Two bad reasons for paying dividends

1. The bird in the hand fallacy

- **Argument**: Dividends now are more certain than capital gains later. Hence dividends are more valuable than capital gains. Stocks that pay dividends will therefore be more highly valued than stocks that do not.

- **Counter**: The appropriate comparison should be between dividends today and price appreciation today. The stock price drops on the ex-dividend day.
2. We have excess cash this year...

- **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. The cost of raising new financing in future years, especially by issuing new equity, can be staggering.
The Cost of Raising Capital

Figure 10.12: Issuance Costs for Stocks and Bonds

Aswath Damodaran
Three “good” reasons for paying dividends...

- **Clientele Effect**: The investors in your company like dividends.

- **The Signalling Story**: Dividends can be signals to the market that you believe that you have good cash flow prospects in the future.

- **The Wealth Appropriation Story**: Dividends are one way of transferring wealth from lenders to equity investors (this is good for equity investors but bad for lenders)
1. The Clientele Effect
The “strange case” of Citizen’s Utility

Class A shares pay cash dividend

Class B shares offer the same amount as a stock dividend & can be converted to class A shares
Evidence from Canadian firms

<table>
<thead>
<tr>
<th>Company</th>
<th>Premium for cash dividend shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated Bathurst</td>
<td>+ 19.30%</td>
</tr>
<tr>
<td>Donfasco</td>
<td>+ 13.30%</td>
</tr>
<tr>
<td>Dome Petroleum</td>
<td>+ 0.30%</td>
</tr>
<tr>
<td>Imperial Oil</td>
<td>+12.10%</td>
</tr>
<tr>
<td>Newfoundland Light &amp; Power</td>
<td>+ 1.80%</td>
</tr>
<tr>
<td>Royal Trustco</td>
<td>+ 17.30%</td>
</tr>
<tr>
<td>Stelco</td>
<td>+ 2.70%</td>
</tr>
<tr>
<td>TransAlta</td>
<td>+1.10%</td>
</tr>
<tr>
<td>Average across companies</td>
<td>+ 7.54%</td>
</tr>
</tbody>
</table>
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

**Equation:**

\[ \text{Dividend Yield}_t = a + b \beta_t + c \text{Age}_t + d \text{Income}_t + e \text{Differential Tax Rate}_t + \epsilon \]

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

a. Courageously announce to your stockholders that you plan to cut dividends and invest in the new markets.

b. Continue to pay the dividends that you used to, and defer investment in the new markets.

c. Continue to pay the dividends that you used to, make the investments in the new markets, and issue new stock to cover the shortfall.

d. Other
2. Dividends send a signal”
Increases in dividends are good news..

Daily Cumulative Average Abnormal Returns: Cases Where Earnings Announcements Precede Dividend Announcements

Aswath Damodaran
But higher or new dividends may signal bad news (not good)

Dividend Initiations and Earnings Growth

Year relative to dividend initiation (Before and after)
Both dividend increases and decreases are becoming less informative...

Market Reaction to Dividend Changes over time: US companies
3. Dividend increases may be good for stocks... but bad for bonds..

**EXCESS RETURNS ON STOCKS AND BONDS AROUND DIVIDEND CHANGES**

- Stock price rises
- Bond price drops

Day (0: Announcement date)
What managers believe about dividends...

<table>
<thead>
<tr>
<th>Statement of Management Beliefs</th>
<th>Agree</th>
<th>No Opinion</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A firm’s dividend payout ratio affects the price of the stock.</td>
<td>61%</td>
<td>33%</td>
<td>6%</td>
</tr>
<tr>
<td>2. Dividend payments provide a signaling device of future prospects.</td>
<td>52%</td>
<td>41%</td>
<td>7%</td>
</tr>
<tr>
<td>3. The market uses divided announcements as information for assessing firm value.</td>
<td>43%</td>
<td>51%</td>
<td>6%</td>
</tr>
<tr>
<td>4. Investors have different perceptions of the relative riskiness of dividends and retained earnings.</td>
<td>56%</td>
<td>42%</td>
<td>2%</td>
</tr>
<tr>
<td>5. Investors are basically indifferent with regard to returns from dividends and capital gains.</td>
<td>6%</td>
<td>30%</td>
<td>64%</td>
</tr>
<tr>
<td>6. A stockholder is attracted to firms that have dividend policies appropriate to the stockholder’s tax environment.</td>
<td>44%</td>
<td>49%</td>
<td>7%</td>
</tr>
<tr>
<td>7. Management should be responsive to shareholders’ preferences regarding dividends.</td>
<td>41%</td>
<td>49%</td>
<td>10%</td>
</tr>
</tbody>
</table>
ASSESSING DIVIDEND POLICY: OR HOW MUCH CASH IS TOO MUCH?

It is my cash and I want it now...
Maximize the value of the business (firm)

The Investment Decision
Invest in assets that earn a return greater than the minimum acceptable hurdle rate

The Financing Decision
Find the right kind of debt for your firm and the right mix of debt and equity to fund your operations

The Dividend Decision
If you cannot find investments that make your minimum acceptable rate, return the cash to owners of your business

The hurdle rate should reflect the riskiness of the investment and the mix of debt and equity used to fund it.

The return should reflect the magnitude and the timing of the cashflows as well as all side effects.

The optimal mix of debt and equity maximizes firm value.

The right kind of debt matches the tenor of your assets.

How much cash you can return depends upon current & potential investment opportunities.

How you choose to return cash to the owners will depend on whether they prefer dividends or buybacks.

Aswath Damodaran
Assessing Dividend Policy

- **Approach 1: The Cash/Trust Nexus**
  - Assess how much cash a firm has available to pay in dividends, relative what it returns to stockholders. Evaluate whether you can trust the managers of the company as custodians of your cash.

- **Approach 2: Peer Group Analysis**
  - Pick a dividend policy for your company that makes it comparable to other firms in its peer group.
I. The Cash/Trust Assessment

Step 1: How much did the company actually pay out during the period in question?
Step 2: How much could the company have paid out during the period under question?
Step 3: 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?
How much has the company returned to stockholders?

- As firms increasing use stock buybacks, we have to measure cash returned to stockholders as not only dividends but also buybacks.
- For instance, for the five companies we are analyzing the cash returned looked as follows.

<table>
<thead>
<tr>
<th></th>
<th>Disney</th>
<th></th>
<th>Vale</th>
<th></th>
<th>Tata Motors</th>
<th></th>
<th>Baidu</th>
<th></th>
<th>Deutsche Bank</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Dividends</td>
<td>Buybacks</td>
<td>Dividends</td>
<td>Buybacks</td>
<td>Dividends</td>
<td>Buybacks</td>
<td>Dividends</td>
<td>Buybacks</td>
<td>Dividends</td>
<td>Buybacks</td>
</tr>
<tr>
<td>2008</td>
<td>$648</td>
<td>$648</td>
<td>$2,993</td>
<td>$741</td>
<td>7,595₹</td>
<td>0₹</td>
<td>¥0</td>
<td>¥0</td>
<td>2,274 €</td>
<td>0 €</td>
</tr>
<tr>
<td>2009</td>
<td>$653</td>
<td>$2,669</td>
<td>$2,771</td>
<td>$9</td>
<td>3,496₹</td>
<td>0₹</td>
<td>¥0</td>
<td>¥0</td>
<td>309 €</td>
<td>0 €</td>
</tr>
<tr>
<td>2010</td>
<td>$756</td>
<td>$4,993</td>
<td>$3,037</td>
<td>$1,930</td>
<td>10,195₹</td>
<td>0₹</td>
<td>¥0</td>
<td>¥0</td>
<td>465 €</td>
<td>0 €</td>
</tr>
<tr>
<td>2011</td>
<td>$1,076</td>
<td>$3,015</td>
<td>$9,062</td>
<td>$3,051</td>
<td>15,031₹</td>
<td>0₹</td>
<td>¥0</td>
<td>¥0</td>
<td>691 €</td>
<td>0 €</td>
</tr>
<tr>
<td>2012</td>
<td>$1,324</td>
<td>$4,087</td>
<td>$6,006</td>
<td>$0</td>
<td>15,088₹</td>
<td>970₹</td>
<td>¥0</td>
<td>¥0</td>
<td>689 €</td>
<td>0 €</td>
</tr>
<tr>
<td>2008-12</td>
<td>$4,457</td>
<td>$15,412</td>
<td>$23,869</td>
<td>$5,731</td>
<td>51,405₹</td>
<td>970₹</td>
<td>¥0</td>
<td>¥0</td>
<td>¥4,428</td>
<td>¥0</td>
</tr>
</tbody>
</table>
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.

\[
\text{Net Income} + \text{Depreciation} & \text{& Amortization} \\
\text{= Cash flows from Operations to Equity Investors} \\
- \text{Preferred Dividends} \\
- \text{Capital Expenditures} \\
- \text{Working Capital Needs} \\
\text{= FCFE before net debt cash flow (Owner’s Earnings)} \\
+ \text{New Debt Issues} \\
- \text{Debt Repayments} \\
\text{= FCFE after net debt cash flow}
\]
Estimating FCFE when Leverage is Stable

- The cash flow from debt (debt issue, netted out against repayment) can be a volatile number, creating big increases or decreases in FCFE, depending upon the period examined.

- To provide a more balanced measure, you can estimate a FCFE, assuming a stable debt ratio had been used to fund reinvestment over the period.

\[
\text{Net Income} - (1 - \text{Debt Ratio}) (\text{Capital Expenditures} - \text{Depreciation}) - (1 - \text{Debt Ratio}) \text{ Working Capital Needs} = \text{Free Cash flow to Equity}
\]

\[
\text{Debt Ratio} = \frac{\text{Debt}}{\text{Capital Ratio}} \text{ (either an actual or a target)}
\]
Disney’s FCFE and Cash Returned: 2008 – 2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>$6,136</td>
<td>$5,682</td>
<td>$4,807</td>
<td>$3,963</td>
<td>$3,307</td>
<td>$23,895</td>
</tr>
<tr>
<td>- (Cap. Exp - Depr)</td>
<td>$604</td>
<td>$1,797</td>
<td>$1,718</td>
<td>$397</td>
<td>$122</td>
<td>$4,638</td>
</tr>
<tr>
<td>- δ Working Capital</td>
<td>($133)</td>
<td>$940</td>
<td>$950</td>
<td>$308</td>
<td>($109)</td>
<td>$1,956</td>
</tr>
<tr>
<td>Free CF to Equity (pre-debt)</td>
<td>$5,665</td>
<td>$2,945</td>
<td>$2,139</td>
<td>$3,258</td>
<td>$3,294</td>
<td>$17,301</td>
</tr>
<tr>
<td>+ Net Debt Issued</td>
<td>$1,881</td>
<td>$4,246</td>
<td>$2,743</td>
<td>$1,190</td>
<td>($235)</td>
<td>$9,825</td>
</tr>
<tr>
<td>= Free CF to Equity (actual debt)</td>
<td>$7,546</td>
<td>$7,191</td>
<td>$4,882</td>
<td>$4,448</td>
<td>$3,059</td>
<td>$27,126</td>
</tr>
<tr>
<td>Free CF to Equity (target debt ratio)</td>
<td>$5,720</td>
<td>$3,262</td>
<td>$2,448</td>
<td>$3,340</td>
<td>$3,296</td>
<td>$18,065</td>
</tr>
<tr>
<td>Dividends</td>
<td>$1,324</td>
<td>$1,076</td>
<td>$756</td>
<td>$653</td>
<td>$648</td>
<td>$4,457</td>
</tr>
<tr>
<td>Dividends + Buybacks</td>
<td>$5,411</td>
<td>$4,091</td>
<td>$5,749</td>
<td>$3,322</td>
<td>$1,296</td>
<td>$19,869</td>
</tr>
</tbody>
</table>

Disney returned about $1.5 billion more than the $18.1 billion it had available as FCFE with a normalized debt ratio of 11.58% (its current debt ratio).

Aswath Damodaran
How companies get big cash balances: Microsoft in 1996...

- Consider the following inputs for Microsoft in 1996.
  - Net Income = $2,176 Million
  - Capital Expenditures = $494 Million
  - Depreciation = $480 Million
  - Change in Non-Cash Working Capital = $35 Million
  - Debt = None

\[
\text{FCFE} = \text{Net Income} - (\text{Cap ex} - \text{Depr}) - \text{Change in non-cash WC} - \text{Debt CF}
\]
\[
= \$2,176 - (494 - 480) - 35 - 0 = \$2,127 \text{ Million}
\]

- By this estimation, Microsoft could have paid $2,127 Million in dividends/stock buybacks in 1996. They paid no dividends and bought back no stock. Where will the $2,127 million show up in Microsoft’s balance sheet?
We redefine reinvestment as investment in regulatory capital.

\[
\text{FCF}_{\text{Bank}} = \text{Net Income} - \text{Increase in Regulatory Capital (Book Equity)}
\]

Consider a bank with $10 billion in loans outstanding and book equity of $750 million. If it maintains its capital ratio of 7.5%, intends to grow its loan base by 10% (to $11 billion) and expects to generate $150 million in net income:

\[
\text{FCF} = 150 \text{ million} - (11,000-10,000) \times 0.075 = 75 \text{ million}
\]

| Deutsche Bank: FCFE estimates (November 2013) |
|-----------------|-------|-------|-------|-------|-------|-------|
|                  | Current | 1     | 2     | 3     | 4     | 5     |
| Risk Adjusted Assets (grows 3% each year) | 439,851 € | 453,047 € | 466,638 € | 480,637 € | 495,056 € | 509,908 € |
| Tier 1 as % of Risk Adj assets | 15.13% | 15.71% | 16.28% | 16.85% | 17.43% | 18.00% |
| Tier 1 Capital | 66,561 € | 71,156 € | 75,967 € | 81,002 € | 86,271 € | 91,783 € |
| Change in regulatory capital | 4,595 € | 4,811 € | 5,035 € | 5,269 € | 5,512 € | |
| Book Equity | 76,829 € | 81,424 € | 86,235 € | 91,270 € | 96,539 € | 102,051 € |
| ROE (increases to 8%) | -1.08% | 0.74% | 2.55% | 4.37% | 6.18% | 8.00% |
| Net Income | -716 € | 602 € | 2,203 € | 3,988 € | 5,971 € | 8,164 € |
| - Investment in Regulatory Capital | 4,595 € | 4,811 € | 5,035 € | 5,269 € | 5,512 € | |
| FCFE | -3,993 € | -2,608 € | -1,047 € | 702 € | 2,652 € | |
Dividends versus FCFE: Across the globe

Figure 11.2: Dividends versus FCFE in 2014
Cash Buildup and Investor Blowback: Chrysler in 1994

Chrysler: FCFE, Dividends and Cash Balance

- **Cash Flow**
- **Cash Balance**
- **Cumulated Cash**

- Free CF to Equity
- Cash to Stockholders
- Cumulated Cash


Aswath Damodaran
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
  - + New Debt Issued + Change in ST Borrowing
  - = FCFE = FCFE

- Compare to
  - Dividends (Common) Common Dividend
  - + Stock Buybacks Stock Buybacks

Aswath Damodaran
A Practical Framework for Analyzing Dividend Policy

How much did the firm pay out? How much could it have afforded to pay out?
What it could have paid out: Net Income
- (Cap Ex - Depr’ n) (1-DR)
- Chg Working Capital (1-DR)
= FCFE

What it actually paid out:
Dividends + Equity Repurchase

Net Income - (Cap Ex - Depr’ n) (1-DR) - Chg Working Capital (1-DR) = FCFE

Firm pays out too little: FCFE > Dividends
Do you trust managers in the company with your cash?
Look at past project choice:
Compare ROE to Cost of Equity
ROC to WACC

Firm pays out too much: FCFE < Dividends
What investment opportunities does the firm have?
Look at past project choice:
Compare ROE to Cost of Equity
ROC to WACC

Firm has history of good project choice and good projects in the future
Give managers the flexibility to keep cash and set dividends

Firm has history of poor project choice
Force managers to justify holding cash or return cash to stockholders

Firm has good projects
Firm should cut dividends and reinvest more

Firm has poor projects
Firm should deal with its investment problem first and then cut dividends

Aswath Damodaran
<table>
<thead>
<tr>
<th>Quality of projects taken: Excess Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor projects</td>
</tr>
<tr>
<td>Good projects</td>
</tr>
<tr>
<td><strong>Cash Surplus + Poor Projects</strong></td>
</tr>
<tr>
<td>Significant pressure to pay out more to</td>
</tr>
<tr>
<td>stockholders as dividends or stock</td>
</tr>
<tr>
<td>buybacks</td>
</tr>
<tr>
<td><strong>Cash Deficit + Poor Projects</strong></td>
</tr>
<tr>
<td>Reduce or eliminate cash return but real</td>
</tr>
<tr>
<td>problem is in investment policy.</td>
</tr>
<tr>
<td><strong>Cash Surplus + Good Projects</strong></td>
</tr>
<tr>
<td>Maximum flexibility in setting dividend</td>
</tr>
<tr>
<td>policy.</td>
</tr>
<tr>
<td><strong>Cash Deficit + Good Projects</strong></td>
</tr>
<tr>
<td>Reduce cash payout, if any, to stockholders</td>
</tr>
</tbody>
</table>
More on Microsoft

- Microsoft had accumulated a cash balance of $43 billion by 2002 by paying out no dividends while generating huge FCFE. At the end of 2003, there was no evidence that Microsoft was being penalized for holding such a large cash balance or that stockholders were becoming restive about the cash balance. There was no hue and cry demanding more dividends or stock buybacks. Why?

- In 2004, Microsoft announced a huge special dividend of $33 billion and made clear that it would try to return more cash to stockholders in the future. What do you think changed?
Case 1: Disney in 2003

- **FCFE versus Dividends**
  - Between 1994 & 2003, Disney generated $969 million in FCFE each year.
  - Between 1994 & 2003, Disney paid out $639 million in dividends and stock buybacks each year.

- **Cash Balance**
  - Disney had a cash balance in excess of $4 billion at the end of 2003.

- **Performance measures**
  - Between 1994 and 2003, Disney has generated a return on equity, on its projects, about 2% less than the cost of equity, on average each year.
  - Between 1994 and 2003, Disney’s stock has delivered about 3% less than the cost of equity, on average each year.
  - The underperformance has been primarily post 1996 (after the Capital Cities acquisition).
Can you trust Disney’s management?

- Given Disney’s track record between 1994 and 2003, if you were a Disney stockholder, would you be comfortable with Disney’s dividend policy?
  - a. Yes
  - b. No

- Does the fact that the company is run by Michael Eisner, the CEO for the last 10 years and the initiator of the Cap Cities acquisition have an effect on your decision.
  - a. Yes
  - b. No
Disney could have afforded to pay more in dividends during the period of the analysis.

It chose not to, and used the cash for acquisitions (Capital Cities/ABC) and ill fated expansion plans (Go.com).

While the company may have flexibility to set its dividend policy a decade ago, its actions over that decade have frittered away this flexibility.

**Bottom line:** *Large cash balances would not be tolerated in this company. Expect to face relentless pressure to pay out more dividends.*
Following up: Disney in 2009

- Between 2004 and 2008, Disney made significant changes:
  - It replaced its CEO, Michael Eisner, with a new CEO, Bob Iger, who at least on the surface seemed to be more receptive to stockholder concerns.
  - Its stock price performance improved (positive Jensen’s alpha)
  - Its project choice improved (ROC moved from being well below cost of capital to above)
- The firm also shifted from cash returned < FCFE to cash returned > FCFE and avoided making large acquisitions.
- If you were a stockholder in 2009 and Iger made a plea to retain cash in Disney to pursue investment opportunities, would you be more receptive?
  a. Yes
  b. No

Aswath Damodaran
Final twist: Disney in 2013

- Disney did return to holding cash between 2008 and 2013, with dividends and buybacks amounting to $2.6 billion less than the FCFE (with a target debt ratio) over this period.

- Disney continues to earn a return on capital well in excess of the cost of capital and its stock has doubled over the last two years.

- Now, assume that Bob Iger asks you for permission to withhold even more cash to cover future investment needs. Are you likely to go along?
  a. Yes
  b. No
Case 2: Vale – Dividends versus FCFE

<table>
<thead>
<tr>
<th></th>
<th>Aggregate</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>$57,404</td>
<td>$5,740</td>
</tr>
<tr>
<td>Dividends</td>
<td>$36,766</td>
<td>$3,677</td>
</tr>
<tr>
<td>Dividend Payout Ratio</td>
<td>$1</td>
<td>$1</td>
</tr>
<tr>
<td>Stock Buybacks</td>
<td>$6,032</td>
<td>$603</td>
</tr>
<tr>
<td>Dividends + Buybacks</td>
<td>$42,798</td>
<td>$4,280</td>
</tr>
<tr>
<td>Cash Payout Ratio</td>
<td>$1</td>
<td></td>
</tr>
<tr>
<td>Free CF to Equity (pre-debt)</td>
<td>($1,903)</td>
<td>($190)</td>
</tr>
<tr>
<td>Free CF to Equity (actual debt)</td>
<td>$1,036</td>
<td>$104</td>
</tr>
<tr>
<td>Free CF to Equity (target debt ratio)</td>
<td>$19,138</td>
<td>$1,914</td>
</tr>
<tr>
<td>Cash payout as % of pre-debt FCFE</td>
<td>FCFE negative</td>
<td></td>
</tr>
<tr>
<td>Cash payout as % of actual FCFE</td>
<td>4131.08%</td>
<td></td>
</tr>
<tr>
<td>Cash payout as % of target FCFE</td>
<td>223.63%</td>
<td></td>
</tr>
</tbody>
</table>
Vale: Its your call..

- Vale’s managers have asked you for permission to cut dividends (to more manageable levels). Are you likely to go along?
  a. Yes
  b. No

- The reasons for Vale’s dividend problem lie in its equity structure. Like most Brazilian companies, Vale has two classes of shares - common shares with voting rights and preferred shares without voting rights. However, Vale has committed to paying out 35% of its earnings as dividends to the preferred stockholders. If they fail to meet this threshold, the preferred shares get voting rights. If you own the preferred shares, would your answer to the question above change?
  a. Yes
  b. No
Assume now that the government decides to mandate a minimum dividend payout for all companies. Given our discussion of FCFE, what types of companies will be hurt the most by such a mandate?

a. Large companies making huge profits
b. Small companies losing money
c. High growth companies that are losing money
d. High growth companies that are making money

What if the government mandates a cap on the dividend payout ratio (and a requirement that all companies reinvest a portion of their profits)?
### Summary of calculations

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free CF to Equity</td>
<td>$571.10</td>
<td>$1,382.29</td>
<td>$3,764.00</td>
<td>($612.50)</td>
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<tr>
<td>Dividends</td>
<td>$1,496.30</td>
<td>$448.77</td>
<td>$2,112.00</td>
<td>$831.00</td>
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<tr>
<td>Dividends+Repurchases</td>
<td>$1,496.30</td>
<td>$448.77</td>
<td>$2,112.00</td>
<td>$831.00</td>
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<tr>
<td>Dividend Payout Ratio</td>
<td>84.77%</td>
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<tr>
<td>Cash Paid as % of FCFE</td>
<td>262.00%</td>
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<tr>
<td>ROE - Required return</td>
<td>-1.67%</td>
<td>11.49%</td>
<td>20.90%</td>
<td>-21.59%</td>
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</tbody>
</table>

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

BY MATTHEW L. WALD

British Petroleum said yesterday that it would cut its dividend by 85 percent, take a pretax restructuring charge of $1.63 billion for the second quarter and lay off 11,500 employees, or 10 percent of its worldwide workforce. 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 41.625, or 7.98 percent, to $48.975. It was the most active issue on the New York Stock Exchange, with 6.59 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 $187 million, down 32 percent.

Quick 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 company's 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 market for petrochemicals in Europe remains weak.

B.P.'s second quarter profits before one-time transactions, declined to $183 million from $255 million, valuing investors on a replacement-cost basis. James J. Murchie, an analyst at Standard C. Bernard, estimated that after exceptional items, earnings per share fell 30 cents in the second quarter, compared with 62 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. Covert of Prudential Securities Research said, "Debt rose, interest expense rose, and profits have gone to the bank."

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 $20 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 120 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 on its refining and marketing operation as the company had been doing before.

Continued on Page 209
Managing changes in dividend policy

<table>
<thead>
<tr>
<th>Category</th>
<th>Periods Around Announcement Date</th>
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<td></td>
<td>Prior Quarter</td>
<td>Announcement Period</td>
<td>Quarter After</td>
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<tr>
<td>Simultaneous announcement of earnings decline/loss ($N = 176$)</td>
<td>$-7.23%$</td>
<td>$-8.17%$</td>
<td>$+1.80%$</td>
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<td>$-5.52%$</td>
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