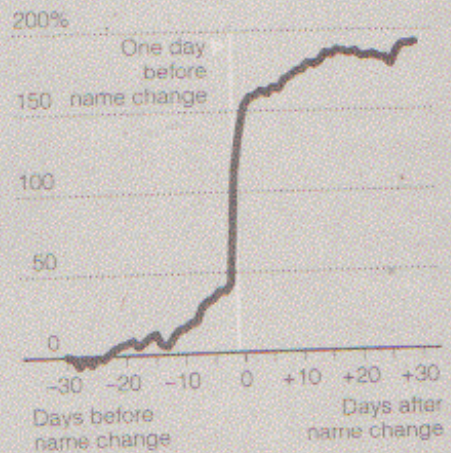




Value Enhancement: Back to Basics

Price Enhancement versus Value Enhancement

Stock price performance of companies that changed their names to include Web-oriented designations like ".com," from 30 trading days before the name-change announcement to 30 days after. The study looked at stocks of companies that changed their names from January 1998 through March 26, 1999.

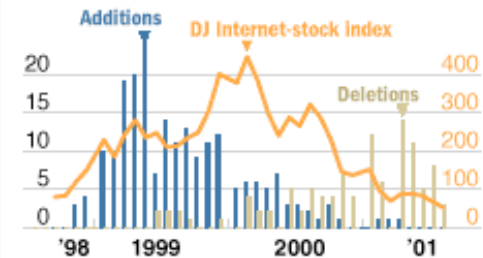


Source: "A Rose.com by Any Other Name," by Michael J. Cooper, P. Raghavendra Rau and Orlin Dimitrov of Purdue University.

NAME THAT STOCK

New Markets, New Names

In the bull market, adding dot-com to a company name made a stock soar. Lately those zippy new monikers are disappearing.



New Name, Higher Price

But the stocks still get a bounce when dot-com goes away. Chart shows returns in the days before and after the name change.

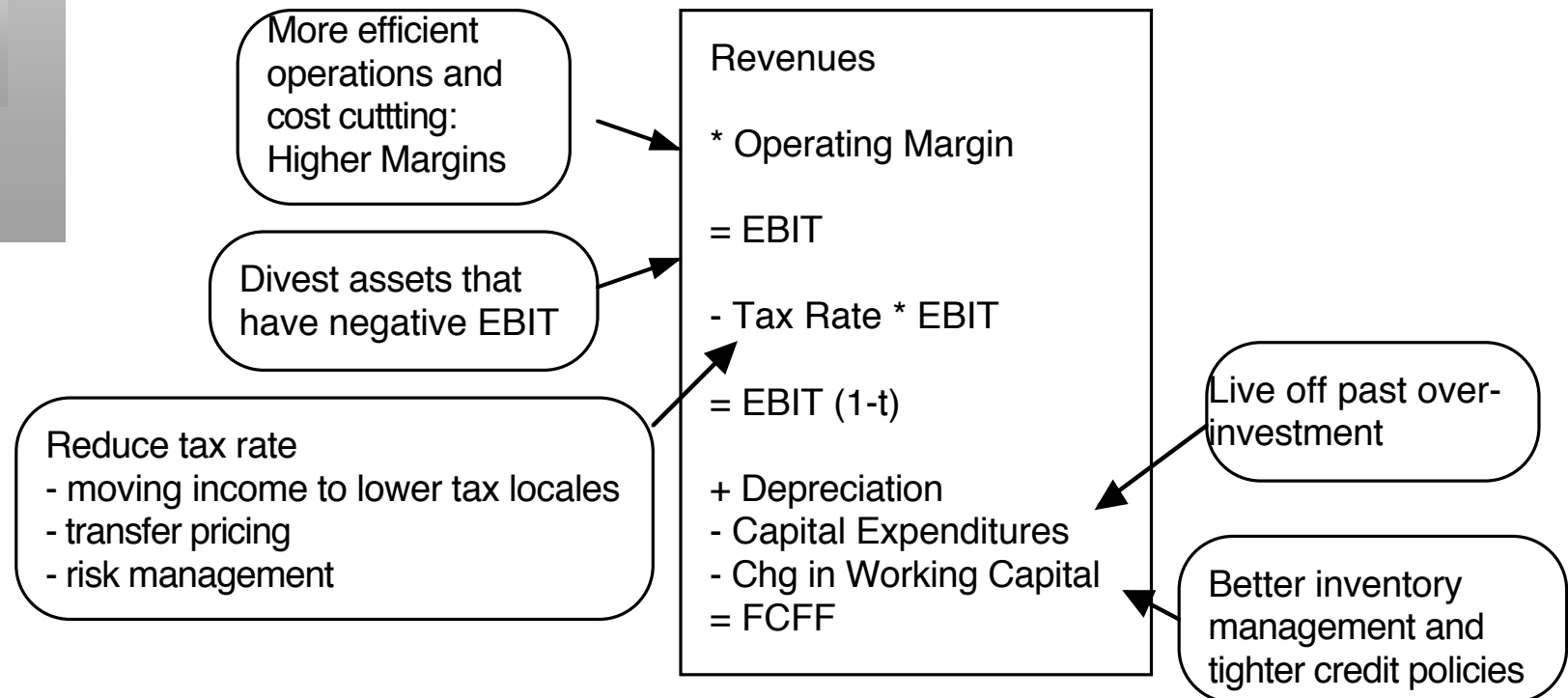


Sources: Thomson Datastream; P. Raghavendra Rau, Michael J. Cooper, Igor Osobov, Purdue Univ.; Ajay Khorana, Virginia Univ.; Ajay Patel, Wake Forest Univ.

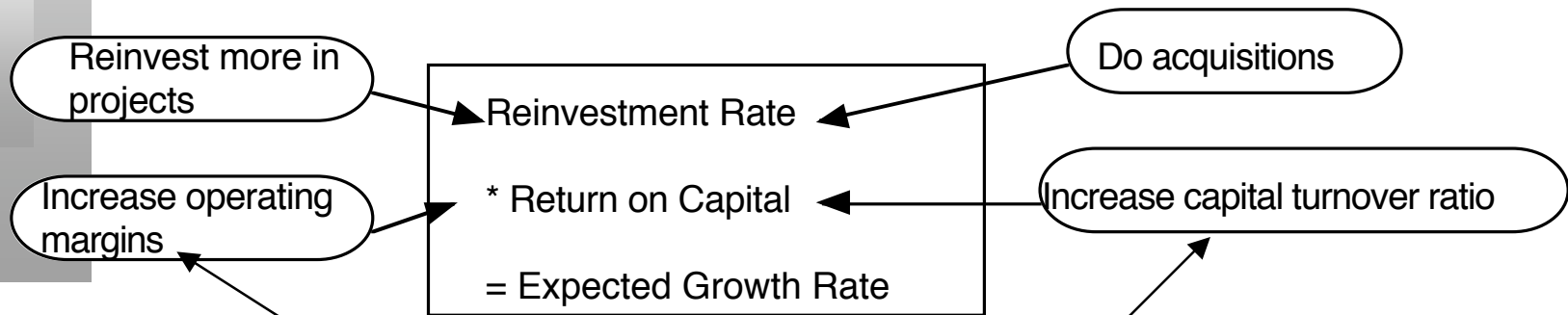
The Paths to Value Creation

- 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

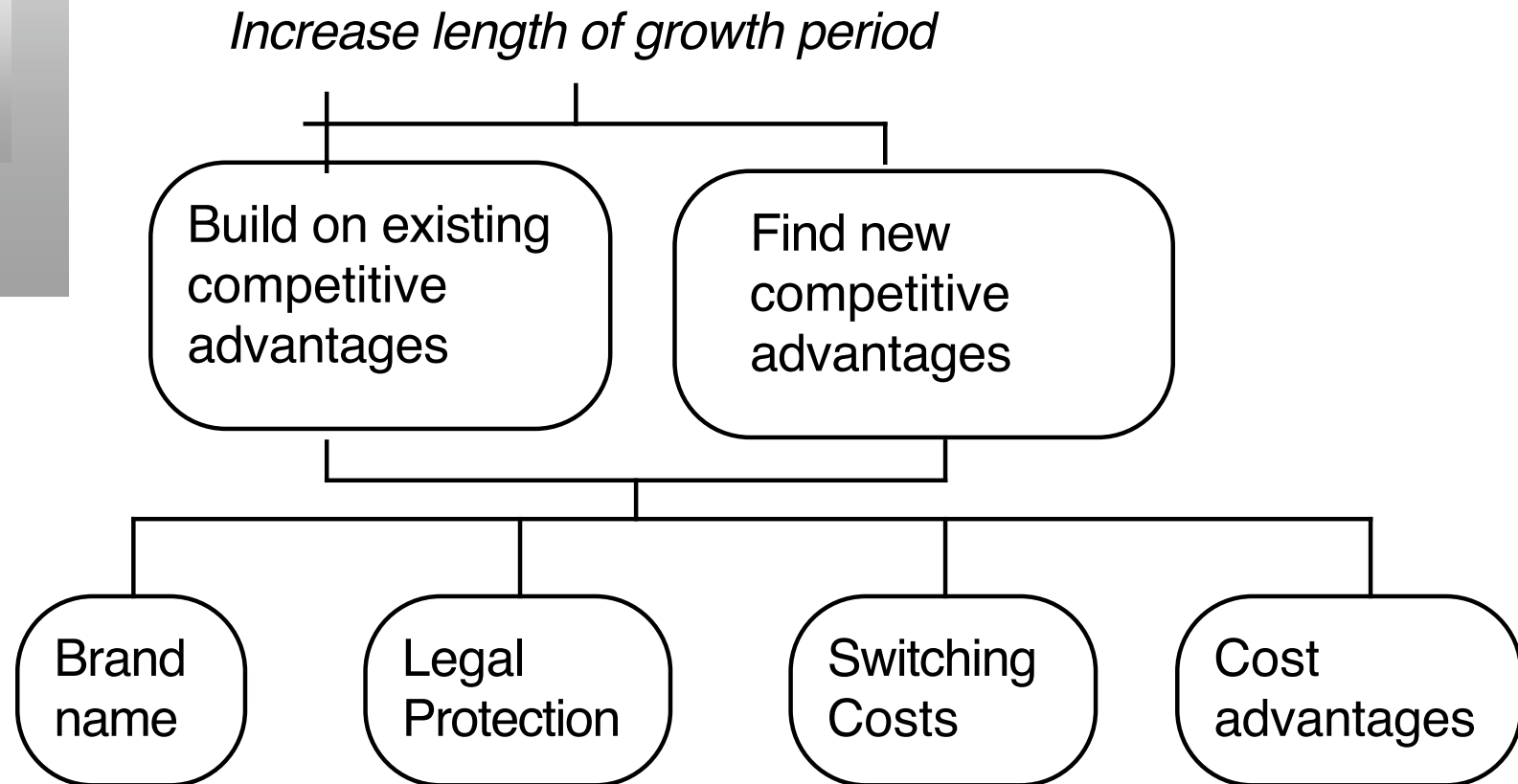


Value Creation 2: Increase Expected Growth

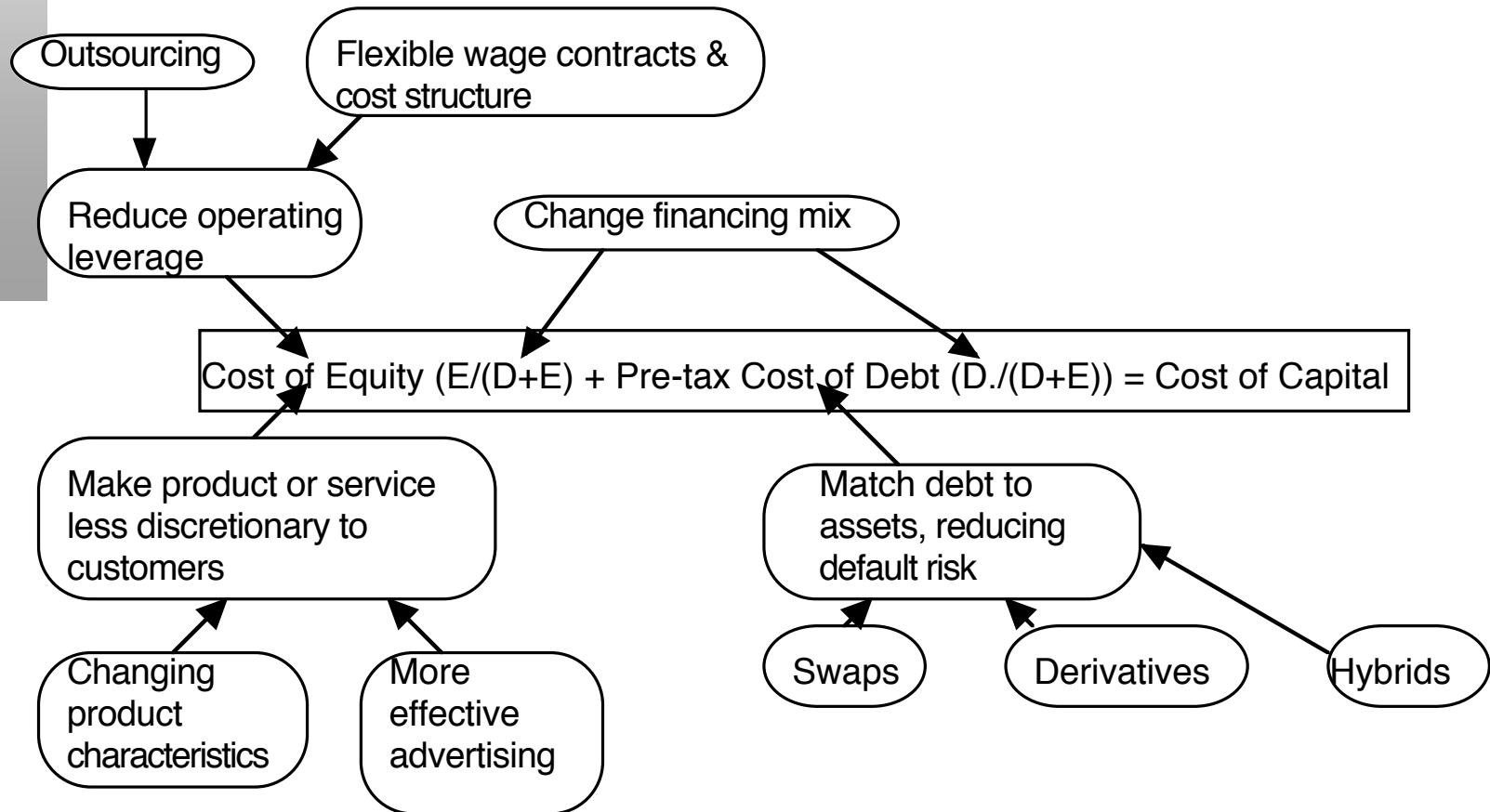


Price Leader versus Volume Leader Strategies
*Return on Capital = Operating Margin * Capital Turnover Ratio*

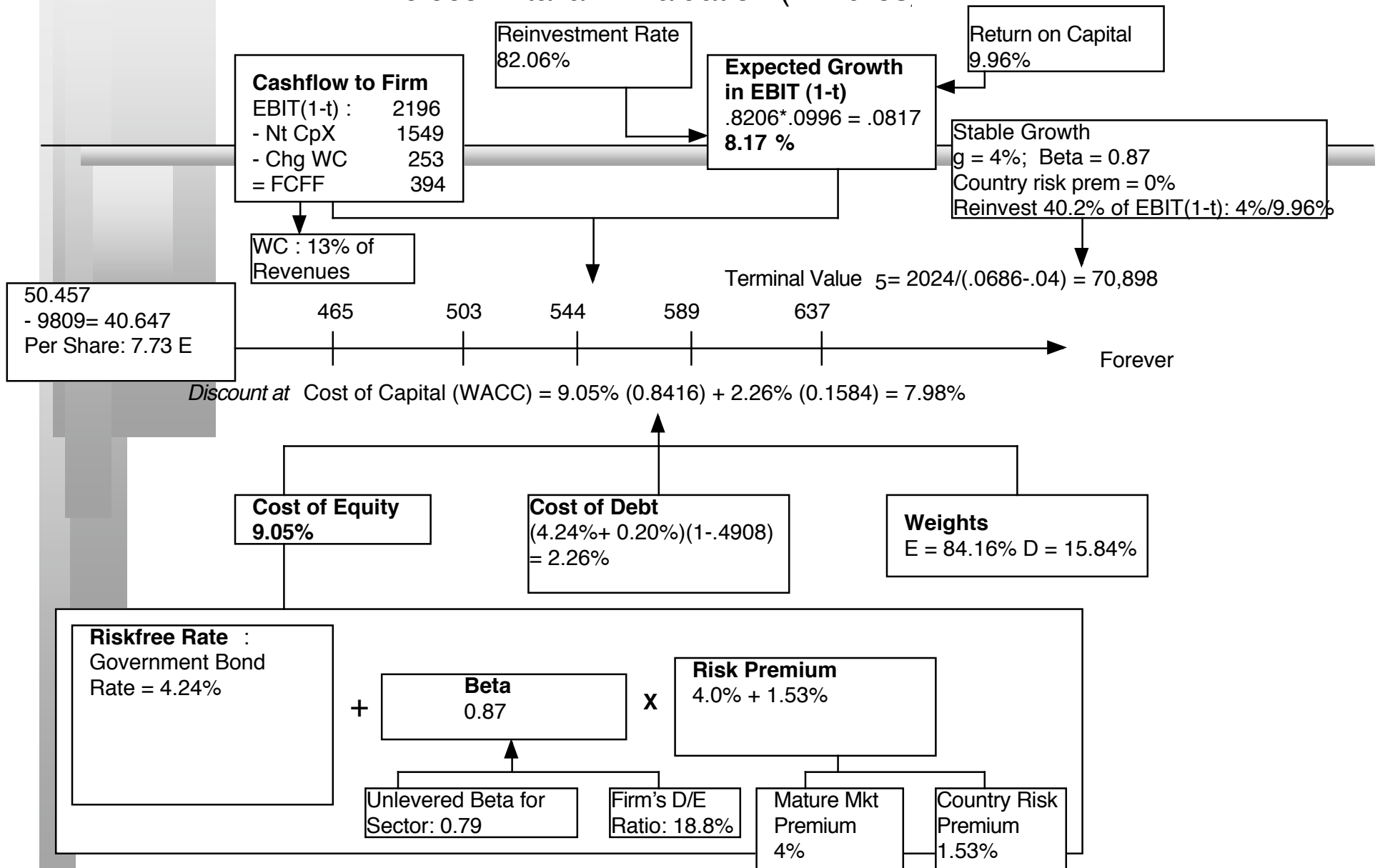
III. Building Competitive Advantages: Increase length of the growth period



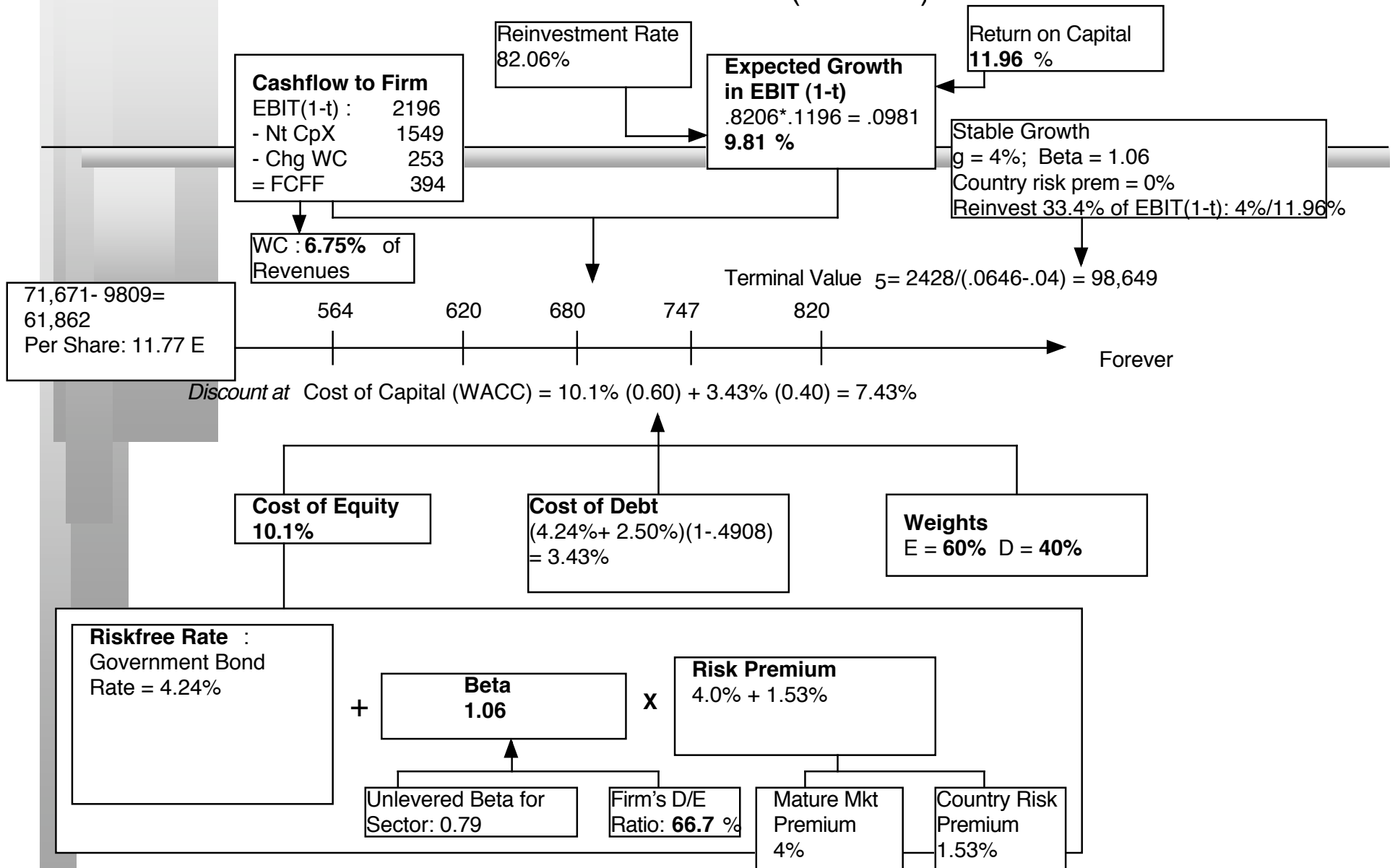
Value Creation 4: Reduce Cost of Capital



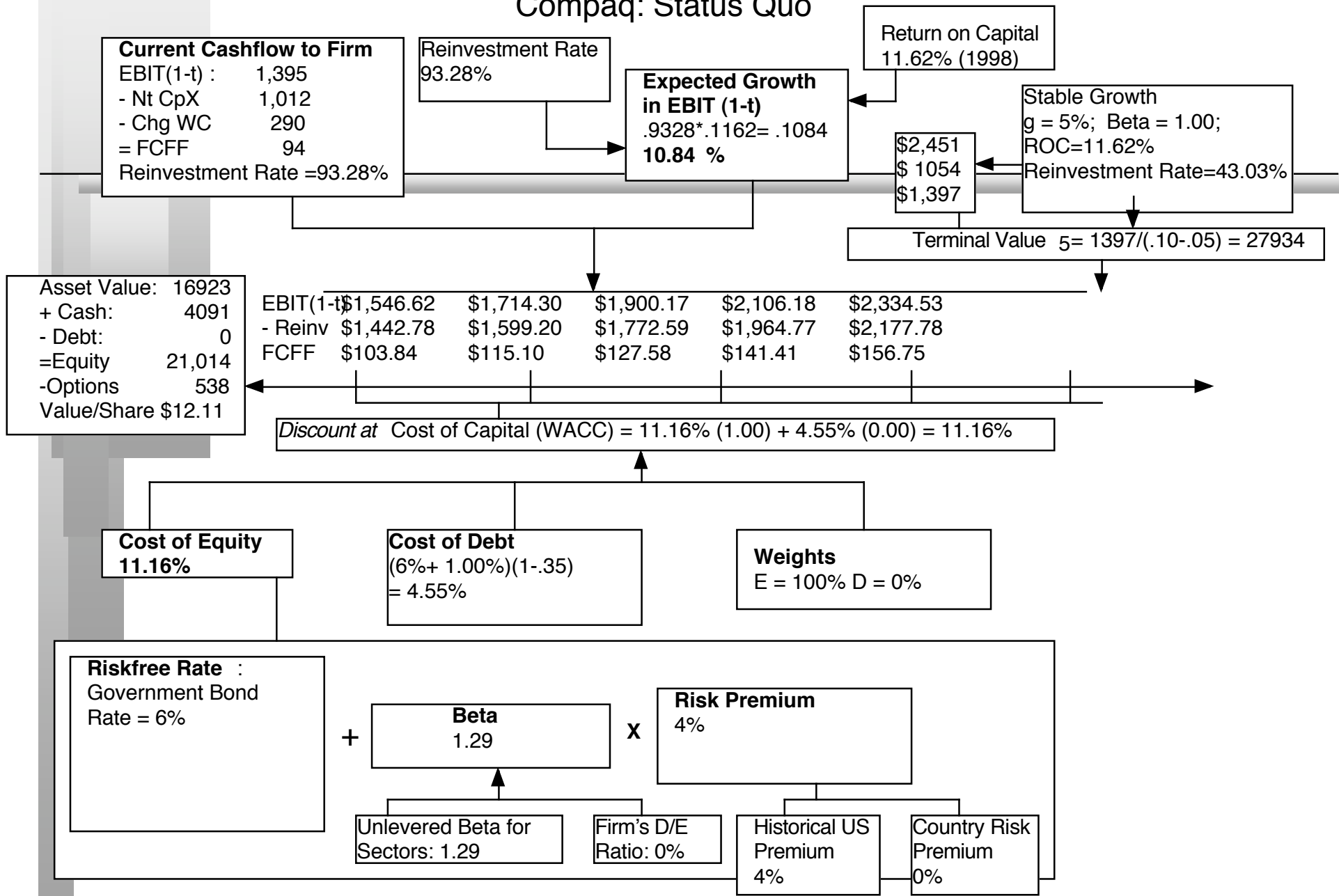
Telecom Italia: A Valuation (in Euros)



Telecom Italia: Restructured (in Euros)



Compaq: Status Quo



Compaq: Restructured

Current Cashflow to Firm
 EBIT(1-t) : 1,395
 - Nt CpX 1012
 - Chg WC 290
 = FCFF 94
 Reinvestment Rate = 93.28%

Reinvestment Rate
 93.28% (1998)

Expected Growth in EBIT (1-t)
 $.9328 \times 19.76\% = .1843$
18.43%

Return on Capital
 19.76%

Stable Growth
 $g = 5\%$; Beta = 1.00;
 ROC = 19.76%
 Reinvestment Rate = 25.30%

Terminal Value $5 = 5942 / (.0904 - .05) = 147,070$

Firm Value: 54895
 + Cash: 4091
 - Debt: 0
 = Equity 58448
 - Options 538
 Value/Share \$34.56

EBIT(1-t)	\$1,653	\$1,957	\$2,318	\$2,745	\$3,251	\$3,851	\$4,560	\$5,401	\$6,397	\$7,576
- Reinv	\$1,542	\$1,826	\$2,162	\$2,561	\$3,033	\$3,592	\$4,254	\$5,038	\$5,967	\$7,067
FCFF	\$111	\$131	\$156	\$184	\$218	\$259	\$306	\$363	\$429	\$509

Discount at Cost of Capital (WACC) = 12.50% (0.80) + 5.20% (0.20) = 10.64%

Cost of Equity
 12.00%

Cost of Debt
 $(6\% + 2\%)(1 - .35)$
 = 5.20%

Weights
 E = 80% D = 20%

Riskfree Rate :
 Government Bond
 Rate = 6%

+ **Beta**
 1.50

x **Risk Premium**
 4.00%

Unlevered Beta for Sectors: 1.29

Firm's D/E Ratio: 0.00%

Mature risk premium 4%

Country Risk Premium 0.00%

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.

Economic Value Added (EVA) and CFROI

- The Economic Value Added (EVA) is a measure of surplus value created on an investment.
 - Define the return on capital (ROC) to be the “true” cash flow return on capital earned on an investment.
 - Define the cost of capital as the weighted average of the costs of the different financing instruments used to finance the investment.

$$\text{EVA} = (\text{Return on Capital} - \text{Cost of Capital}) (\text{Capital Invested in Project})$$

- The CFROI is a measure of the cash flow return made on capital
$$\text{CFROI} = (\text{Adjusted EBIT} (1-t) + \text{Depreciation \& Other Non-cash Charges}) / \text{Capital Invested}$$

A Simple Illustration

- Assume that you have a firm with a book value value of capital of \$ 100 million, on which it expects to generate a return on capital of 15% in perpetuity with a cost of capital of 10%.
- This firm is expected to make additional investments of \$ 10 million at the beginning of each year for the next 5 years. These investments are also expected to generate 15% as return on capital in perpetuity, with a cost of capital of 10%.
- After year 5, assume that
 - The earnings will grow 5% a year in perpetuity.
 - The firm will keep reinvesting back into the business but the return on capital on these new investments will be equal to the cost of capital (10%).

Firm Value using EVA Approach

Capital Invested in Assets in Place	= \$ 100
EVA from Assets in Place = $(.15 - .10) (100)/.10$	= \$ 50
+ PV of EVA from New Investments in Year 1 = $[(.15 - .10)(10)/.10]$	= \$ 5
+ PV of EVA from New Investments in Year 2 = $[(.15 - .10)(10)/.10]/1.1$	= \$ 4.55
+ PV of EVA from New Investments in Year 3 = $[(.15 - .10)(10)/.10]/1.1^2$	= \$ 4.13
+ PV of EVA from New Investments in Year 4 = $[(.15 - .10)(10)/.10]/1.1^3$	= \$ 3.76
+ PV of EVA from New Investments in Year 5 = $[(.15 - .10)(10)/.10]/1.1^4$	= \$ 3.42
Value of Firm	= \$ 170.85

Firm Value using DCF Valuation: Estimating FCFF

	<i>Base Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>Term. Year</i>
EBIT (1-t) : Assets in Place	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	
EBIT(1-t) :Investments- Yr 1		\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	
EBIT(1-t) :Investments- Yr 2			\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	
EBIT(1-t): Investments -Yr 3				\$ 1.50	\$ 1.50	\$ 1.50	
EBIT(1-t): Investments -Yr 4					\$ 1.50	\$ 1.50	
EBIT(1-t): Investments- Yr 5						\$ 1.50	
Total EBIT(1-t)		\$ 16.50	\$ 18.00	\$ 19.50	\$ 21.00	\$ 22.50	\$ 23.63
- Net Capital Expenditures	\$10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 11.25	\$ 11.81
FCFF		\$ 6.50	\$ 8.00	\$ 9.50	\$ 11.00	\$ 11.25	\$ 11.81

After year 5, the reinvestment rate is 50% = g/ ROC

Firm Value: Present Value of FCFF

Year	0	1	2	3	4	5	Term Year
FCFF		\$ 6.50	\$ 8.00	\$ 9.50	\$ 11.00	\$ 11.25	\$ 11.81
PV of FCFF	(\$10)	\$ 5.91	\$ 6.61	\$ 7.14	\$ 7.51	\$ 6.99	
Terminal Value						\$ 236.25	
PV of Terminal Value						\$ 146.69	
Value of Firm	\$170.85						

Implications

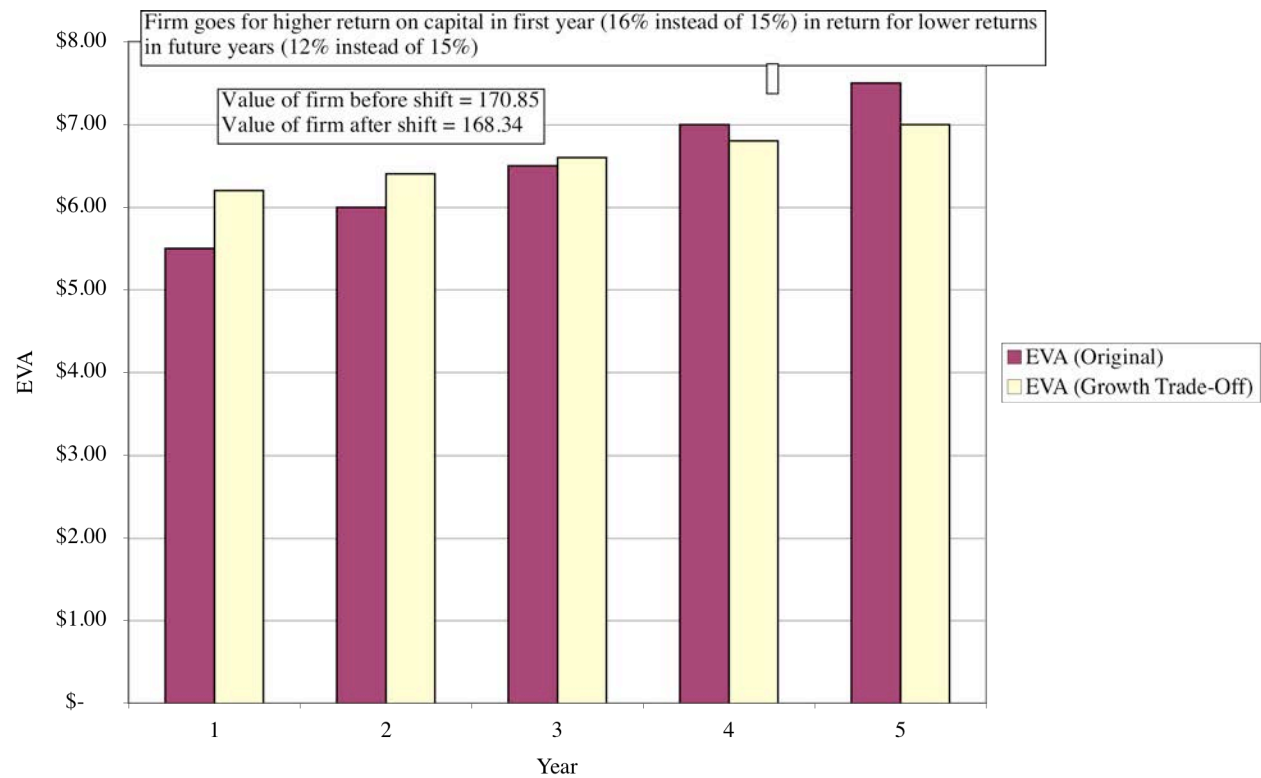
- Growth, by itself, does not create value. It is growth, with investment in excess return projects, that creates value.
 - The growth of 5% a year after year 5 creates no additional value.
- The “market value added” (MVA), which is defined to be the excess of market value over capital invested is a function of the excess value created.
 - In the example above, the market value of \$ 170.85 million exceeds the book value of \$ 100 million, because the return on capital is 5% higher than the cost of capital.

Year-by-year EVA Changes

- Firms are often evaluated based upon year-to-year changes in EVA rather than the present value of EVA over time.
- The advantage of this comparison is that it is simple and does not require the making of forecasts about future earnings potential.
- Another advantage is that it can be broken down by any unit - person, division etc., as long as one is willing to assign capital and allocate earnings across these same units.
- While it is simpler than DCF valuation, using year-by-year EVA changes comes at a cost. In particular, it is entirely possible that a firm which focuses on increasing EVA on a year-to-year basis may end up being less valuable.

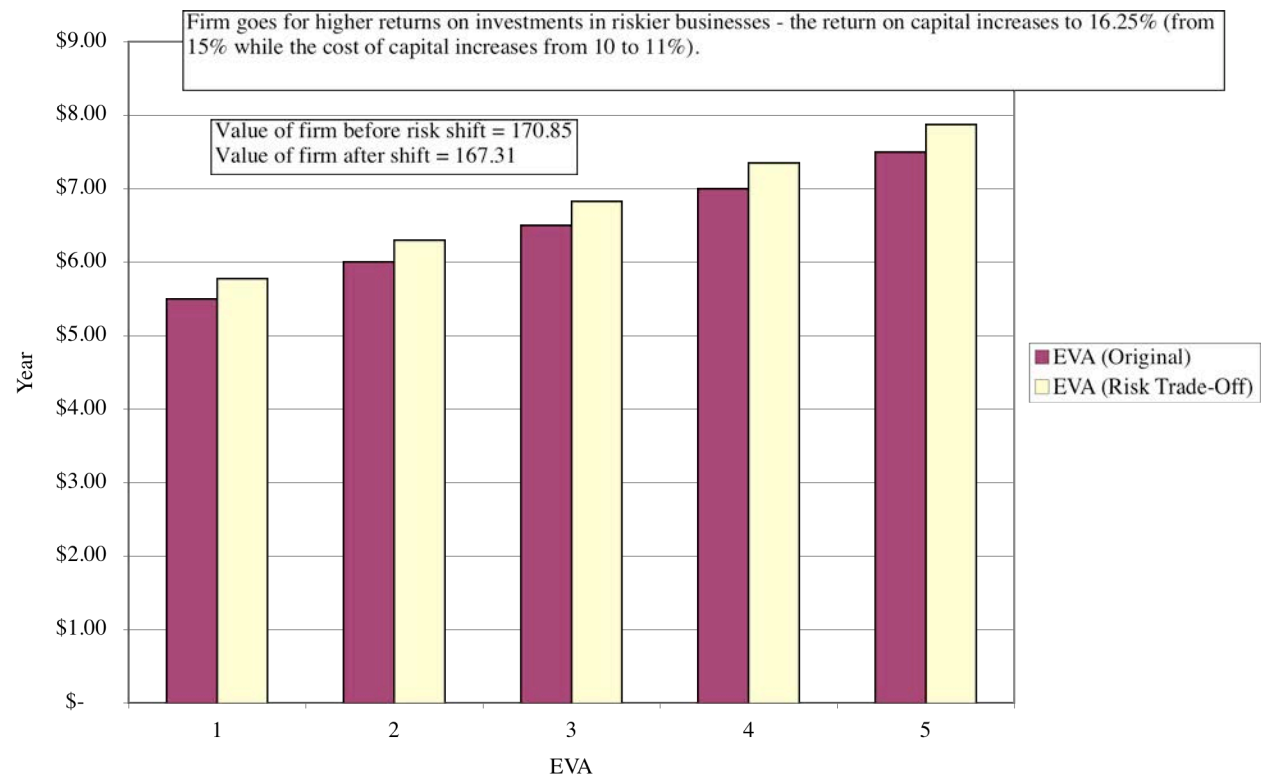
1. The Growth Tradeoff

Figure 32.1: Annual EVA: With and Without Growth Trade-Off



2. The Risk Tradeoff

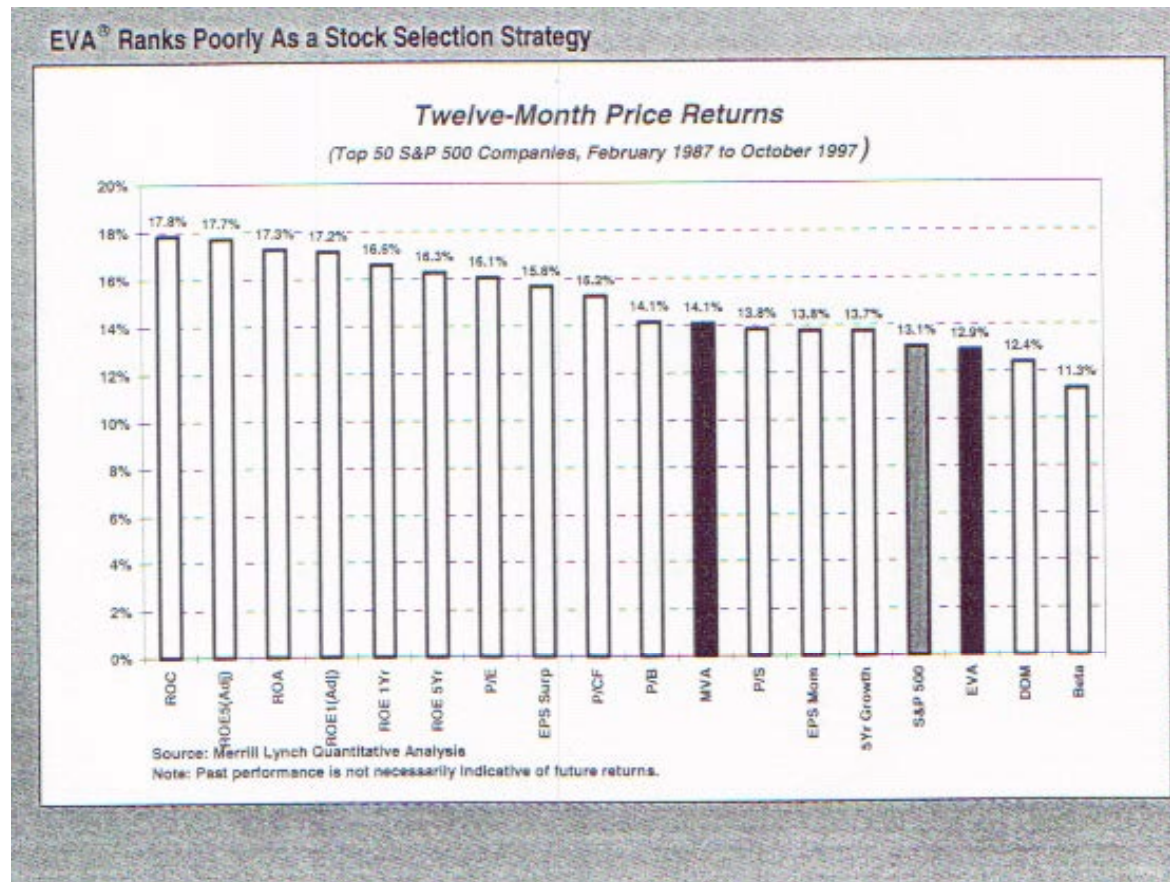
Figure 32.2: EVA: Higher Risk and Return



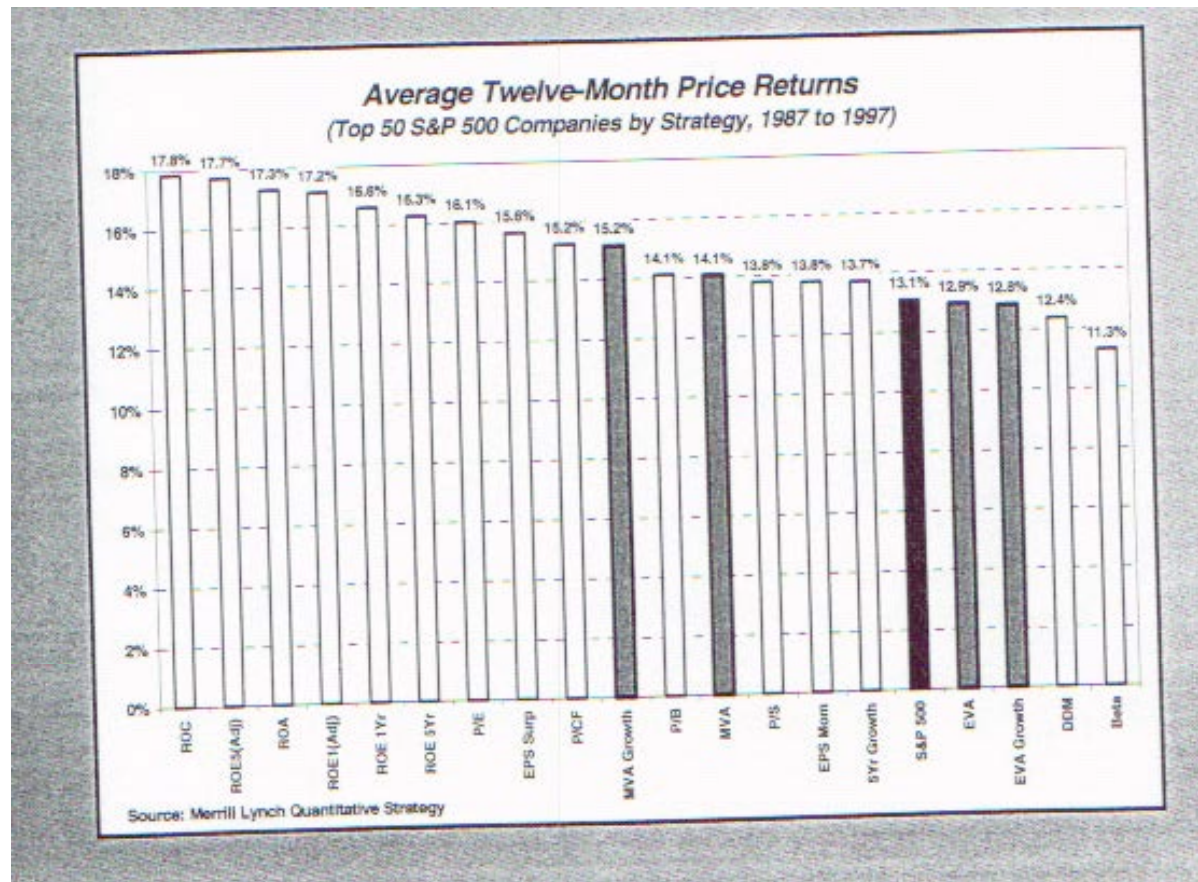
3. Delivering a high EVA may not translate into higher stock prices...

- The relationship between EVA and Market Value Changes is more complicated than the one between EVA and Firm Value.
- The market value of a firm reflects not only the Expected EVA of Assets in Place but also the Expected EVA from Future Projects
- To the extent that the actual economic value added is smaller than the expected EVA the market value can decrease even though the EVA is higher.

High EVA companies do not earn excess returns



Increases in EVA do not create excess returns



Implications of Findings

- This does not imply that increasing EVA is bad from a corporate finance standpoint. In fact, given a choice between delivering a “below-expectation” EVA and no EVA at all, the firm should deliver the “below-expectation” EVA.
- It does suggest that the correlation between increasing year-to-year EVA and market value will be weaker for firms with high anticipated growth (and excess returns) than for firms with low or no anticipated growth.
- It does suggest also that “investment strategies” based upon EVA have to be carefully constructed, especially for firms where there is an expectation built into prices of “high” surplus returns.

When focusing on year-to-year EVA changes has least side effects

1. Most or all of the assets of the firm are already in place; i.e., very little or none of the value of the firm is expected to come from future growth.
 - [This minimizes the risk that increases in current EVA come at the expense of future EVA]
2. The leverage is stable and the cost of capital cannot be altered easily by the investment decisions made by the firm.
 - [This minimizes the risk that the higher EVA is accompanied by an increase in the cost of capital]
3. The firm is in a sector where investors anticipate little or not surplus returns; i.e., firms in this sector are expected to earn their cost of capital.
 - [This minimizes the risk that the increase in EVA is less than what the market expected it to be, leading to a drop in the market price.]

When focusing on year-to-year EVA changes can be dangerous

1. High growth firms, where the bulk of the value can be attributed to future growth.
2. Firms where neither the leverage nor the risk profile of the firm is stable, and can be changed by actions taken by the firm.
3. Firms where the current market value has imputed in it expectations of significant surplus value or excess return projects in the future.

Note that all of these problems can be avoided if we restate the objective as maximizing the present value of EVA over time. If we do so, however, some of the perceived advantages of EVA - its simplicity and observability - disappear.