE	$21.70	Buy
Hexcell	29.34	9.22	EV to Sales	82.4	Sell
MSG Network	$11.76	$15.51	EV to EBITDA	$30.27	Hold
The Cheeseckae Factory	22.53	37.86	EV to Sales	56.63	Buy

Most overpriced on a relative basis…

Company	Price	DCF Value	Multiple	Pricing	Recommendation
MGM Resorts	15.59	-17.01	EV to EBITDA	0.44	Sell
Zoom	155.4	60.22	EV to EBITDA	$6.61	Sell
Nio	$3.77	$1.17	EV to Sales	$0.26	Sell
Tesla	$729.83	$365.14	Other	$79.56	Sell
Altria	36.16	39.96	Price to Book	4.15	Hold
Shopify	708.5	466.65	PE	110.65	Sell
Virgin Galactic	$20.18	$31.89	EV to Sales	$4.08	Hold
Amarin. NASDAQ: AMRN	$7.72	$1.90	EV to EBITDA	$1.74	Sell
Shopify	$708.97	$184.05	EV to Sales	$162.54	Sell
Roku	82.42	54.03	EV to Sales	21.39	Sell

Contingent Claim (Option) Valuation

- Options have several features
  - They derive their value from an underlying asset, which has value
  - The payoff on a call (put) option occurs only if the value of the underlying asset is greater (lesser) than an exercise price that is specified at the time the option is created. If this contingency does not occur, the option is worthless.
  - They have a fixed life
- Any security that shares these features can be valued as an option.

- Number of firms valued using option models = 33
- Median Percent increase in value over DCF value= 35.56%

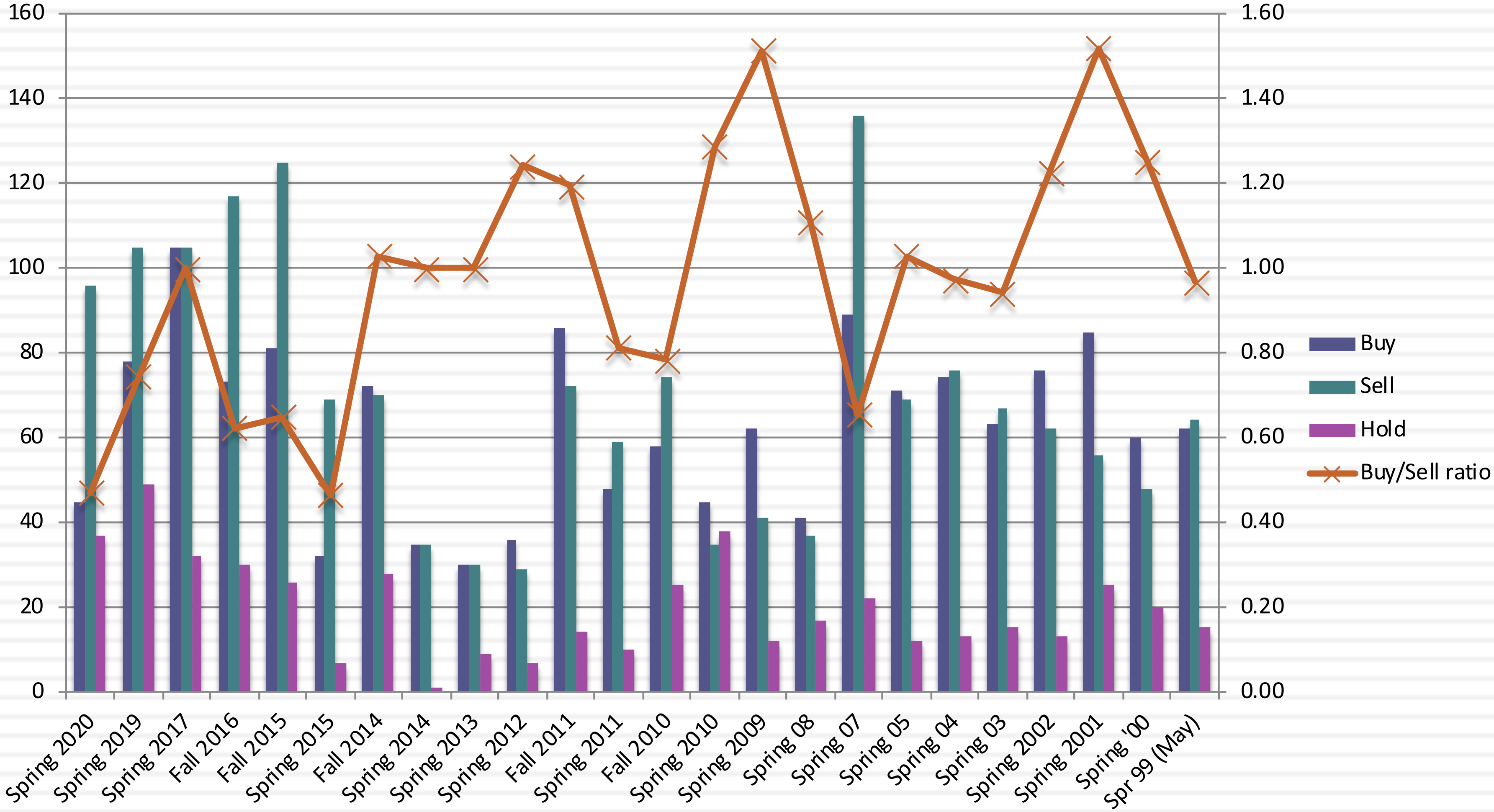
Acting on valuation: It is not just an academic exercise

a. I am not sure yet: Uncertainty is not a shield against action. If you wait until you feel "certain" about your valuation, you will never act.

b. All believers now? Ultimately, you have to believe in some modicum of market efficiency. Markets have to correct their mistakes for your valuations to pay off.

c. The law of large numbers: Assuming your valuations carry heft, you are far more likely to be right across many companies than on any individual one.

Your recommendations were to..



What approach would work for you?

- As an investor, given your investment philosophy, time horizon and beliefs about markets (that you will be investing in), which of the the approaches to valuation would you choose?

a. Discounted Cash Flow Valuation
b. Relative Valuation
c. Neither. I believe that markets are efficient.

Story Tellers? Number Crunchers?

- If you are a story teller, I hope that you have
  - More confidence in your number crunching
  - More discipline in your stories
  - Less intimidation, when confronted with number crunchers
- If you are a number cruncher, I hope that you have
  - More willingness to put stories behind your numbers
  - More imagination in your number crunching
  - More understanding, when confronted with story telling

Some Not Very Profound Advice

1. Its all in the fundamentals.
2. Focus on the big picture. Don’t sweat the small stuff and don’t get distracted.
3. Anecdotes mean little and experience does not equal knowledge.
4. Keep your perspective. It is only a valuation.
5. In investing, luck dominates skill and knowledge.