Returning Cash to the Owners: Dividend Policy

"Companies don't have cash. They hold cash for their stockholders."

First Principles

Invest in projects that <u>yield a return greater</u> than the <u>minimum</u> <u>acceptable hurdle rate</u>.

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

Objective: Maximize the Value of the Firm

Steps to the Dividend Decision...



I. Dividends are sticky



II. Dividends tend to follow earnings



III. More and more firms are buying back stock, rather than pay dividends...



IV. But the change in dividend tax law in 2003 may cause a shift back to dividends



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: January 2007



Dividend Yields in the United States: January 2007



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

The balanced viewpoint

If a company has excess cash, and few good investment opportunities (NPV>0), returning money to stockholders (dividends or stock repurchases) is good.

If a company does not have excess cash, and/or has several good investment opportunities (NPV>0), returning money to stockholders (dividends or stock repurchases) is <u>bad</u>.

Why do firms pay dividends?

The Miller-Modigliani Hypothesis: **Dividends do not affect value** Basis:

- If a firm's investment policies (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.

The Classic Tax Response: Until 2003, dividends were taxed much more heavily than capital gains...



Gauging the tax effect by looking at Price Behavior on Ex-Dividend Date

Assume that you are the owner of a stock that is approaching an exdividend day and you know that dollar dividened with certainty. In addition, assume that you have owned the stock for several years. 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 Ex-Dividend Dw

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

$$\frac{P_{b} - P_{a}}{D} = \frac{(1 - t_{o})}{(1 - t_{cg})}$$

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

If

The Evidence on Ex-Dividend Day Behavior

		Ordi nary I nco me	Capit d 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 %	0.90

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

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 exdividend 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. Consider the cost of issuing new stock:

The Cost of Raising Capital



Three "good" reasons for paying dividends...

- 1. <u>Clientele Effect</u>: The investors in your company like dividends.
- 2. <u>The Signalling Story</u>: Dividends can be signals to the market that you believe that you have good cash flow prospects in the future.
- 3. <u>The Wealth Appropriation Story</u>: 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: Dividends or Capital Gains..



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

Dividend Yieldt = $a + b \beta_t + c Aget + d Incomet + e Differential Tax Ratet + \varepsilon_t$

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

2. Dividends send a signal" Increases in dividends are good news..



An Alternative Story..Increasing dividends is bad news...

TABLE 1 FARNINGS GROWTH RATES	Year Relative to Dividend Initiation	Number of Firms	Mean Earnings Growth Rate	Median Earnings Growth Rate
IN YEARS SURROUNDING	-4	130	14.9%	17.4%
FIRST-TIME	-3	129	-7.1	7.6
131 FIRMS IN THE	-2	128	12.9	10.5
PERIOD 1970 TO 1979*	-1	131	42.7**	28.0
	- 1	130	55.0**	40.2
	2	130	22.0**	35.9
	-	130	35.0**	28.2
	5 4	128	3.5	19.5

 In our original research we compute earnings performance as earnings changes standardized by stock prices. Here we convert these values to earnings growth rates by assuming that the average price earnings ratio for the sample firms is ten.
** Significantly different from zero at the 10% level or lower.



3. Dividend increases may be good for stocks... but bad for bonds..



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 could the company have paid out during the period under question?
- Step 2: How much did the the company actually pay out during the period in 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?

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 when Leverage is Stable

Net Income

- $(1-\delta)$ (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)

An Example: FCFE Calculation

Consider the following inputs for Microsoft in 1996. In 1996, Microsoft's FCFE was:

- Net Income = \$2,176 Million
- Capital Expenditures = \$494 Million
- Depreciation = \$ 480 Million
- Change in Non-Cash Working Capital = \$35 Million
- Debt Ratio = 0%
- FCFE = Net Income (Cap ex Depr) (1-DR) Chg WC (!-DR)
 - = \$2,176 (494 480) (1-0) \$35 (1-0)
 - = \$2,127 Million

Microsoft: Dividends?

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?

Dividends versus FCFE: U.S.



The Consequences of Failing to pay FCFE



Application Test: Estimating your firm's FCFE

In General,

Net Income

- + Depreciation & Amortization
- Capital Expenditures
- Change in Non-Cash Working Capital
- Preferred Dividend
- Principal Repaid
- + New Debt Issued

= FCFE

Compare to

Dividends (Common)

+ Stock Buybacks

If cash flow statement used

Net Income

- + Depreciation & Amortization
- + Capital Expenditures
- + Changes in Non-cash WC
- + Preferred Dividend
- + Increase in LT Borrowing
- + Decrease in LT Borrowing
- + Change in ST Borrowing
- = FCFE

-Common Dividend- Decrease in Capital Stock+ Increase in Capital Stock

A Practical Framework for Analyzing Dividend Policy



A Dividend Matrix

	Quality of projects taken Poor projects	: ROE versus Cost of Equity Good projects
utrelative to FCFE Cash Surplus	<i>Cash Surplus + Poor</i> <i>Projects</i> Significant pressure to pay out more to stockholders as dividends or stock buybacks	<i>Cash Surplus + Good Projects</i> Maximum flexibility in setting dividend policy
Dividends paid o Cash Deficit	<i>Cash Deficit + Poor</i> <i>Projects</i> Cut out dividends but real problem is in investment policy.	<i>Cash Deficit + Good Projects</i> Reduce cash payout, if any, to stockholders

More on Microsoft

Microsoft had accumulated a cash balance of \$ 43 billion by 2003 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
- Stockholders were becoming restive about the cash balance. There was no hue and cry demanding more dividends or stock buybacks.
- Why?

Microsoft's big dividend in 2004

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?

Disney: An analysis of FCFE from 1994-2003

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				Change in	FCFE		FCFE
	Net		Capital	non-cash	(before	Net CF	(after
Year	Income	Depreciation	Expenditure s	WC	debt CF)	from Debt	Debt CF)
1994	\$1,110.40	\$1,608.30	\$1,026.11	\$654.10	\$1,038.49	\$551.10	\$1,589.59
1995	\$1,380.10	\$1,853.00	\$896.50	(\$270.70)	\$2,607.30	\$14.20	\$2,621.50
1996	\$1,214.00	\$3,944.00	\$13,464.00	\$617.00	(\$8,923.00)	\$8,688.00	(\$235.00)
1997	\$1,966.00	\$4,958.00	\$1,922.00	(\$174.00)	\$5,176.00	(\$1,641.00)	\$3,535.00
1998	\$1,850.00	\$3,323.00	\$2,314.00	\$939.00	\$1,920.00	\$618.00	\$2,538.00
1999	\$1,300.00	\$3,779.00	\$2,134.00	(\$363.00)	\$3,308.00	(\$176.00)	\$3,132.00
2000	\$920.00	\$2,195.00	\$2,013.00	(\$1,184.00)	\$2,286.00	(\$2,118.00)	\$168.00
2001	(\$158.00)	\$1,754.00	\$1,795.00	\$244.00	(\$443.00)	\$77.00	(\$366.00)
2002	\$1,236.00	\$1,042.00	\$1,086.00	\$27.00	\$1,165.00	\$1,892.00	\$3,057.00
2003	\$1,267.00	\$1,077.00	\$1,049.00	(\$264.00)	\$1,559.00	(\$1,145.00)	\$414.00
Average	\$1,208.55	\$2,553.33	\$2,769.96	\$22.54	\$969.38	\$676.03	\$1,645.41

Disney's Dividends and Buybacks from 1994 to 2003

		Disney	
Year	Dividends (in \$)	Equity Repurchases (in \$)	Cash to Equity
1994	\$153	\$571	\$724
1995	\$180	\$349	\$529
1996	\$271	\$462	\$733
1997	\$342	\$633	\$975
1998	\$412	\$30	\$442
1999	\$0	\$19	\$19
2000	\$434	\$166	\$600
2001	\$438	\$1,073	\$1,511
2002	\$428	\$0	\$428
2003	\$429	\$0	\$429
Average	\$ 308.70	\$ 330.30	\$ 639

Disney: Dividends versus FCFE

Disney paid out \$ 330 million less in dividends (and stock buybacks) than it could afford to pay out (Dividends and stock buybacks were \$639 million; FCFE before net debt issues was \$969 million). How much cash do you think Disney accumulated during the period?

Disney's track record on projects and stockholder wealth





Given Disney's track record over the last 10 years, if you were a Disney stockholder, would you be comfortable with Disney's dividend policy?

□ Yes

No

The Bottom Line on Disney Dividends

- Disney <u>could have afforded</u> to pay more in dividends during the period of the analysis.
- It <u>chose not to</u>, 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 will not be tolerated in this company. Expect to face relentless pressure to pay out more dividends.

Aracruz: Dividends and FCFE: 1998-2003

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				Change in	FCFE		FCFE
	Net		Capital	non-cash	(before net	Net Debt	(after net
Year	Income	Depreciation	Expenditures	WC	Debt CF)	Cashflow	Debt CF)
1998	\$3.45	\$152.80	\$88.31	\$76.06	(\$8.11)	\$174.27	\$166.16
1999	\$90.77	\$158.83	\$56.47	\$2.18	\$190.95	(\$604.48)	(\$413.53)
2000	\$201.71	\$167.96	\$219.37	\$12.30	\$138.00	(\$292.07)	(\$154.07)
2001	\$18.11	\$162.57	\$421.49	(\$56.76)	(\$184.06)	\$318.24	\$134.19
2002	\$111.91	\$171.50	\$260.70	(\$5.63)	\$28.34	\$36.35	\$64.69
2003	\$148.09	\$162.57	\$421.49	(\$7.47)	(\$103.37)	\$531.20	\$427.83
Average	\$95.67	\$162.70	\$244.64	\$3.45	\$10.29	\$27.25	\$37.54

Aracruz: Cash Returned to Stockholders

Year	Net Income	Dividends	Payout Ratio	FCFE	Cash returned to	Cash Returned/FCFE
					Stockholders	
1998	\$3.45	\$24.39	707.51%	\$166.16	\$50.79	30.57%
1999	\$90.77	\$18.20	20.05%	(\$413.53)	\$18.20	NA
2000	\$201.71	\$57.96	28.74%	(\$154.07)	\$80.68	N A
2001	\$18.11	\$63.17	348.87%	\$134.19	\$63.17	47.08%
2002	\$111.91	\$73.80	65.94%	\$64.69	\$75.98	117.45%
2003	\$148.09	\$109.31	73.81%	\$427.83	\$112.31	26.25%
1998-	\$574.04	\$346.83	60.42%	\$225.27	\$401.12	178.07%
2003						

Aracruz: Stock and Project Returns



Aracruz: Its your call..

Assume that you are a large preferred stockholder (with no voting rights) in Aracruz. They have been paying more in dividends than they have available in FCFE. Their project choice has been acceptable and your stock has performed well over the period. Would you accept a cut in dividends?

□ 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

	S	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%			

BP: Just Desserts!



The Limited: Summary of Dividend Policy: 1983-1992

	S	ummary of calculations		
	Average	Standard Deviation	Maximum	Minimum
Free CF to Equity	(\$34.20)	\$109.74	\$96.89	(\$242.17
Dividends	\$40.87	\$32.79	\$101.36	\$5.97
Dividends+Repurchases	\$40.87	\$32.79	\$101.36	\$5.97
Dividend Payout Ratio	18.59%			
Cash Paid as % of FCFE	-119.52%			

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?

YesNo

Why?

Summing up...



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)?

II. The Peer Group Approach - Disney

Company Name	Dividend Yield	Divi de nd P ayout
Astral Media Inc. 'A'	0.00%	0.00%
Belo Corp. 'A'	1.34%	34.13%
CanWest Global Comm. Corp.	0.00%	0.00%
Cinram Intl Inc	0.00%	0.00%
Clear Channel	0.85%	35.29%
Cox Radio 'A' Inc	0.00%	0.00%
Cumulus Media Inc	0.00%	0.00%
Disney (Walt)	0.90%	32.31%
Emmis Communications	0.00%	0.00%
Entercom Comm. Corp	0.00%	0.00%
Fox Entmt Group Inc	0.00%	0.00%
Hearst-Argyle Television Inc	0.00%	0.00%
InterActiveCorp	0.00%	0.00%
Liberty Media 'A'	0.00%	0.00%
Lin TV Corp.	0.00%	0.00%
Metro Goldwyn Mayer	0.00%	0.00%
Pixar	0.00%	0.00%
Radio One INC.	0.00%	0.00%
Regal Entertainment Group	2.70%	66.57%
Sin clair Broad cast	0.00%	0.00%
Sirius Satellite	0.00%	0.00%
Time Warner	0.00%	0.00%
Univision Communic.	0.00%	0.00%
Viacom Inc. 'B'	0.56%	19.00%
Westwood One	0.00%	0.00%
XM Satellite `A'	0.00%	0.00%
Average	0.24%	7.20%

Peer Group Approach: Deutsche Bank

Name	Dividend Yield	Dividend Payout
Banca Intesa Spa	1.57%	167.50%
Banco Bilbao Vizcaya Argenta	0.00%	0.00%
Ban co Santander Central Hisp	0.00%	0.00%
Barclays PIc	3.38%	35.61%
Bnp Paribas	0.00%	0.00%
Deutsche Bank Ag -Reg	1.98%	481.48%
Erste Bank Der Oester Spark	0.99%	24.31%
Hbos PIc	2.85%	27.28%
Hsbc Holdings PIc	2.51%	39.94%
Lloyds Tsb Group PIc	7.18%	72.69%
Royal Bank Of Scotland Group	3.74%	38.73%
Sanpaolo Imi Spa	0.00%	0.00%
Societe Generale	0.00%	0.00%
Standard Chartered PIc	3.61%	46.35%
Unicredito Italiano Spa	0.00%	0.00%
Average	1.85%	62.26%

Peer Group Approach: Aracruz

Paper & Pulp	Dividend Yiel d	Dividend Payout
Latin America	2.86%	41.34%
Emerging Marke t	2.03%	22.16%
US	1.14%	28.82%
All paper and pul p	1.75%	34.55%
Aracruz	3.00%	37.41%

A High Growth Bank?

Assume that you are advising a small high-growth bank, which is worried about the fact that its dividend payout and yield are much lower than other banks. The CEO of the bank is concerned that investors will punish the bank for its dividend policy. What do you think?

- a. I think that the bank will be punished for its errant dividend policy
- b. I think that investors are sophisticated enough for the bank to be treated fairly
- c. I think that the bank will not be punished for its low dividends as long as it tries to convey information to its investors about the quality of its projects and growth prospects.

Going beyond averages... Looking at the market

Regressing dividend yield and payout against expected growth yields:PYT = 0.3889 - 0.738 CPXFR - 0.214 INS + 0.193 DFR - 0.747 EGR
(20.41) (3.42) (3.41) (4.80) (8.12) $R^2 = 18.30\%$ YLD = 0.0205 - 0.058 CPXFR - 0.012 INS + 0.0200 DFR - 0.047 EGR
(22.78) (5.87) (3.66) (9.45) (11.53)

 $R^2 = 28.5\%$

- PYT = Dividend Payout Ratio = Dividends/Net Income
- YLD = Dividend Yield = Dividends/Current Price
- CPXFR = Capital Expenditures / Book Value of Total Assets
- EGR = Expected growth rate in earnings over next 5 years (analyst estimates)
- DFR = Debt / (Debt + Market Value of Equity)
- INS = Insider holdings as a percent of outstanding stock

Disney and Aracruz ADR vs US Market

For Disney

- Payout Ratio = 0.3889 0.738 (0.021) 0.214 (0.026) + 0.193 (0.2102) 0.747 (0.08) = 34.87%
- Dividend Yield = 0.0205 0.058 (0.021) 0.012 (0.026) + 0.0200 (0.2102) 0.047 (0.08) = 1.94%

Disney is paying out too little in dividends, with its payout ratio of 32.31% and its dividend yield of 0.91%

For Aracruz ADR

- Payout Ratio = 0.3889 0.738(0.02) 0.214(0.20) + 0.193(0.31) 0.747(0.23) = 21.71%
- Dividend Yield = 0.0205 0.058 (0.02)- 0.012 (0.20)+ 0.0200 (0.31)-0.047 (0.23) = 1.22%

Aracruz is paying out too much in dividends, with its payout ratio of 37.41% and its dividend yield of 3%

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

