Returning Cash to the Owners: Dividend Policy

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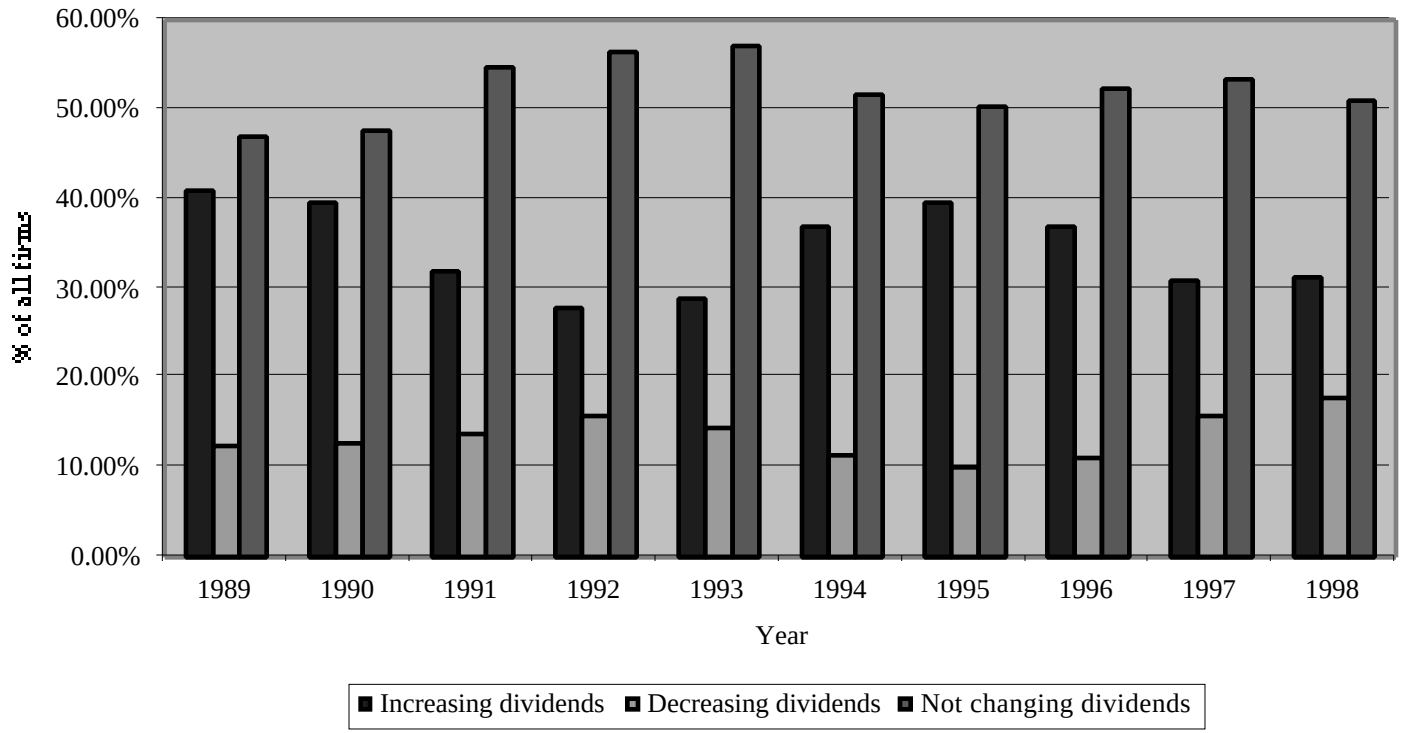
First Principles

- Invest in projects that yield a return greater than the minimum acceptable hurdle rate.
  - The hurdle rate should be higher for riskier projects and reflect the financing mix used - owners' funds (equity) or borrowed money (debt)
  - Returns on projects should be measured based on cash flows generated and the timing of these cash flows; they should also consider both positive and negative side effects of these projects.
- Choose a financing mix that minimizes the hurdle rate and matches the assets being financed.
- **If there are not enough investments that earn the hurdle rate, return the cash to stockholders.**
  - **The form of returns - dividends and stock buybacks - will depend upon the stockholders' characteristics.**

Objective: Maximize the Value of the Firm

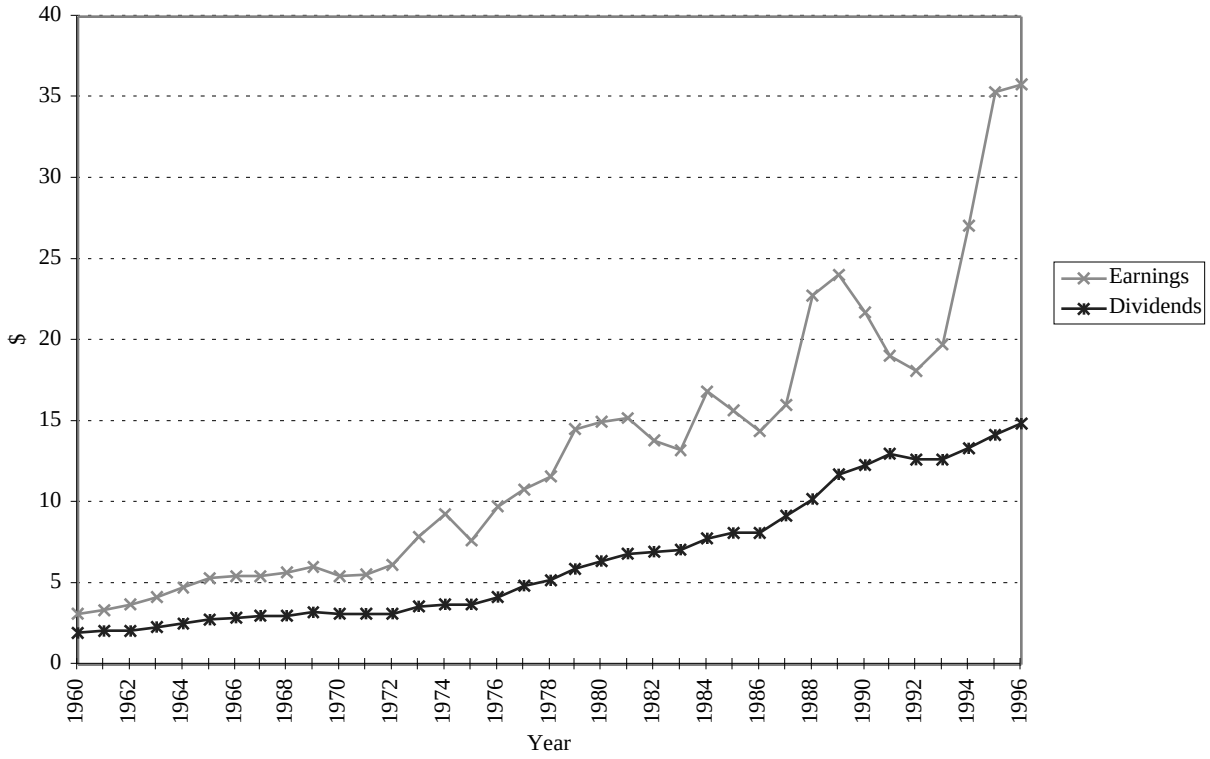
Dividends are sticky

Figure 21.6: Dividend Changes : 1989-1998



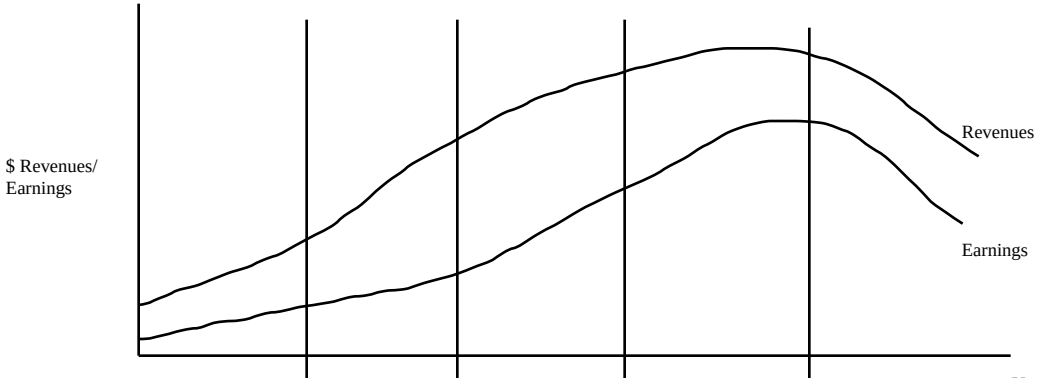
Dividends tend to follow Earnings

Figure 10.1: Aggregate Earnings and Dividends: S & P 500 - 1960-1996



Dividends follow the Life Cycle

Figure 21.7: Life Cycle Analysis of Dividend Policy

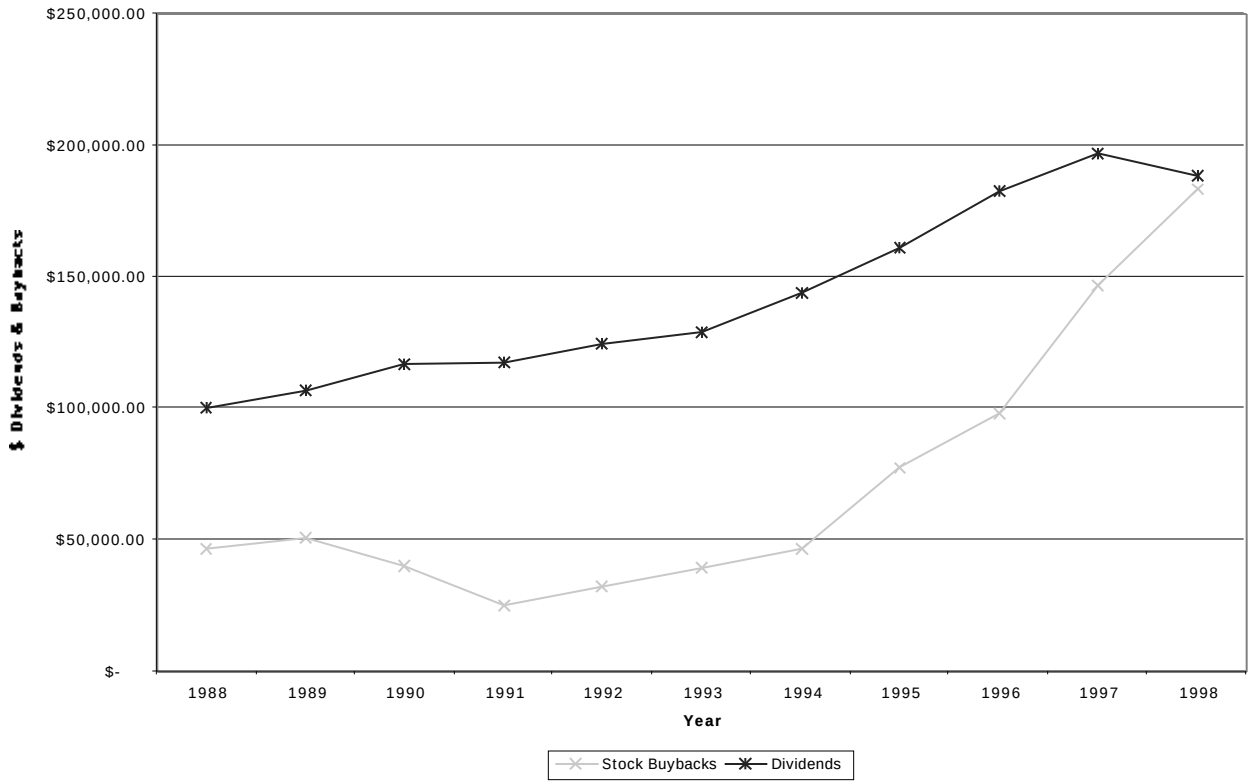


External funding needs	High, but constrained by infrastructure	High, relative to firm value.	Moderates, relative to firm value.	Low, as projects dry up.	Low, as projects dry up.
Internal financing	Negative or low	Negative or low	Low, relative to funding needs	High, relative to funding needs	More than funding needs
Capacity to pay dividends	None	None	Very low	Increasing	High
Growth stage	Stage 1 Start-up	Stage 2 Rapid Expansion	Stage 3 High Growth	Stage 4 Mature Growth	Stage 5 Decline

Years

More companies are buying back stock..

Figure 22.1: Stock Buybacks and Dividends: Aggregate for US Firms - 1989-98

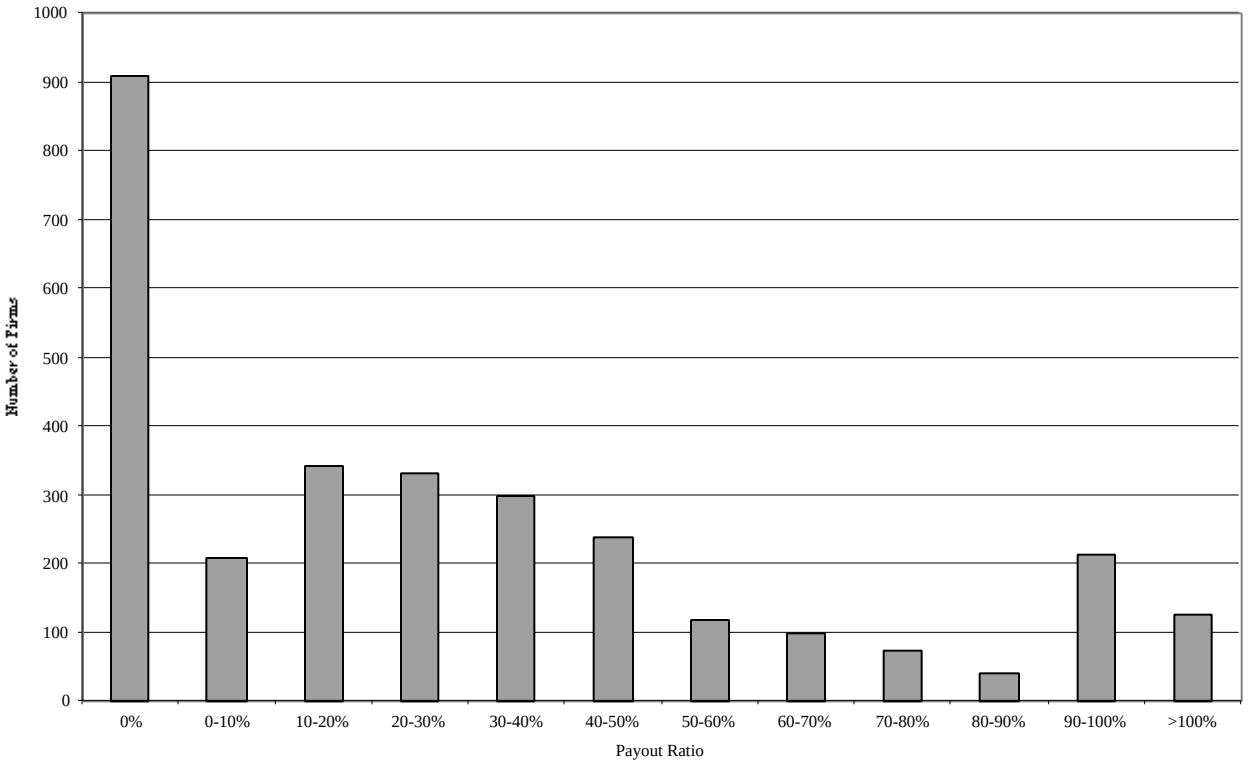


Measures of Dividend Policy

- Dividend Payout:
  - measures the percentage of earnings that the company pays in dividends
  - = Dividends / Earnings
- Dividend Yield :
  - measures the return that an investor can make from dividends alone
  - = Dividends / Stock Price

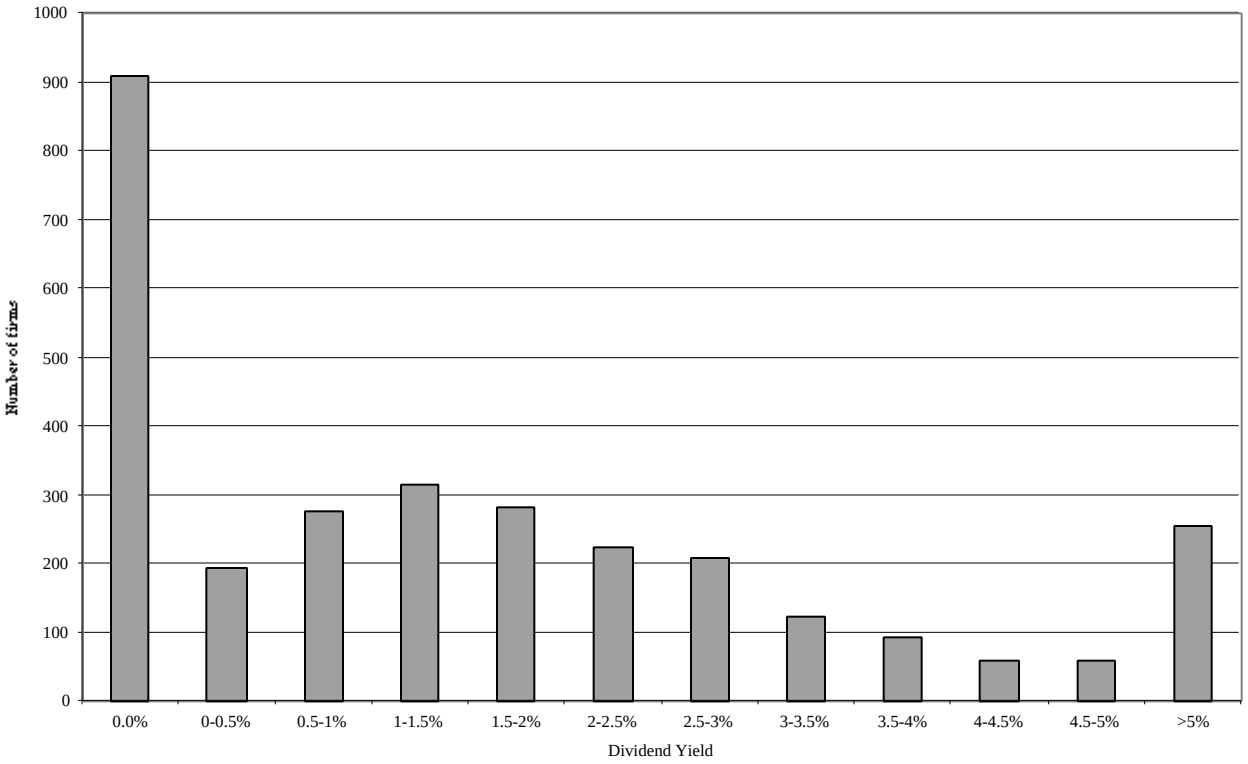
Dividend Payout Ratios in the United States

Figure 21.4: Dividend Payout Ratios: US Companies - April 19



Dividend Yields in the United States

Figure 21.2: Dividend Yields: US Companies - April 199



Three Schools Of Thought On Dividends

- 1. If
  - (a) there are no tax disadvantages associated with dividends
  - (b) companies can issue stock, at no cost, to raise equity, whenever needed
  - **Dividends do not matter, and dividend policy does not affect value.**
- 2. If dividends have a tax disadvantage,
  - **Dividends are bad, and increasing dividends will reduce value**
- 3. If stockholders like dividends, or dividends operate as a signal of future prospects,
  - **Dividends are good, and increasing dividends will increase value**

Dividends don’t affect value

- The Miller-Modigliani Hypothesis: **Dividends do not affect value**
- Basis:
  - If a firm's investment policy (and hence cash flows) don't change, the value of the firm cannot change with dividend policy. If we ignore personal taxes, investors have to be indifferent to receiving either dividends or capital gains.
- Underlying Assumptions:
  - (a) There are no tax differences between dividends and capital gains.
  - (b) If companies pay too much in cash, they can issue new stock, with no flotation costs or signaling consequences, to replace this cash.
  - (c) If companies pay too little in dividends, they do not use the excess cash for bad projects or acquisitions.

A Simple Example proving Dividend Irrelevance

- LongLast Corporation, an unlevered firm manufacturing furniture, has operating income after taxes of $ 100 million, growing at 5% a year, and that its cost of capital is 10%. Further, assume that this firm has reinvestment needs of $ 50 million, also growing at 5% a year, and that there are 105 million shares outstanding. Finally, assume that this firm pays out residual cash flows as dividends each year.

Free Cash Flow to the Firm = EBIT (1- tax rate) – Reinvestment needs

= $ 100 million - $ 50 million = $ 50 million

Value of the Firm = Free Cash Flow to Firm (1+g) / (WACC - g)

= $ 50 (1.05) / (.10 - .05) = $ 1050 million

- Price per share = $ 1050 million / 105 million = $ 10.00
- Dividend per share = $ 50 million/105 million = $ 0.476
- Total Value per Share = $ 10.00 + $ 0.48 = $10.476

LongLast doubles dividends

- Assuming that the firm's investment policy does not change, this will mean that the firm has to issue $ 50 million of equity to meet its reinvestment needs:

  Value of the Firm = $ 50 (1.05) / (.10 - .05) = $ 1050 million

Value of the Firm for existing stockholders after dividend payment = $ 1000 million (The remaining $ 50 million belongs to new stockholders)

Price per share = $ 1000 million / 105 million = $ 9.523

Dividends per share = $ 100 million/105 million shares = $ 0.953

Total Value Per Share = $ 9.523 + $0.953 = $10.476

LongLast eliminates dividends

- In this case, the firm will accumulate a cash balance of $ 50 million. The total value of the firm can be estimated as follows:

Value of Firm = Present Value of After-tax Operating CF + Cash Balance

= $ 50 (1.05) / (.10 - .05) + $ 50 million = $1100 million

Value per share = $ 1100 million / 105 million shares = $10.476

The Tax Response: Dividends are taxed more than capital gains

- Basis:
  - Dividends are taxed more heavily than capital gains. A stockholder will therefore prefer to receive capital gains over dividends.
- Evidence:
  - Examining ex-dividend dates should provide us with some evidence on whether dividends are perfect substitutes for capital gains.

Price Behavior on Ex-Dividend Date

Let P_b= Price before the stock goes ex-dividend

P_a=Price after the stock goes ex-dividend

D = Dividends declared on stock

t_o, t_{cg} = Taxes paid on ordinary income and capital gains respectively

Cashflows from Selling around Ex-Dividend Day

- The cash flows from selling before then are-

$$P_b - (P_b - P)\, t_{cg}$$

- The cash flows from selling after the ex-dividend day are-

$$P_a - (P_a - P)\, t_{cg} + D(1-t_o)$$

Since the average investor should be indifferent between selling before the ex-dividend day and selling after the ex-dividend day -

$$P_b - (P_b - P)\, t_{cg} = P_a - (P_a - P)\, t_{cg} + D(1-t_o)$$

Moving the variables around, we arrive at the following:

Price Change, Dividends and Tax Rates

$$\frac{P_b - P_a}{D} = \frac{(1-t_o)}{(1-t_{cg})}$$

If	$P_b - P_a = D$	then	$t_o = t_{cg}$
	$P_b - P_a < D$	then	$t_o > t_{cg}$
	$P_b - P_a > D$	then	$t_o < t_{cg}$

The Evidence on Ex-Dividend Day Behavior

	Ordinary Income	Capital Gains	$(P_b - P_a)/D$
Before 1981	70 %	28 %	0.78 (1966-69)
1981-85	50 %	20 %	0.85
1986-1990	28 %	28 %	0.90
1991-1993	33 %	28 %	0.92
1994.	39.6 %	28 %	?

Dividend Arbitrage

- Assume that you are a tax exempt investor, and that you know that the price drop on the ex-dividend day is only 90% of the dividend. How would you exploit this differential?
  - Invest in the stock for the long term
  - Sell short the day before the ex-dividend day, buy on the ex-dividend day
  - Buy just before the ex-dividend day, and sell after.
  - _____

Example of dividend capture strategy with tax factors

- XYZ company is selling for $50 at close of trading May 3. On May 4, XYZ goes ex-dividend; the dividend amount is $1. The price drop (from past examination of the data) is only 90% of the dividend amount.
- The transactions needed by a tax-exempt U.S. pension fund for the arbitrage are as follows:
  - 1. Buy 1 million shares of XYZ stock cum-dividend at $50/share.
  - 2. Wait till stock goes ex-dividend; Sell stock for $49.10/share (50 - 1* 0.90)
  - 3. Collect dividend on stock.
- Net profit = - 50 million + 49.10 million + 1 million = $0.10 million

Bad Reasons for Paying Dividends

- **The bird in the hand fallacy**: Dividends are better than capital gains because dividends are certain and capital gains are not.
- **The Excess Cash Argument**: The excess cash that a firm has in any period should be paid out as dividends in that period.

The bird in the hand fallacy

- **Argument**: Dividends now are more certain than capital gains later. Hence dividends are more valuable than capital gains.
- **Counter:** The appropriate comparison should be between dividends today and price appreciation today. (The stock price drops on the ex-dividend day.)

The excess cash hypothesis

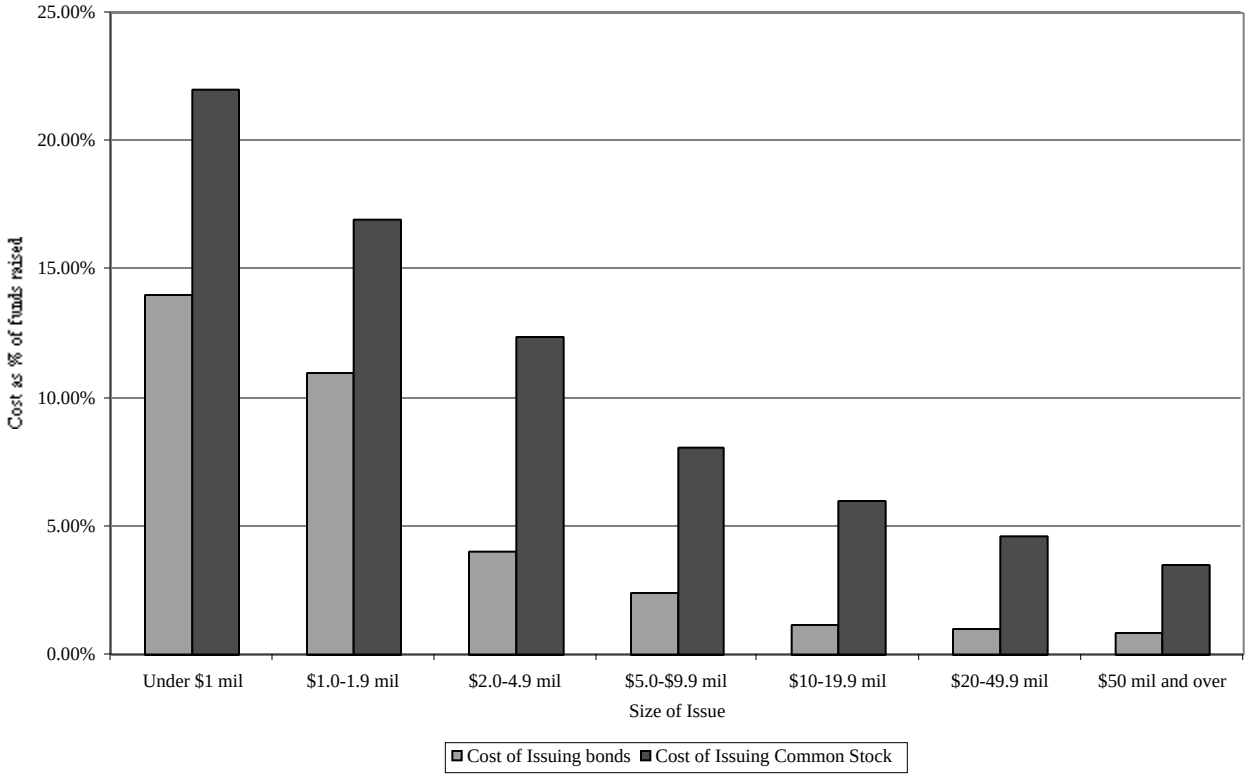
- **Argument**: The firm has excess cash on its hands this year, no investment projects this year and wants to give the money back to stockholders.
- **Counter**: So why not just repurchase stock? If this is a one-time phenomenon, the firm has to consider future financing needs. Consider the cost of issuing new stock:

The Cost of Raising Funds

- Issuing new equity is much more expensive than raising new debt for companies that are already publicly traded, in terms of transactions costs and investment banking fees
- Raising small amounts is much more expensive than raising large amounts, for both equity and debt. Making a small equity issue (say $ 25-$ 50 million might be prohibitively expensive)

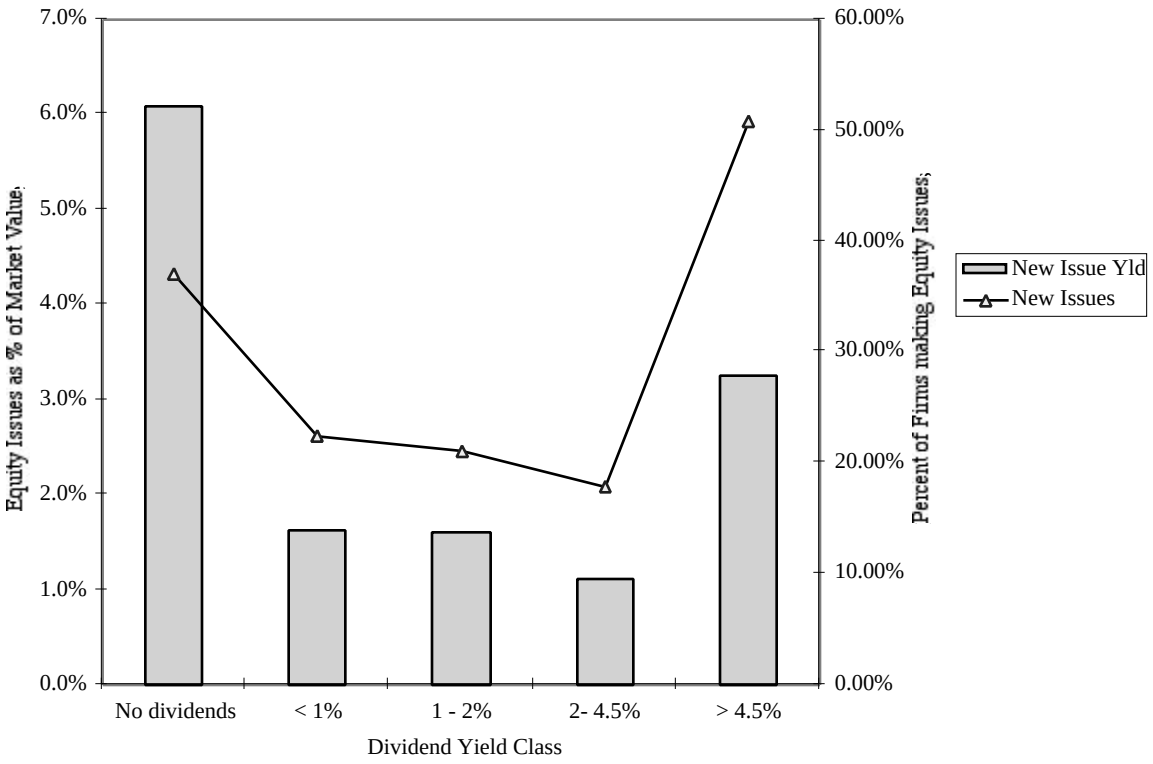
Issuance Costs

Figure 21.10: Issuance Costs for Stocks and Bonds



Some companies pay dividends and fund them by issuing stock….

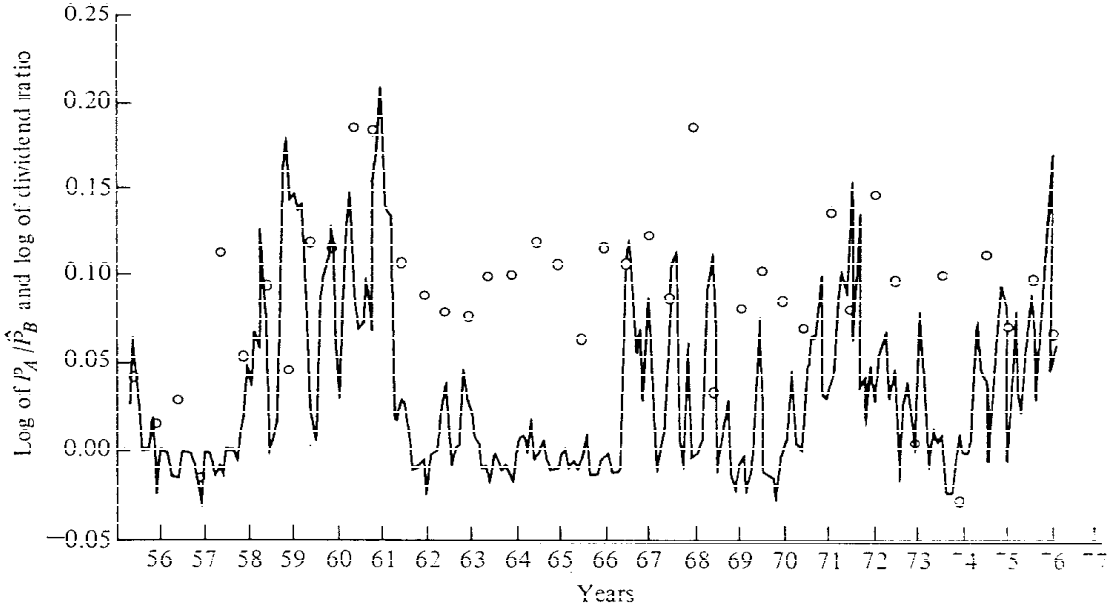
Figure 21.11: Equity Issues by Dividend Class, United States



Potentially Good Reasons for Paying Dividends

- **The Clientele Argument**: There are stockholders who like dividends, either because they value the regular cash payments or do not face a tax disadvantage. If these are the stockholders in your firm, paying more in dividends will increase value.
- **Dividends as Signals**: Dividend increases may operate as a positive signal to financial markets and thus increase stock prices.
- **Wealth Transfer**: By returning more cash to stockholders, there might be a transfer of wealth from the bondholders to the stockholders.

Some stockholders like dividends: A Case Study



The natural log of $P_A/\hat{P}_B$ (the connected monthly observations) and the natural log of the semi-annual ratio of Series A to Series B dividends (the unconnected 0's) for the period 1956–1976. $\hat{P}_B$ is the price per share of Series B stock with dividends reinvested during each half-year prior to payment of the semi-annual Series A dividend. The unconnected points representing the log of the dividend ratio are placed in the figure at the end of the half-years to which they refer.

Evidence from Canadian Firms

Company	*Premium for Cash dividend over Stock Dividend Shares*
Consolidated Bathurst	19.30%
Donfasco	13.30%
Dome Petroleum	0.30%
Imperial Oil	12.10%
Newfoundland Light & Power	1.80%
Royal Trustco	17.30%
Stelco	2.70%
TransAlta	1.10%
Average	**7.54%**

A clientele based explanation

- **Basis**: Investors may form clienteles based upon their tax brackets. Investors in high tax brackets may invest in stocks which do not pay dividends and those in low tax brackets may invest in dividend paying stocks.
- **Evidence**: A study of 914 investors' portfolios was carried out to see if their portfolio positions were affected by their tax brackets. The study found that
  - (a) Older investors were more likely to hold high dividend stocks and
  - (b) Poorer investors tended to hold high dividend stocks

Results from Regression: Clientele Effect

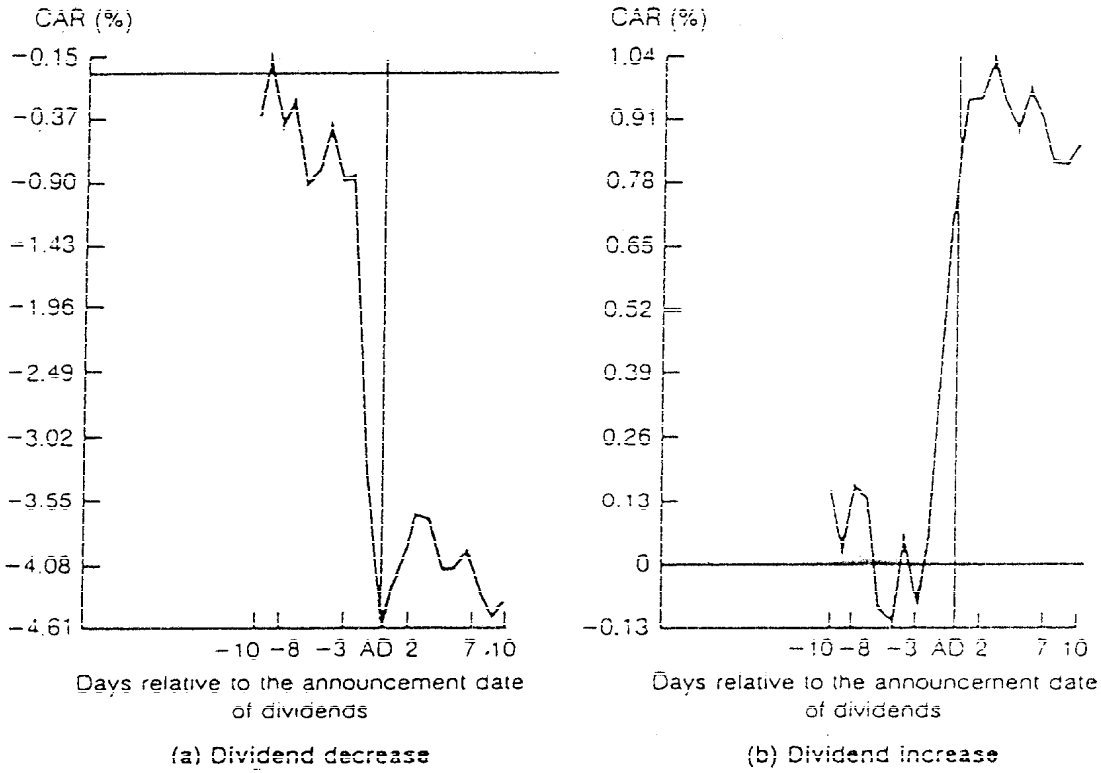
$$\text{Dividend Yield}_t = a + b\,\beta_t + c\,\text{Age}_t + d\,\text{Income}_t + e\,\text{Differential Tax Rate}_t + \varepsilon_t$$

Variable	Coefficient	Implies
Constant	4.22%	
Beta Coefficient	-2.145	Higher beta stocks pay lower dividends.
Age/100	3.131	Firms with older investors pay higher dividends.
Income/1000	-3.726	Firms with wealthier investors pay lower dividends.
Differential Tax Rate	-2.849	If ordinary income is taxed at a higher rate than capital gains, the firm pays less dividends.

Dividend Policy and Clientele

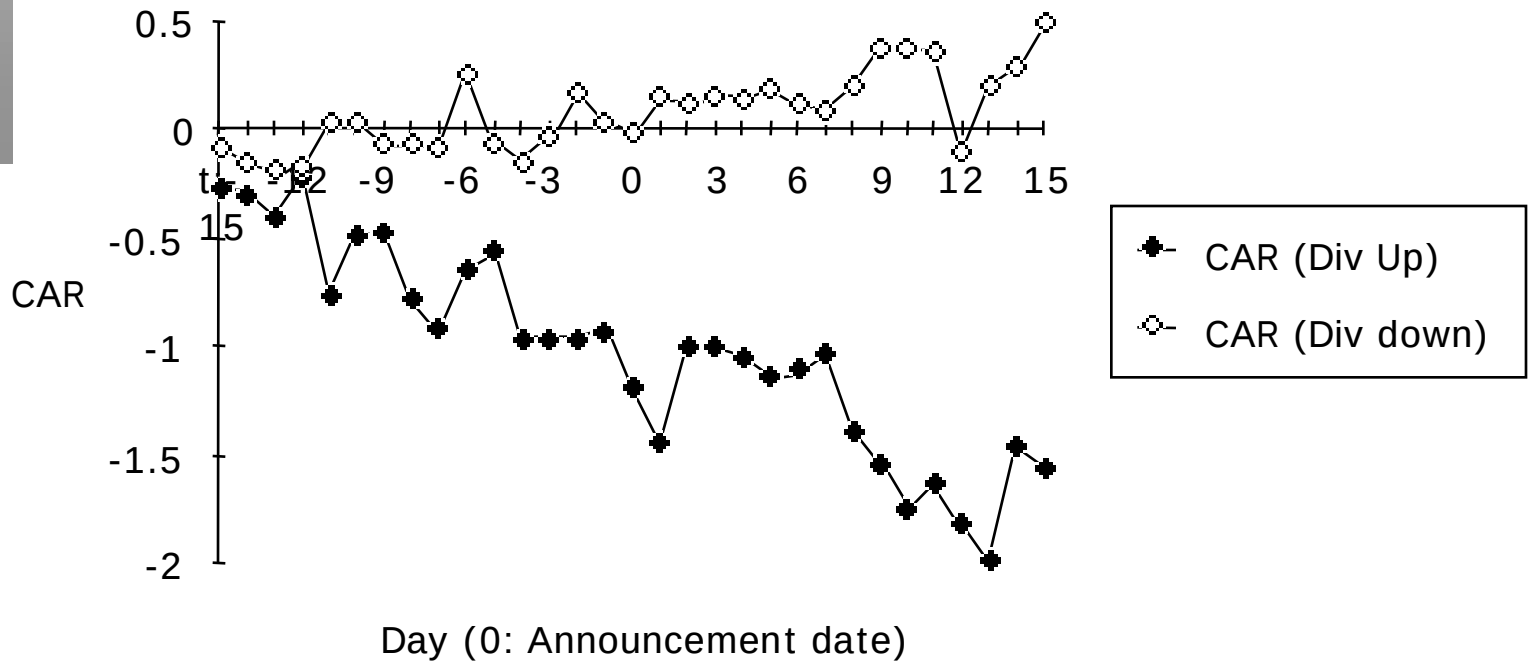
- Assume that you run a phone company, and that you have historically paid large dividends. You are now planning to enter the telecommunications and media markets. Which of the following paths are you most likely to follow?
  - Courageously announce to your stockholders that you plan to cut dividends and invest in the new markets.
  - Continue to pay the dividends that you used to, and defer investment in the new markets.
  - Continue to pay the dividends that you used to, make the investments in the new markets, and issue new stock to cover the shortfall
  - Other

The Signaling Hypothesis



The Wealth Transfer Hypothesis

EXCESS RETURNS ON STRAIGHT BONDS AROUND DIVIDEND CHANGES



Questions to Ask in Dividend Policy Analysis

- How much could the company have paid out during the period under question?
- How much did the the company actually pay out during the period in question?
- How much do I trust the management of this company with excess cash?
  - How well did they make investments during the period in question?
  - How well has my stock performed during the period in question?

A Measure of How Much a Company Could have Afforded to Pay out: FCFE

- The Free Cashflow to Equity (FCFE) is a measure of how much cash is left in the business after non-equity claimholders (debt and preferred stock) have been paid, and after any reinvestment needed to sustain the firm's assets and future growth.

  Net Income

  + Depreciation & Amortization

  = Cash flows from Operations to Equity Investors

  - Preferred Dividends

  - Capital Expenditures

  - Working Capital Needs

  - Principal Repayments

  + Proceeds from New Debt Issues

  = Free Cash flow to Equity

Estimating FCFE: The Home Depot

Year	*Net Income*	*Depreciation*	*Capital Spending*	*Change in Non-cash Working Capital*	*Net Debt Issued*	*FCFE*
1	$111.95	$21.12	$190.24	$6.20	$181.88	$118.51
2	$163.43	$34.36	$398.11	$10.41	$228.43	$17.70
3	$249.15	$52.28	$431.66	$47.14	-$1.94	($179.31)
4	$362.86	$69.54	$432.51	$93.08	$802.87	$709.68
5	$457.40	$89.84	$864.16	$153.19	-$2.01	($472.12)
6	$604.50	$129.61	$1,100.65	$205.29	$97.83	($474.00)
7	$731.52	$181.21	$1,278.10	$247.38	$497.18	($115.57)
8	$937.74	$232.34	$1,194.42	$124.25	$470.24	$321.65
9	$1,160.00	$283.00	$1,481.00	$391.00	-$25.00	($454.00)
10	$1,615.00	$373.00	$2,059.00	$131.00	$238.00	$36.00
Average	$639.36	$146.63	$942.99	$140.89	$248.75	($49.15)

Estimating FCFE when Leverage is Stable

Net Income

- (1- δ) (Capital Expenditures - Depreciation)

- (1- δ) Working Capital Needs

= Free Cash flow to Equity

δ = Debt/Capital Ratio

For this firm,

- Proceeds from new debt issues = Principal Repayments + δ (Capital Expenditures - Depreciation + Working Capital Needs)

Re-estimating FCFE: The Home Depot

Year	*Net Income*	*Net Capital Expenditures (1-DR)*	*Change in Non-Cash WC (1-DR)*	*FCFE*
1	$111.95	$124.24	$4.55	($16.84)
2	$163.43	$267.21	$7.65	($111.43)
3	$249.15	$278.69	$34.63	($64.17)
4	$362.86	$266.64	$68.38	$27.85
5	$457.40	$568.81	$112.53	($223.95)
6	$604.50	$713.32	$150.81	($259.63)
7	$731.52	$805.77	$181.72	($255.98)
8	$937.74	$706.74	$91.27	$139.72
9	$1,160.00	$880.05	$287.23	($7.28)
10	$1,615.00	$1,238.53	$96.23	$280.24
Average	$639.36	$585.00	$103.50	($49.15)

∂ = Average debt ratio during the period = 26.54%

The Home Depot: Cash Returned to Stockholders

Year	*Dividends (in $)*	*Equity Repurchases (in $)*	*Cash to Equity*
1989	$8.39	$0.00	$8.39
1990	$12.84	$0.00	$12.84
1991	$22.45	$0.00	$22.45
1992	$35.82	$0.00	$35.82
1993	$50.34	$0.00	$50.34
1994	$67.79	$0.00	$67.79
1995	$89.75	$0.00	$89.75
1996	$110.21	$0.00	$110.21
1997	$139.00	$0.00	$139.00
1998	$168.00	$0.00	$168.00

Dividends with Negative FCFE

- During the period 1989-98, the Home Depot has consistently had negative free cash flows to equity. It has, however, managed to pay dividends in each of these years.
- How does a company with negative free cash flows to equity pay dividends (or buy back stock)?
- Why might it do so?

Estimating FCFE: Boeing

Year	*Net Income*	*Net Capital Expenditures (1-DR)*	*Change in Non-Cash WC (1-DR)*	*FCFE*
1	$973.00	$423.80	$333.27	$215.93
2	$1,385.00	$523.55	$113.59	$747.86
3	$1,567.00	$590.44	($55.35)	$1,031.92
4	$552.00	$691.34	($555.26)	$415.92
5	$1,244.00	$209.88	$268.12	$766.00
6	$856.00	($200.08)	$6.34	$1,049.74
7	$393.00	($232.95)	($340.77)	$966.72
8	$1,818.00	($155.68)	($21.91)	$1,995.59
9	($178.00)	$516.63	($650.98)	($43.65)
10	$1,120.00	$754.77	$107.25	$257.98
Average	$973.00	$312.17	($79.57)	$740.40

∂ = Average debt ratio during the period = 42.34%

Boeing: Cash Returned to Stockholders

Year	Dividends (in $)	Equity Repurchases (in $)	Cash to Equity
1989	$269.00	$2.00	$271.00
1990	$328.00	$156.00	$484.00
1991	$343.00	$127.00	$470.00
1992	$340.00	$109.00	$449.00
1993	$340.00	$0.00	$340.00
1994	$340.00	$0.00	$340.00
1995	$342.00	$0.00	$342.00
1996	$480.00	$718.00	$1,198.00
1997	$557.00	$141.00	$698.00
1998	$564.00	$1,397.00	$1,961.00

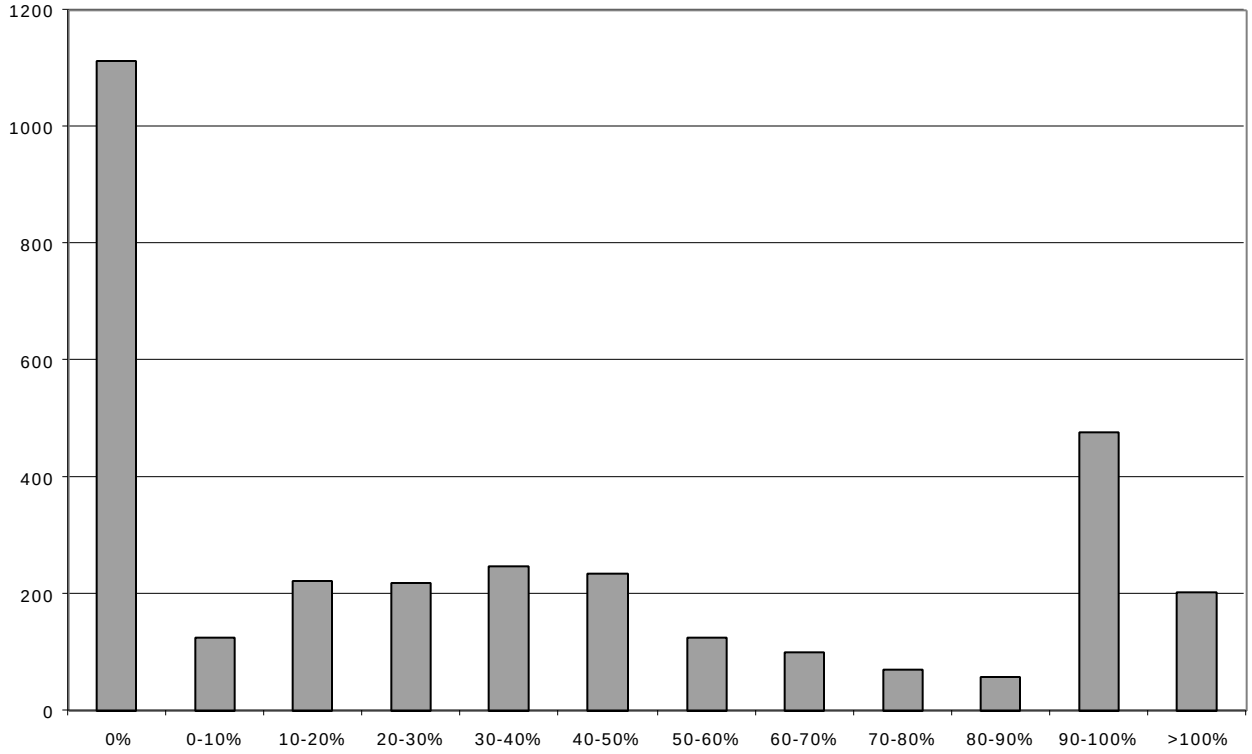
Cash Returned versus FCFE

- On average, Boeing has returned $ 655 million a year over this 10 year period. On average, Boeing has had free cash flows to equity of $ 740 million each year over the same period.
- Where does the difference ($740- $ 655) accumulate?

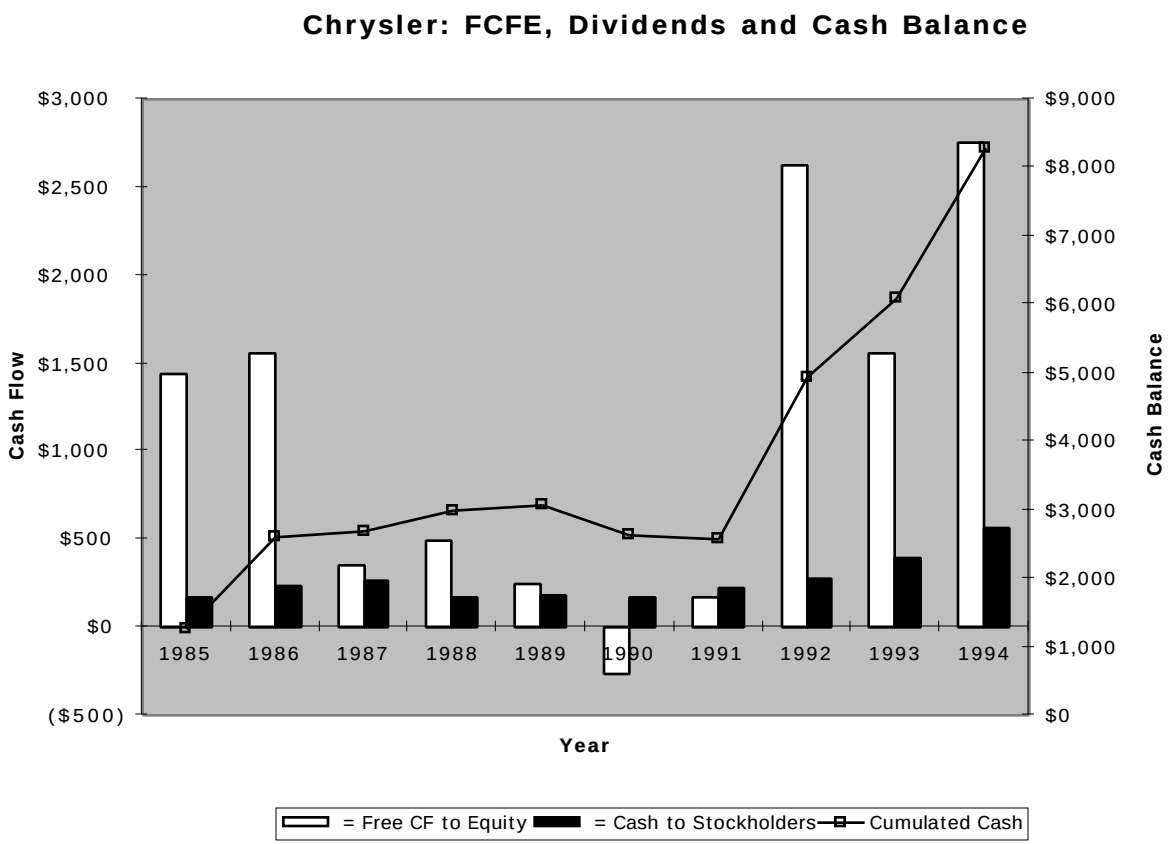
- Why might firms pay out less than they have available as FCFE?

Dividends versus FCFE: U.S.

Figure 22.2: Cash Returned as Percent of FCFE



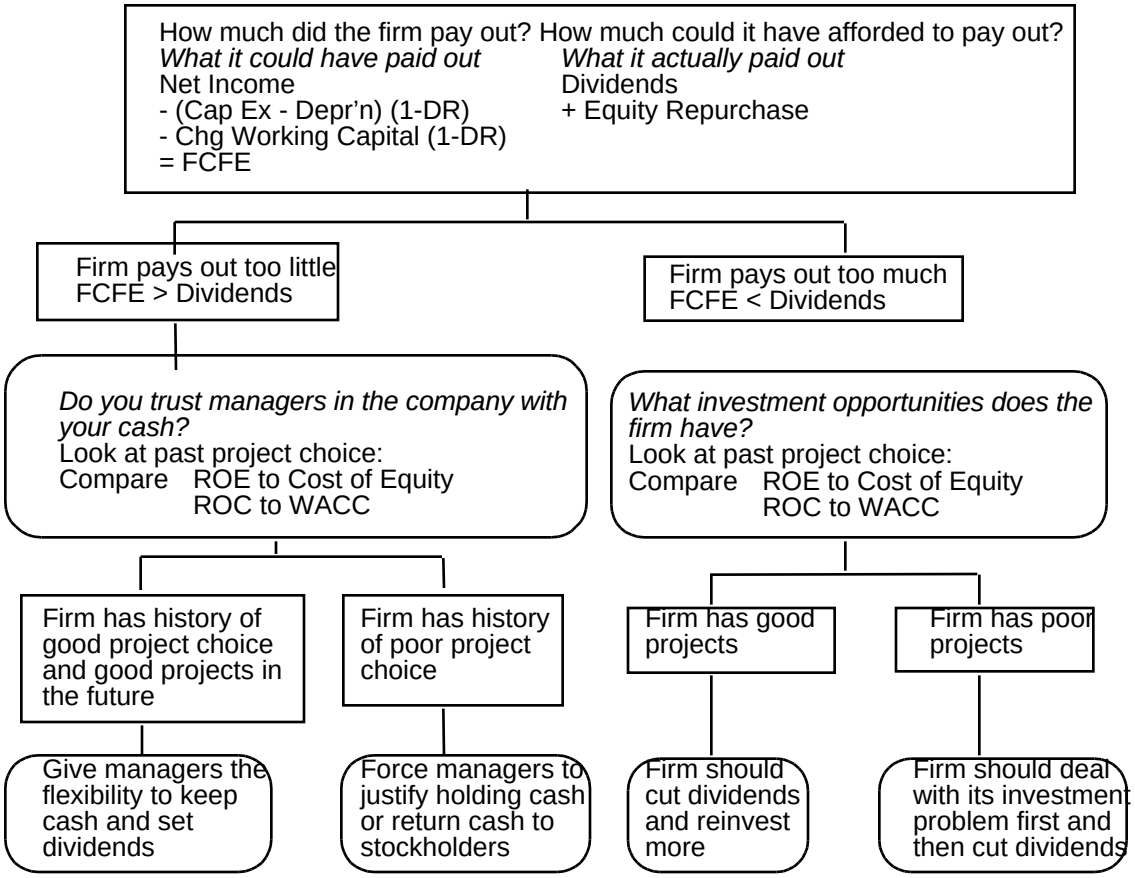
The Consequences of Failing to pay FCFE



Application Test: Estimating your firm's FCFE

In General,	If cash flow statement used
Net Income	Net Income
+ Depreciation & Amortization	+ Depreciation & Amortization
- Capital Expenditures	+ Capital Expenditures
- Change in Non-Cash Working Capital	+ Changes in Non-cash WC
- Preferred Dividend	+ Preferred Dividend
- Principal Repaid	+ Increase in LT Borrowing
+ New Debt Issued	+ Decrease in LT Borrowing
	+ Change in ST Borrowing
= FCFE	= FCFE
Compare to	
Dividends (Common)	-Common Dividend +
Stock Buybacks	- Decrease in Capital Stock
	+ Increase in Capital Stock

A Practical Framework for Analyzing Dividend Policy



Evaluating the Quality of Investments

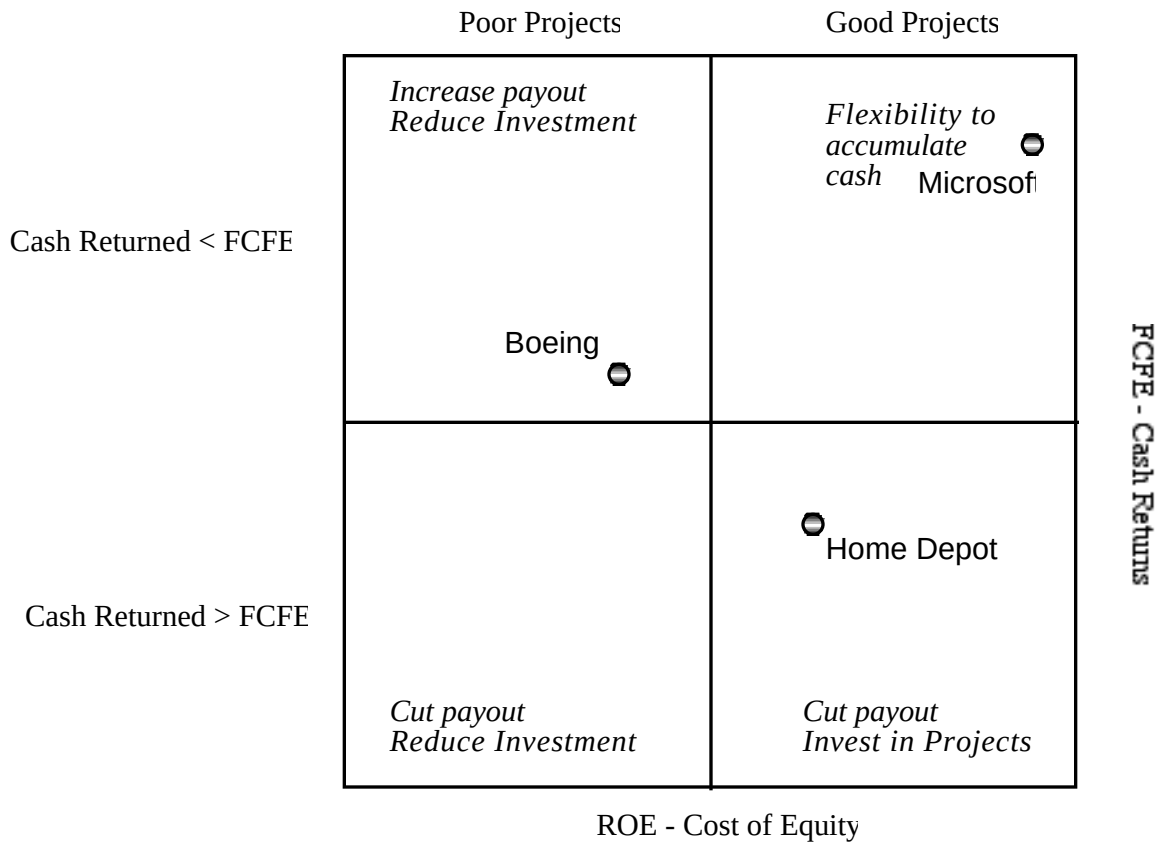
- Measuring Project Quality
  - Accounting Return differentials, where we compare the accounting return on equity to the cost of equity and the accounting return on capital to the cost of capital.
  - Economic value Added, which measures the excess return earned on capital invested in existing investments, and can be computed either on an equity or capital basis.
- Stock Price Performance
  - Excess returns, relative to the market (given the riskiness of a stock)
  - In an efficient market, this can be considered to be an evaluation of whether a firm earn a return on its investments that were greater than or less than those expected by the market.

The Four Possible Combinations

- *A firm may have good projects and may be paying out more than its free cash flow to equity*: The firm is losing value in two ways.
  - It is creating a cash shortfall that has to be met by issuing more securities.
  - Overpaying may create capital rationing constraints; as a result, the firm may reject good projects it otherwise would have taken.
- *A firm may have good projects and may be paying out less than its free cash flow to equity as a dividend*. This firm will accumulate cash, but stockholders are unlikely to
- *A firm may have poor projects and may be paying out less than its free cash flow to equity as a dividend*. This firm will also accumulate cash, but find itself under pressure from stockholders to distribute the cash.
- *A firm may have poor projects and may be paying out more than its free cash flow to equity as a dividend*. This firm has an investment problem and a dividend problem.

A Dividend Matrix

Figure 22.5: Analyzing Dividend Poli

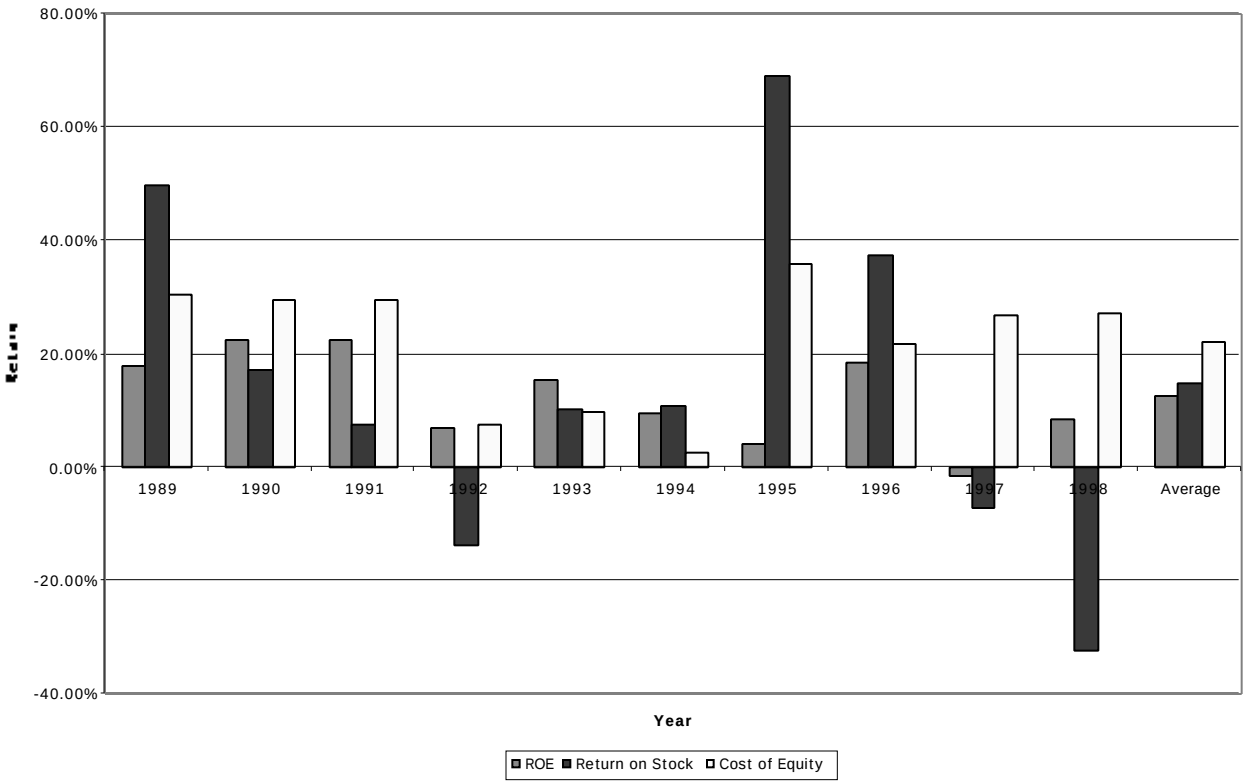


Boeing: Summary Statistics on Cash Returned versus FCFE

Year	*Dividends*	*Net Income*	*Payout Ratio*	*Dividends + Stock Buybacks*	*FCFE*	*Cash to Stockholders/FCFE*
1	$269.00	$973.00	27.6%	$271.00	$215.93	125.51%
2	$328.00	$1,385.00	23.7%	$484.00	$747.86	64.72%
3	$343.00	$1,567.00	21.9%	$470.00	$1,031.92	45.55%
4	$340.00	$552.00	61.6%	$449.00	$415.92	107.95%
5	$340.00	$1,244.00	27.3%	$340.00	$766.00	44.39%
6	$340.00	$856.00	39.7%	$340.00	$1,049.74	32.39%
7	$342.00	$393.00	87.0%	$342.00	$966.72	35.38%
8	$480.00	$1,818.00	26.4%	$1,198.00	$1,995.59	60.03%
9	$557.00	($178.00)	-312.9%	$698.00	($43.65)	-1598.99%
10	$564.00	$1,120.00	50.4%	$1,961.00	$257.98	760.12%
Avg	$390.30	$973.00	40.1%	$655.30	$740.40	88.51%

Boeing: Measuring Investment Quality

Figure 22.3: Boeing: Project and Stock Returns: 1989-98



Can you trust Boeing's management?

- If you were a Boeing stockholder, would you be comfortable with Boeing's dividend policy?
- Yes
- No

Aracruz: Dividends and FCFE: 1994-1996

	1994	*1995*	*1996*
Net Income	BR248.21	BR326.42	BR47.00
- (Cap. Exp - Depr)*(1-DR)	BR174.76	BR197.20	BR14.96
- ∂ Working Capital*(1-DR)	(BR47.74)	BR15.67	(BR23.80)
= Free CF to Equity	BR121.19	BR113.55	BR55.84
Dividends	BR80.40	BR113.00	BR27.00
+ Equity Repurchases	BR 0.00	BR 0.00	BR 0.00
= Cash to Stockholders	BR80.40	BR113.00	BR27.00

Aracruz: Investment Record

	1994	*1995*	*1996*
Project Performance Measures			
ROE	19.98%	16.78%	2.06%
Required rate of return	3.32%	28.03%	17.78%
Difference	16.66%	-11.25%	-15.72%
Stock Performance Measure			
Returns on stock	50.82%	-0.28%	8.65%
Required rate of return	3.32%	28.03%	17.78%
Difference	47.50%	-28.31%	-9.13%

Aracruz: Its your call..

- Assume that you are a large stockholder in Aracruz. They have a history of paying less in dividends than they have available in FCFE and have accumulated a cash balance of roughly 1 billion BR (25% of the value of the firm). Would you trust the managers at Aracruz with your cash?
  - Yes
  - No

Mandated Dividend Payouts

- There are many countries where companies are mandated to pay out a certain portion of their earnings as dividends. Given our discussion of FCFE, what types of companies will be hurt the most by these laws?
  - Large companies making huge profits
  - Small companies losing money
  - High growth companies that are losing money
  - High growth companies that are making money

BP: Dividends- 1983-92

	1	2	3	4	5	6	7	8	9	10
Net Income	$1,256.00	$1,626.00	$2,309.00	$1,098.00	$2,076.00	$2,140.00	$2,542.00	$2,946.00	$712.00	$947.00
- (Cap. Exp - Depr)*(1-DR)	$1,499.00	$1,281.00	$1,737.50	$1,600.00	$580.00	$1,184.00	$1,090.50	$1,975.50	$1,545.50	$1,100.00
∂ Working Capital*(1-DR)	$369.50	($286.50)	$678.50	$82.00	($2,268.00)	($984.50)	$429.50	$1,047.50	($305.00)	($415.00)
= Free CF to Equity	($612.50)	$631.50	($107.00)	($584.00)	$3,764.00	$1,940.50	$1,022.00	($77.00)	($528.50)	$262.00
Dividends	$831.00	$949.00	$1,079.00	$1,314.00	$1,391.00	$1,961.00	$1,746.00	$1,895.00	$2,112.00	$1,685.00
+ Equity Repurchases										
= Cash to Stockholders	$831.00	$949.00	$1,079.00	$1,314.00	$1,391.00	$1,961.00	$1,746.00	$1,895.00	$2,112.00	$1,685.00
Dividend Ratios										
Payout Ratio	66.16%	58.36%	46.73%	119.67%	67.00%	91.64%	68.69%	64.32%	296.63%	177.93%
Cash Paid as % of FCFE	-135.67%	150.28%	-1008.41%	-225.00%	36.96%	101.06%	170.84%	-2461.04%	-399.62%	643.13%
Performance Ratios										
1. Accounting Measure										
ROE	9.58%	12.14%	19.82%	9.25%	12.43%	15.60%	21.47%	19.93%	4.27%	7.66%
Required rate of return	19.77%	6.99%	27.27%	16.01%	5.28%	14.72%	26.87%	-0.97%	25.86%	7.12%
Difference	-10.18%	5.16%	-7.45%	-6.76%	7.15%	0.88%	-5.39%	20.90%	-21.59%	0.54%

BP: Summary of Dividend Policy

	Summary of calculations			
	Average	*Standard Deviation*	*Maximum*	*Minimum*
Free CF to Equity	$571.10	$1,382.29	$3,764.00	($612.50)
Dividends	$1,496.30	$448.77	$2,112.00	$831.00
Dividends+Repurchases	$1,496.30	$448.77	$2,112.00	$831.00
Dividend Payout Ratio	84.77%			
Cash Paid as % of FCFE	262.00%			
ROE - Required return	-1.67%	11.49%	20.90%	-21.59%

BP: Just Desserts!

B.P.'s Shares Plummet After Dividend Is Slashed

By MATTHEW L. WALD

British Petroleum said yesterday that it would cut its dividend by 50 percent, take a pretax restructuring charge of $1.82 billion for the second quarter and lay off 11,700 employees, or 10 percent of its worldwide work force. The moves came five weeks after Robert B. Horton, B.P.'s chairman, resigned under pressure from the company's outside directors.

Analysts anticipated a dividend cut by the oil company, the world's third largest, but the one announced was at the low end of their expectations. In response, shares of the company's American depositary rights, each of which represents 12 shares of the London-based company, dropped $3.625, or 7.38 percent, to $45.375. It was the most active issue on the New York Stock Exchange, with 5.88 million shares traded.

The Royal Dutch/Shell group also reported a disappointing quarter yesterday, with earnings on a replacement cost basis — excluding gains or losses on inventory holdings — of $618 million, down 22 percent.

Quiet Recovery Seems Unlikely

Adding to the gloom at B.P., the new chief executive, David A.G. Simon, said the prospects for a quick recovery were poor. "External trading conditions are expected to remain difficult, particularly for the downstream oil and chemicals businesses, with growth prospects for the world's economies remaining uncertain," he said in a statement. Downstream oil is an industry term for refining and marketing operations, as distinct from oil production.

Downstream margins in the United States would be hurt later this year, he predicted, when clean air rules take effect and gasoline must be reformulated to reduce pollution. "In Europe, recovery will depend upon seasonal heating oil demand," Mr. Simon said.

The crude oil market, he predicted, would remain balanced unless Iraqi oil was allowed to re-enter the market. The company said it was well positioned to take advantage of any increase in oil prices, but the company's oil production in the United States is declining. B.P. is the largest producer in Alaska.

The giant British oil company bet on rising oil prices.

The market for petrochemicals in Europe remains weak.

B.P.'s second quarter profits, before one-time transactions, declined to $100 million from $515 million, valuing inventories on a replacement-cost basis. James J. Murchie, an analyst at Sanford C. Bernstein, estimated that after exceptional items, earnings per share fell to 36 cents in the second quarter, compared with 83 cents a year earlier.

Analysts attributed B.P.'s problems to the company's acquisitions in the last few years, and heavy capital expenditures. Summing up the company's recent history, Frank P. Knemeyer of Prudential Securities Research said, "Debt rose, interest expense rose, and profits have gone to hell."

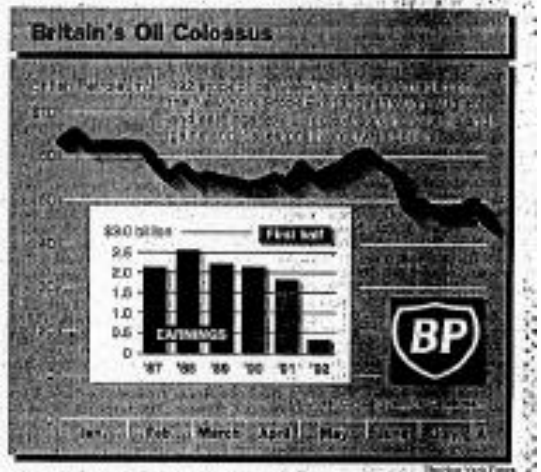
Mr. Murchie, who worked for Standard Oil of Ohio and then B.P. after B.P. acquired Sohio, said, "What you've got is a company that thought oil prices were going to go to $30 and spent like it, in terms of capital." If B.P.'s costs of finding oil are the same as the industry average, he said, then the company has been spending enough to replace 119 percent to 130 percent of its annual production, which is not a successful strategy if prices do not rise.

In addition, he said, the company had been spending twice as much as its refining and marketing operation as it was recording in depreciation.

Another analyst at a large stock brokerage house, who spoke on the condition of anonymity, said, "They took all the old Sohio stations and turned them into modern B.P. stations; they took all the B.P. stations and turned them into ultramodern stations."

The analyst said that while some of the cuts were obvious, some were

Continued on Page D2

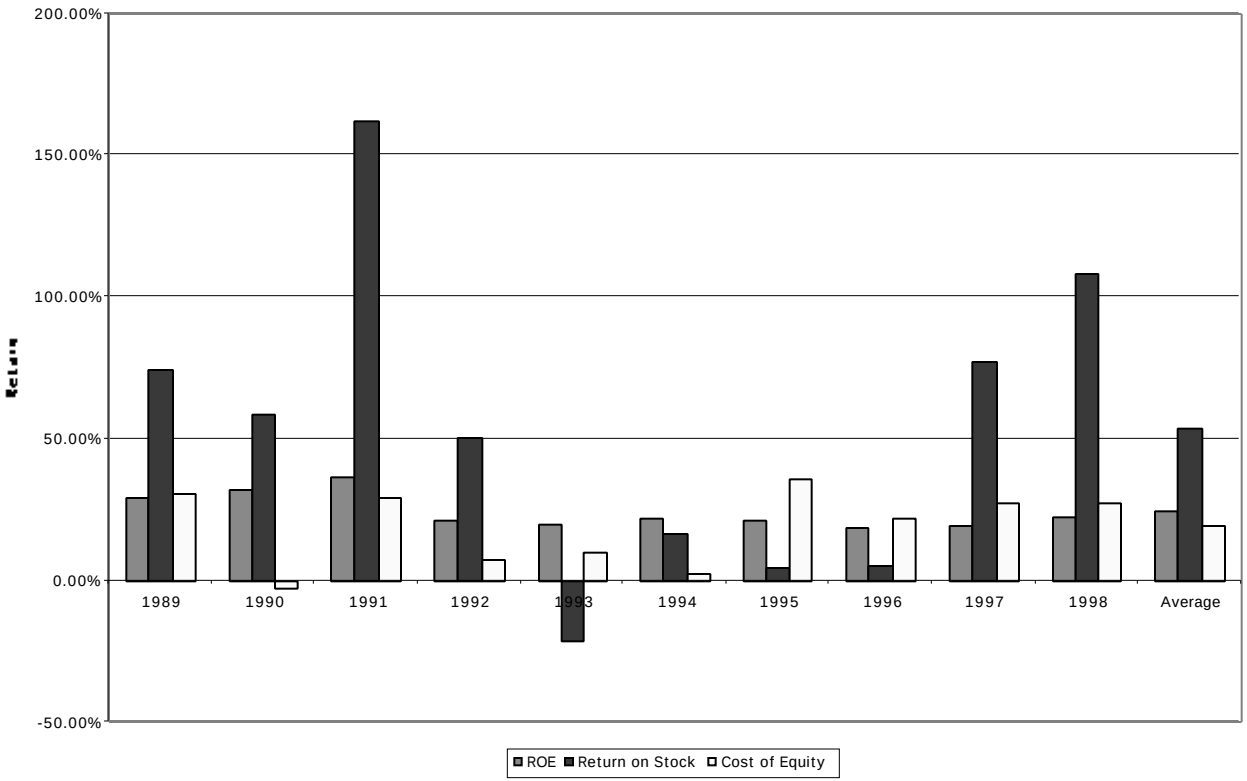


The Home Depot: Summary of Cash Returned and FCFE

Year	*Dividends*	*Earnings*	*Payout Ratio*	*Dividends + Stock Buybacks*	*FCFE*	*Cash to Stockholders/FCFE*
1	$8.39	$111.95	7.49%	$8.39	$118.51	7.08%
2	$12.84	$163.43	7.86%	$12.84	$17.70	72.54%
3	$22.45	$249.15	9.01%	$22.45	($179.31)	-12.52%
4	$35.82	$362.86	9.87%	$35.82	$709.68	5.05%
5	$50.34	$457.40	11.01%	$50.34	($472.12)	-10.66%
6	$67.79	$604.50	11.21%	$67.79	($474.00)	-14.30%
7	$89.75	$731.52	12.27%	$89.75	($115.57)	-77.66%
8	$110.21	$937.74	11.75%	$110.21	$321.65	34.26%
9	$139.00	$1,160.00	11.98%	$139.00	($454.00)	-30.62%
10	$168.00	$1,615.00	10.40%	$168.00	$36.00	466.67%
	$70.46	$639.36	11.02%	$70.46	($49.15)	-143.37%

Evaluating Project Quality at The Home Depot

Figure 22.4: The Home Depot: Project and Stock Returns: 1989-98



Growth Firms and Dividends

- High growth firms are sometimes advised to initiate dividends because its increases the potential stockholder base for the company (since there are some investors - like pension funds - that cannot buy stocks that do not pay dividends) and, by extension, the stock price. Do you agree with this argument?
  - Yes
  - No

Why?

The Home Depot: Looking Forward

	1999	*2000*	*2001*	*2001*	*2002*
Net Income	$1,857	$2,136	$2,456	$2,825	$3,248
- (Cap Ex - Deprec'n) (1 - DR)	$1,484	$1,632	$1,795	$1,975	$2,172
- Change in Working Capital (1 - DR)	$193	$213	$234	$257	$283
FCFE	$180	$291	$427	$592	$793
Expected Dividends	$193	$222	$256	$294	$338
Cash available for stock buybacks	($13)	$69	$171	$299	$455

Application Test: Assessing your firm's dividend policy

- Compare your firm's dividends to its FCFE, looking at the last 5 years of information.
- Based upon your earlier analysis of your firm's project choices, would you encourage the firm to return more cash or less cash to its owners?
- If you would encourage it to return more cash, what form should it take (dividends versus stock buybacks)?

Other Actions that affect Stock Prices

- In the case of dividends and stock buybacks, firms change the value of the assets (by paying out cash) and the number of shares (in the case of buybacks).
- There are other actions that firms can take to change the value of their stockholder's equity.
  - Divestitures: They can sell assets to another firm that can utilize them more efficiently, and claim a portion of the value.
  - Spin offs: In a spin off, a division of a firm is made an independent entity. The parent company has to give up control of the firm.
  - Equity carve outs: In an ECO, the division is made a semi-independent entity. The parent company retains a controlling interest in the firm.
  - Tracking Stock: When tracking stock are issued against a division, the parent company retains complete control of the division. It does not have its own board of directors.

Differences in these actions