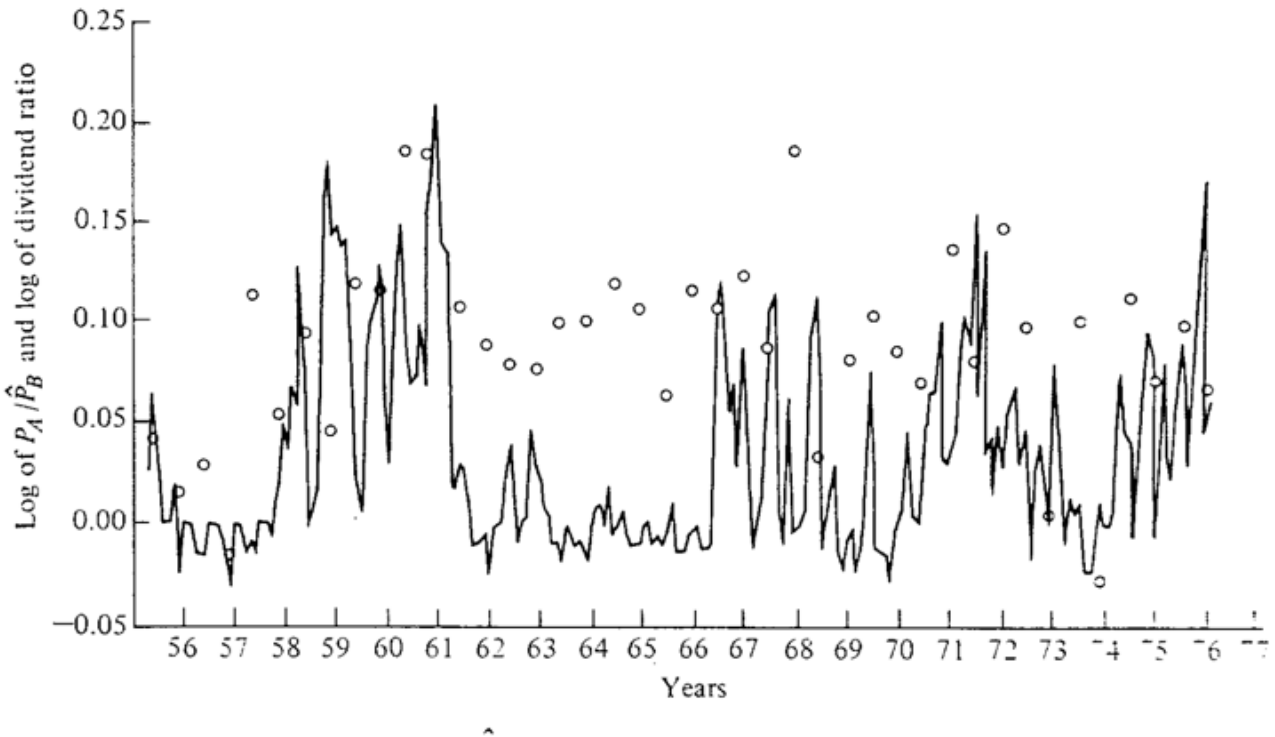
1. The Clientele Effect
The "strange case" of Citizen's Utility



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

Company	Premium for cash 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 across companies	+ 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?

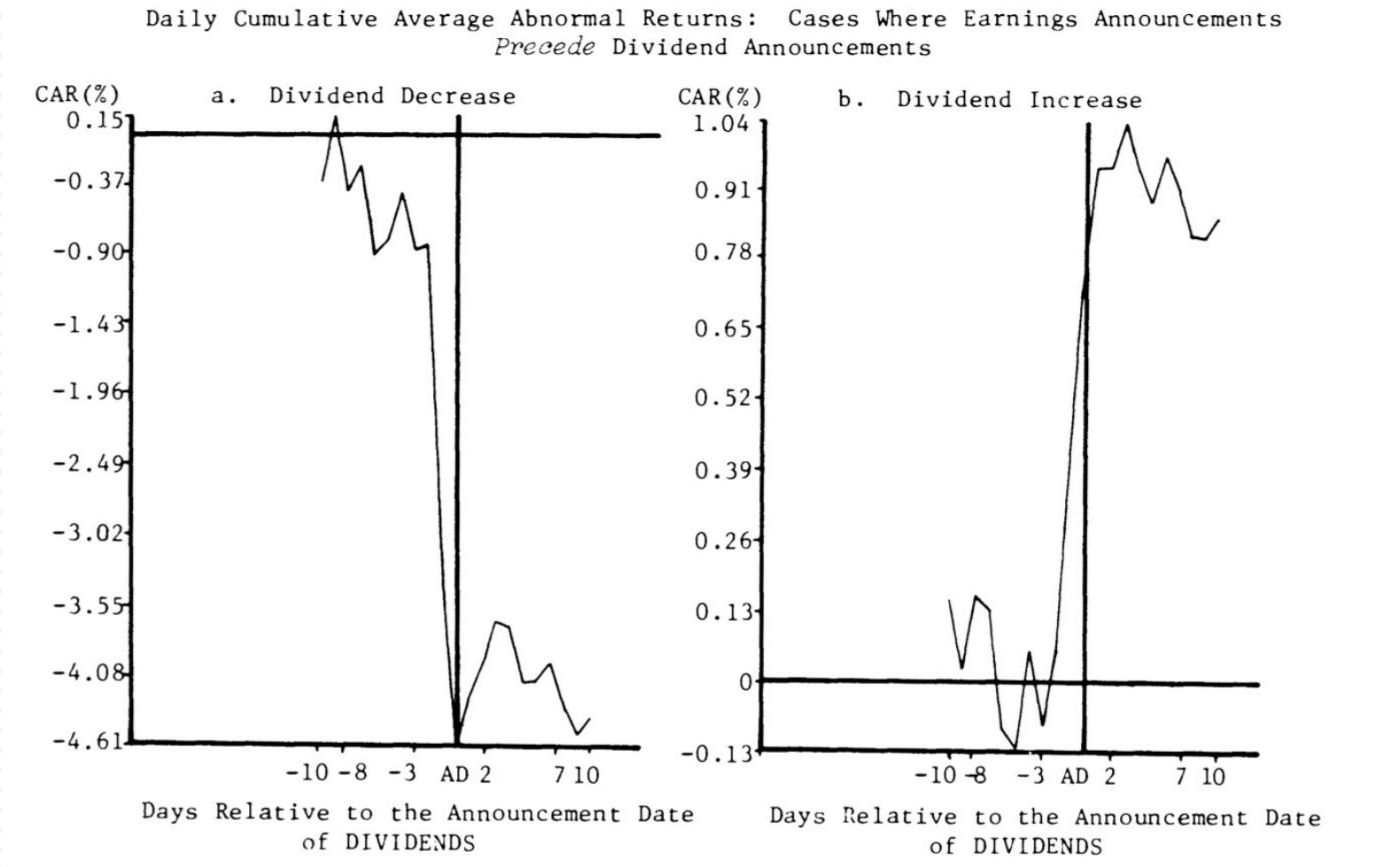
a. Courageously announce to your stockholders that you plan to cut dividends and invest in the new markets.

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

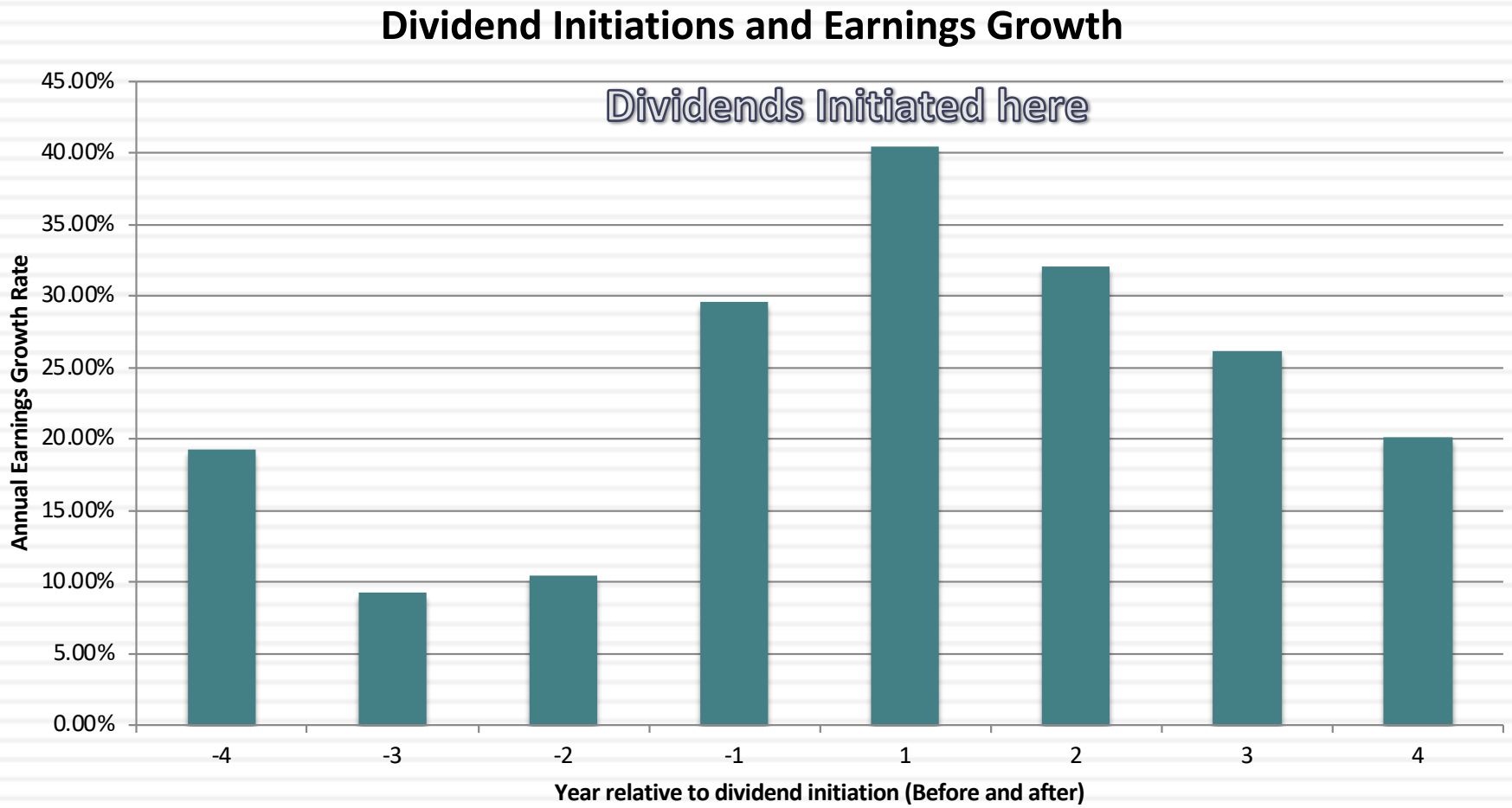
c. Continue to pay the dividends that you used to, make the investments in the new markets, and issue new stock to cover the shortfall

d. Other

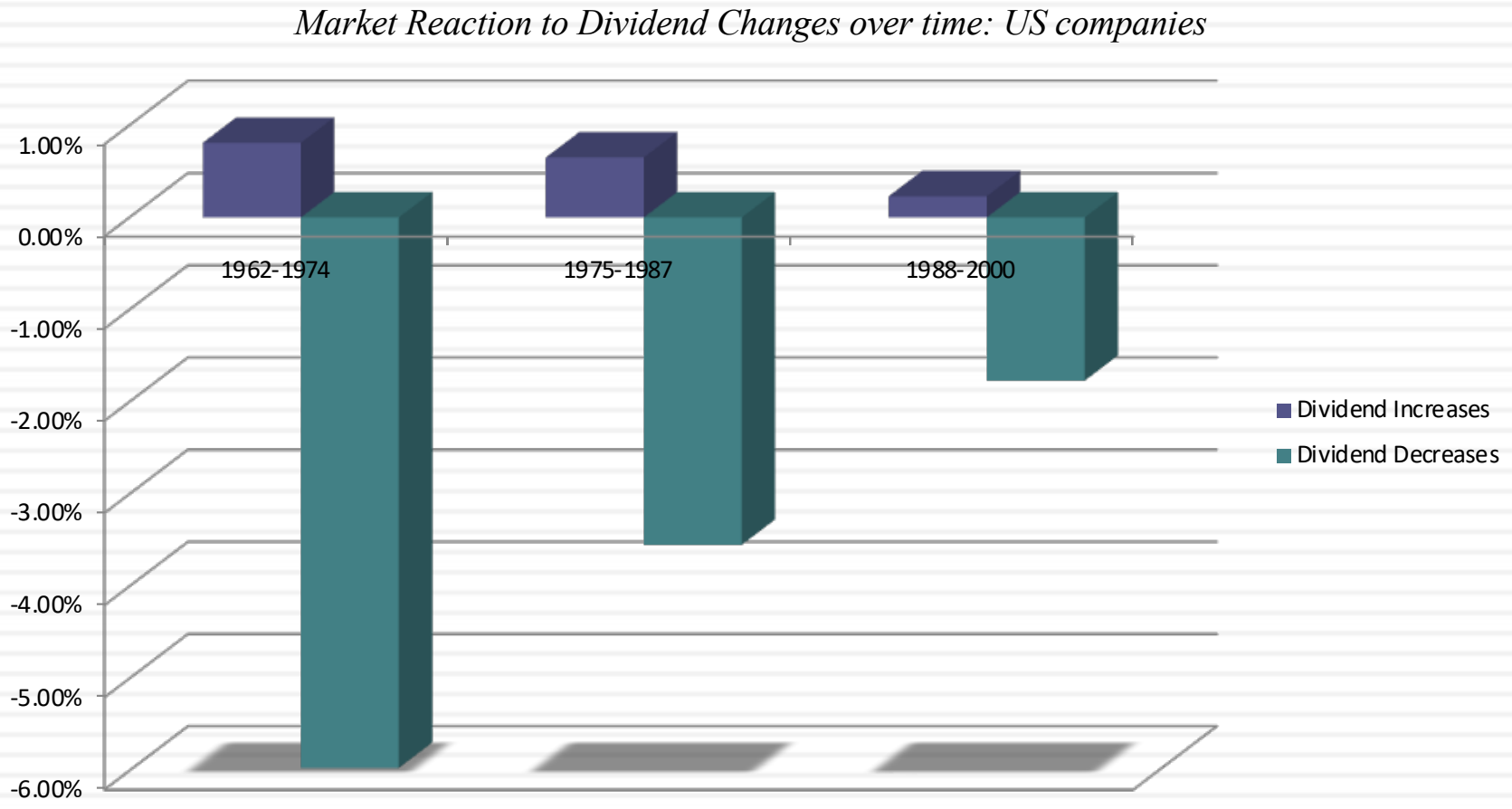
2. Dividends send a "signal"
Increases in dividends are good news..



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

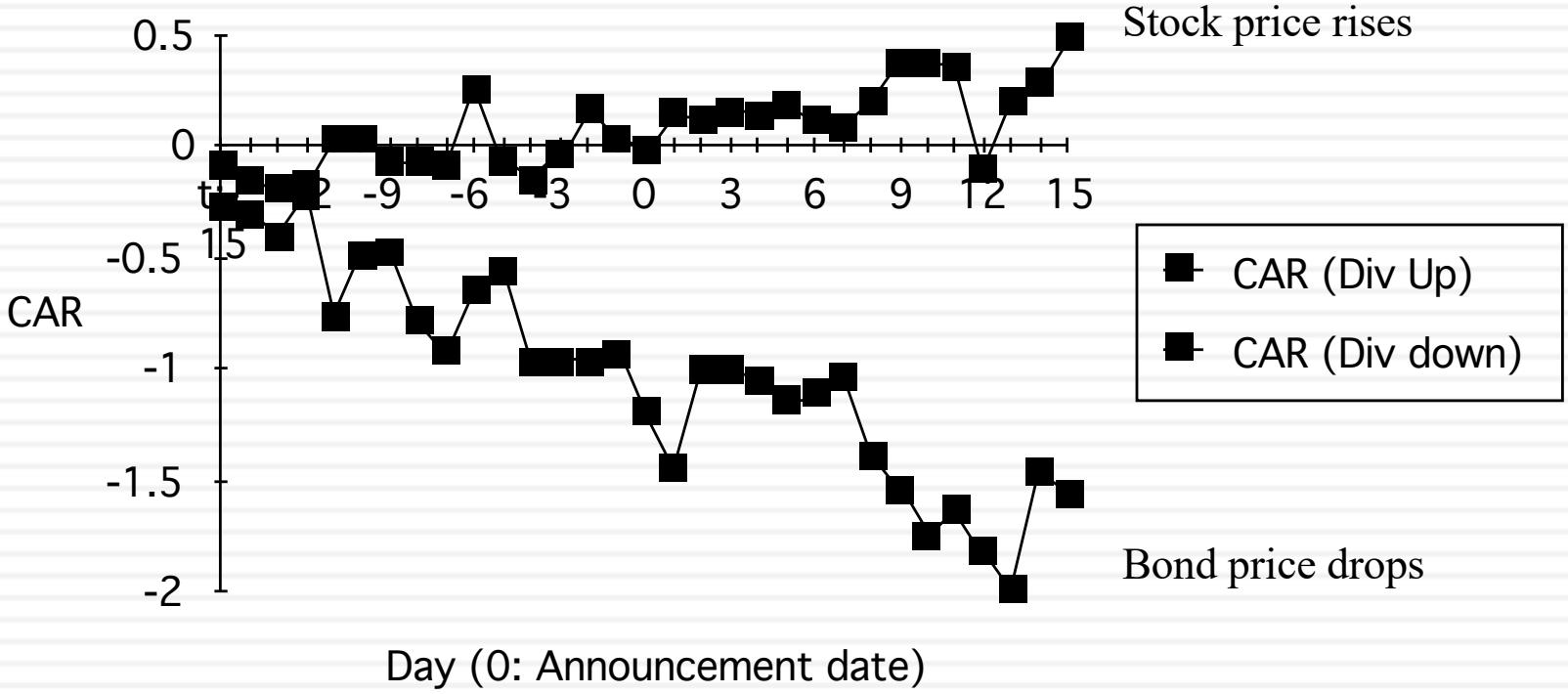


Both dividend increases and decreases are becoming less informative…



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

EXCESS RETURNS ON STOCKS AND BONDS AROUND DIVIDEND CHANGES



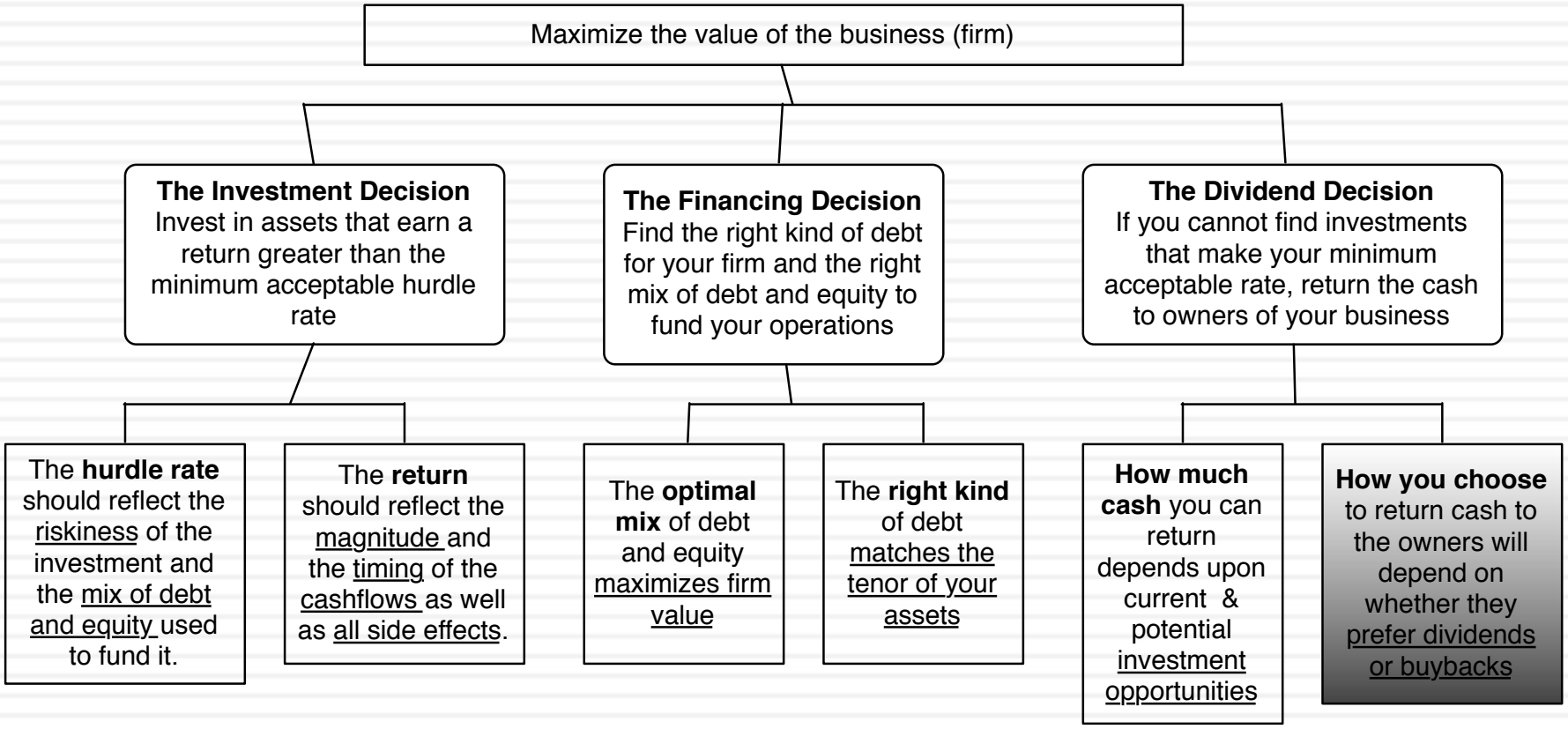
What managers believe about dividends…

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

ASSESSING DIVIDEND POLICY: OR HOW MUCH CASH IS TOO MUCH?

It is my cash and I want it now…

The Big Picture…



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 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.

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

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

Standard Definition	Modified Version	Simplified (if debt ratio = constant)
Net Income	Net Income	Net Income
+ Depreciation	**Reinvestment** - (Cap Ex - Depreciation + Change in Working Capital)	**Reinvestment from Equity** - (Cap Ex - Depreciation + Change in Working Capital) (1 - Debt Ratio)
- Cap Ex		
- Change in WC		
FCFE before debt cash flow	***FCFE before debt cash flow***	
+ New Debt Issued	**Net CF from Debt** + (New Debt Issued - Debt Repaid)	
- Debt Repaid		
FCFE	***FCFE***	***FCFE***

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.

  Net Income

  - (1- Debt Ratio) (Capital Expenditures - Depreciation)

  - (1- Debt Ratio) Working Capital Needs

  = Free Cash flow to Equity

  Debt Ratio = Debt/Capital Ratio (either an actual or a target)

Disney's FCFE and Cash Returned: 2008 – 2012

	2012	2011	2010	2009	2008	Aggregate
Net Income	$6,136	$5,682	$4,807	$3,963	$3,307	$23,895
- (Cap. Exp - Depr)	$604	$1,797	$1,718	$397	$122	$4,638
- ∂ Working Capital	($133)	$940	$950	$308	($109)	$1,956
Free CF to Equity (pre-debt)	$5,665	$2,945	$2,139	$3,258	$3,294	$17,301
+ Net CF from Debt	$1,881	$4,246	$2,743	$1,190	($235)	$9,825
= Free CF to Equity (actual debt)	$7,546	$7,191	$4,882	$4,448	$3,059	$27,126
Free CF to Equity (target debt ratio)	$5,720	$3,262	$2,448	$3,340	$3,296	$18,065
Dividends	$1,324	$1,076	$756	$653	$648	$4,457
Dividends + Buybacks	$5,411	$4,091	$5,749	$3,322	$1,296	$19,869

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).

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

FCFE = Net Income - (Cap ex - Depr) – Change in non-cash WC – Debt CF

= $ 2,176 - (494 - 480) - $ 35 - 0 = $ 2,127 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?

FCFE for a Bank?

- We redefine reinvestment as investment in regulatory capital.

$$FCFE_{Bank} = \text{Net Income} - \text{Increase in Regulatory Capital (Book Equity)}$$

- 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 and expects to generate $ 150 million in net income:

$$FCFE = \$150 \text{ million} - (11{,}000\text{-}10{,}000)^* (.075) = \$75 \text{ million}$$

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 €