

The Objective in Corporate Finance

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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

Why do we need an objective?

- An objective specifies what a decision maker is trying to accomplish and by so doing, provides measures that can be used to choose between alternatives.
- Why do we need an objective?
 - If an objective is not chosen, there is no systematic way to make the decisions that every business will be confronted with at some point in time.
 - A theory developed around multiple objectives of equal weight will create quandaries when it comes to making decisions.
 - The costs of choosing the wrong objective can be significant.

Characteristics of a Good Objective Function

- It is *clear and unambiguous*
- It comes with a *clear and timely measure* that can be used to evaluate the success or failure of decisions.
- It *does not create costs for other entities or groups* that erase firm-specific benefits and leave society worse off overall. As an example, assume that a tobacco company defines its objective to be revenue growth.

The Objective in Decision Making

- In traditional corporate finance, the objective in decision making is to maximize the value of the firm.
- A narrower objective is to maximize stockholder wealth. When the stock is traded and markets are viewed to be efficient, the objective is to maximize the stock price.
- All other goals of the firm are intermediate ones leading to firm value maximization, or operate as constraints on firm value maximization.

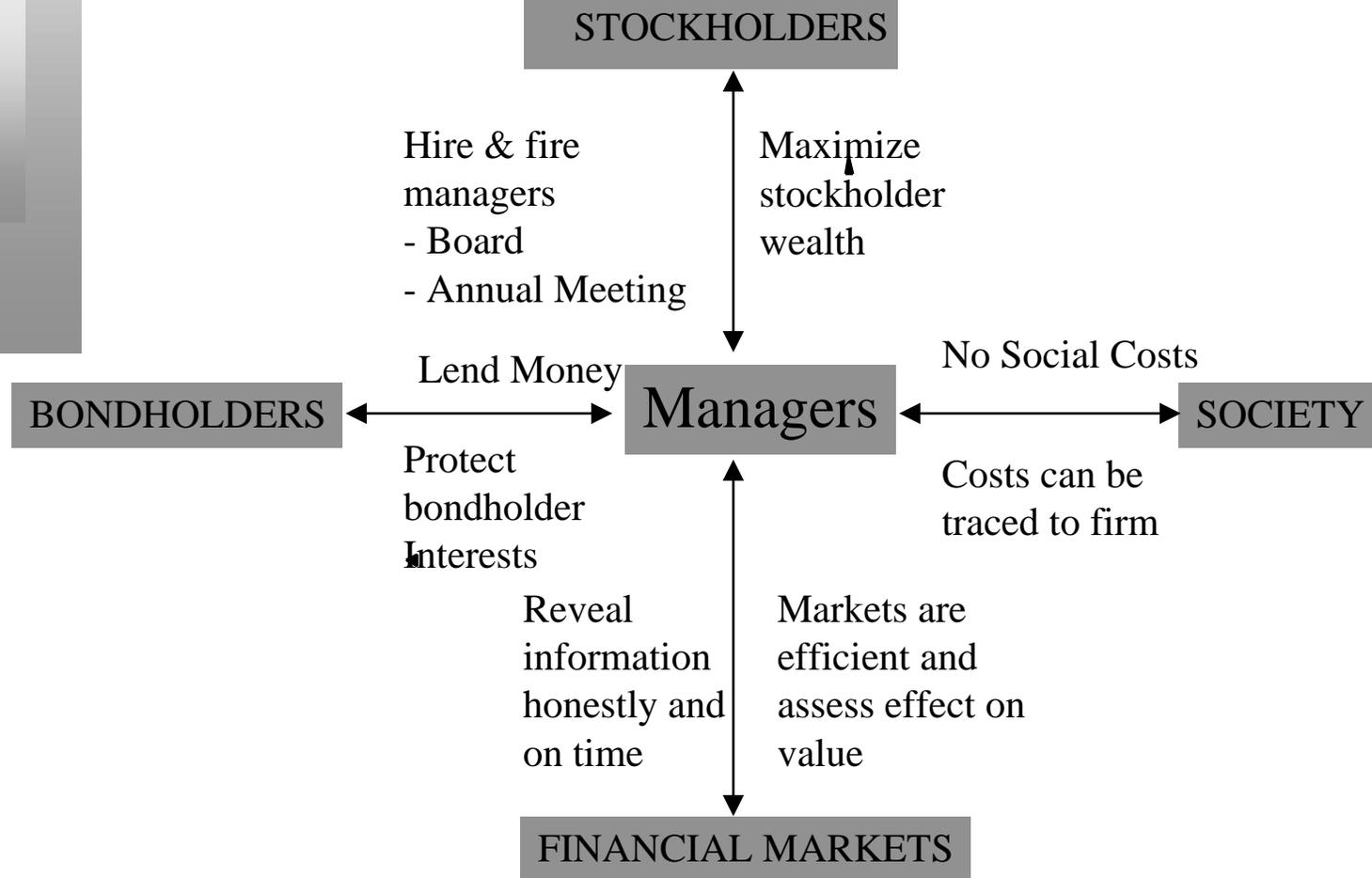
Why traditional corporate financial theory often focuses on maximizing stock prices as opposed to firm value

- Stock price is easily observable and constantly updated (unlike other measures of performance, which may not be as easily observable, and certainly not updated as frequently).
- If investors are rational (are they?), stock prices reflect the wisdom of decisions, short term and long term, instantaneously.
- The stock price is a real measure of stockholder wealth, since stockholders *can sell their stock and receive the price now*.

Maximize stock prices as the only objective function

- For stock price maximization to be the only objective in decision making, we have to assume that
 - The decision makers (managers) are responsive to the owners (stockholders) of the firm
 - Stockholder wealth is not being increased at the expense of bondholders and lenders to the firm; only then is stockholder wealth maximization consistent with firm value maximization.
 - Markets are efficient; only then will stock prices reflect stockholder wealth.
 - There are no significant social costs; only then will firms maximizing value be consistent with the welfare of all of society.

The Classical Objective Function



Another Way of Presenting this is...

Why Stock Price Maximization Works

Stockholders hire managers to run their firms for them

Because stockholders have absolute power to hire and fire managers

Managers set aside their interests and maximize stock prices

Because markets are efficient

Stockholder wealth is maximized

Because lenders are fully protected from stockholder actions

Firm Value is maximized

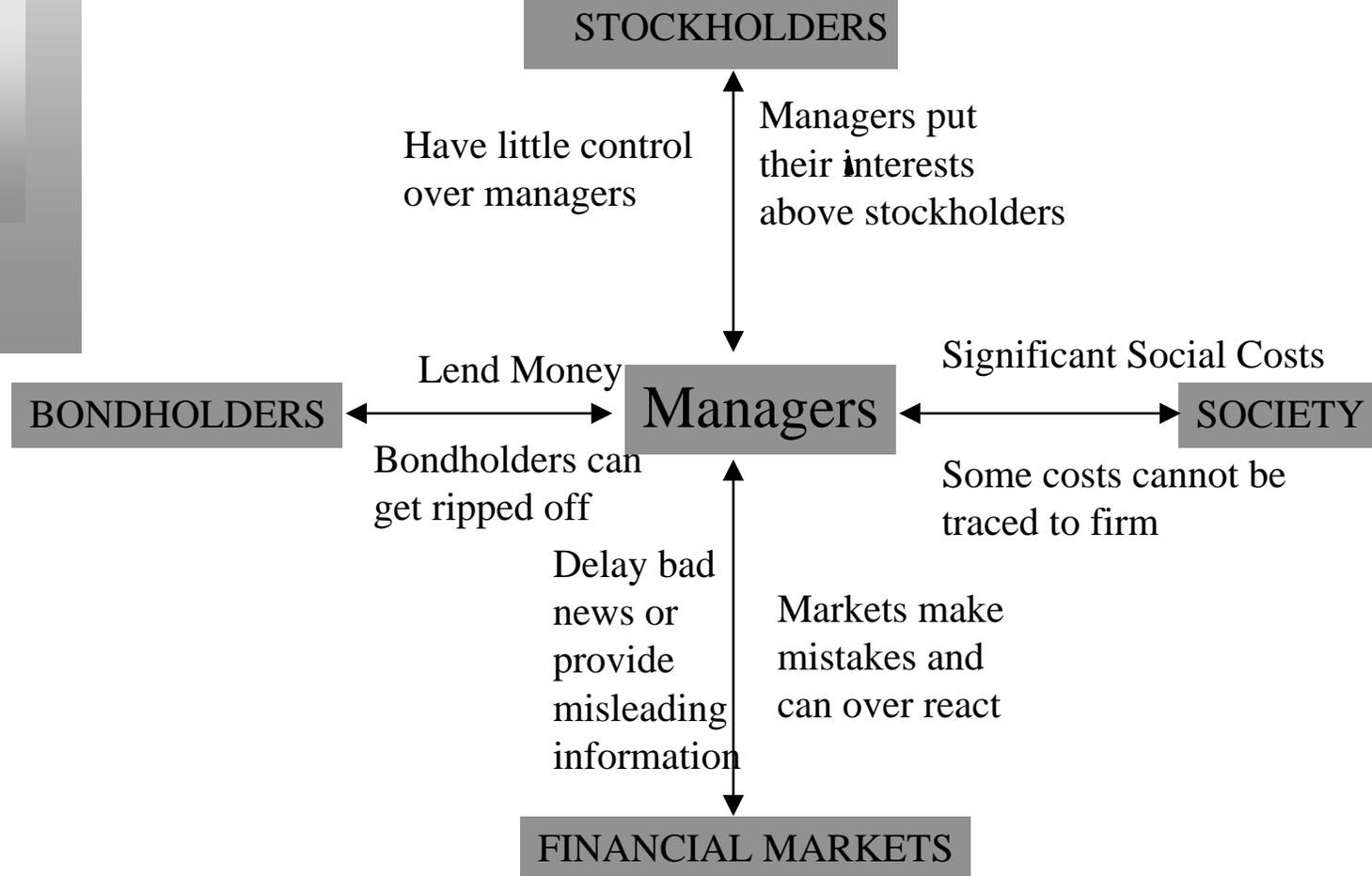
Because there are no costs created for society

Societal wealth is maximized

The Agency Cost Problem

- The interests of managers, stockholders, bondholders and society can diverge. What is good for one group may not necessarily be for another.
 - Managers may have other interests (job security, perks, compensation) that they put over stockholder wealth maximization.
 - Actions that make stockholders better off (increasing dividends, investing in risky projects) may make bondholders worse off.
 - Actions that increase stock price may not necessarily increase stockholder wealth, if markets are not efficient or information is imperfect.
 - Actions that make firms better off may create such large social costs that they make society worse off.
- Agency costs refer to the conflicts of interest that arise between all of these different groups.

What can go wrong?



I. Stockholder Interests vs. Management Interests

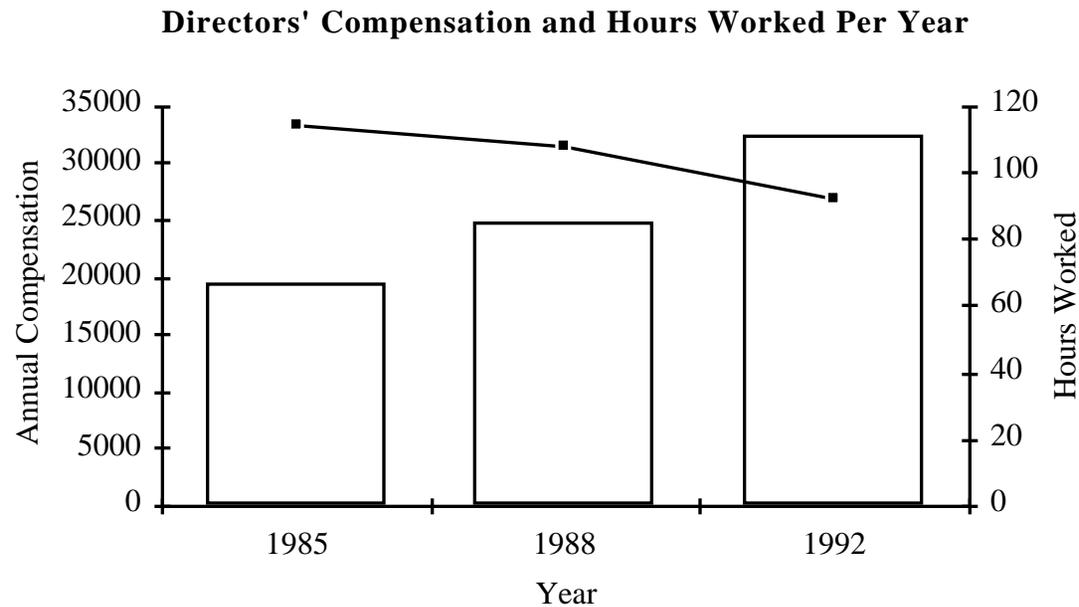
- **Theory:** The stockholders have significant control over management. The mechanisms for disciplining management are the annual meeting and the board of directors.
- **Practice:** Neither mechanism is as effective in disciplining management as theory posits.

The Annual Meeting as a disciplinary venue

- The power of stockholders to act at annual meetings is diluted by three factors
 - Most small stockholders do not go to meetings because the cost of going to the meeting exceeds the value of their holdings.
 - Incumbent management starts off with a clear advantage when it comes to the exercising of proxies. Proxies that are not voted becomes votes for incumbent management.
 - For large stockholders, the path of least resistance, when confronted by managers that they do not like, is to vote with their feet.

Board of Directors as a disciplinary mechanism

- Directors, for the most part, are well compensated and underworked



The CEO hand-picks most directors..

- The 1992 survey by Korn/Ferry revealed that 74% of companies relied on recommendations from the CEO to come up with new directors; Only 16% used an outside search firm.
- Directors often hold only token stakes in their companies. The Korn/Ferry survey found that 5% of all directors in 1992 owned less than five shares in their firms.
- Many directors are themselves CEOs of other firms.

Directors lack the expertise to ask the necessary tough questions..

- The CEO sets the agenda, chairs the meeting and controls the information.
- The search for consensus overwhelms any attempts at confrontation.

The Best Boards ...

THE BEST BOARDS OF DIRECTORS												
RANK	OVERALL SCORE	SURVEY SCORE	ANALYSIS SCORE	DETAILS	BOARD PERFORMANCE POLL				GOVERNANCE GUIDELINE ANALYSIS			
					SHAREHOLDER ACCOUNTABILITY	BOARD QUALITY	BOARD INDEPENDENCE	CORPORATE PERFORMANCE	SHAREHOLDER ACCOUNTABILITY	BOARD QUALITY	BOARD INDEPENDENCE	
1.	CAMPBELL SOUP	87.1	43.1	44.0	Board involvement in recent CEO change rewrites the book on how to do it	9.7	9.0	9.1	9.2	9.2	6.0	10.0
2.	GENERAL ELECTRIC	74.7	45.7	29.0	Won most votes in poll for best board, outside directors own lots of GE stock	8.6	8.6	6.8	9.1	6.0	7.6	4.8
3.	COMPAQ COMPUTER	72.8	28.3	44.5	Model board with nonexecutive chair has delivered big results for investors	9.6	9.2	8.8	10.0	9.2	8.4	9.0
4.	MICROSOFT	69.1	36.6	32.5	Small board wins praise from investors who don't worry about CEO succession	8.0	8.3	7.0	9.2	7.2	6.0	6.4
5.	IBM	68.0	30.5	37.5	Turnaround by board-recruited CEO keeps major shareholders happy	8.5	8.1	7.4	7.8	9.2	6.8	8.0
6.	CHRYSLER	67.8	27.3	40.5	Leader in many governance practices, though many directors on too many boards	9.0	8.7	8.2	8.5	10.0	3.6	9.4
7.	GENERAL MOTORS	67.2	26.2	41.0	Among first to publish guidelines, only weakness: overextended directors	7.0	7.2	6.7	5.7	10.0	2.8	10.0
8.	INTEL	67.1	27.5	32.0	Board gains high marks from investors; directors own lots of stock	9.1	8.4	6.4	9.3	6.4	7.6	8.8
9.	COLGATE PALMOLIVE	66.9	26.4	40.5	All directors own significant stock, only one insider on board: the CEO	8.5	9.3	9.0	9.3	8.0	8.4	8.0
10.	TEXAS INSTRUMENTS	64.9	26.4	38.5	Pays half of retainer in stock, outsiders average more than \$400K of stock	9.5	9.0	8.8	8.8	8.0	6.8	8.0

And the Worst Boards are ..

THE WORST BOARDS OF DIRECTORS												
BW RANK	OVERALL SCORE	SURVEY SCORE	ANALYSIS SCORE	DETAILS	BOARD PERFORMANCE POLL				GOVERNANCE GUIDELINE ANALYSIS			
					SHAREHOLDER ACCOUNTABILITY	BOARD QUALITY	BOARD INDEPENDENCE	CORPORATE PERFORMANCE	SHAREHOLDER ACCOUNTABILITY	BOARD QUALITY	BOARD INDEPENDENCE	
1.	DISNEY	10.3	1.8	8.5	Investors decry board for conflicts; many directors own little if any stock	3.3	4.3	2.0	5.8	-0.4	2.8	2.2
2.	AT&T	10.9	-16.6	27.5	Investors scorn board for failing to control succession, not ousting CEO	3.0	4.2	3.5	2.8	2.0	5.2	7.4
3.	K.J. HEINZ	15.4	-1.1	16.5	Longtime CEO dominates insider-filled board; resists investor calls for change	2.8	3.7	2.0	4.7	4.4	6.0	1.4
4.	ARCHER DANIELS MIDLAND	16.8	-12.2	29.0	Board changes fail to satisfy investors, who say directors still lack independence	2.9	2.1	1.3	3.5	5.6	7.6	5.0
5.	DOW JONES	21.1	1.6	19.5	Investors disenchanted with performance; weakest attendance record of any board	2.6	4.6	2.8	2.6	6.0	0.0	5.8
6.	DILLARD'S	22.0	5.0	17.0	Board loaded with insiders; lacks an outsider with retail expertise or CEO	2.0	3.0	2.0	3.5	6.4	3.2	2.0
7.	ROLLINS INTERNATIONAL	22.7	1.7	21.0	Board dominated by family members and insiders; lacks nominating panel	1.0	1.0	0.0	2.0	4.0	7.6	4.4
8.	OCCIDENTAL PETROLEUM	24.0	-1.5	25.5	Investors outraged over \$95 million payout to CEO by cozy, aging board	1.3	2.0	1.1	2.0	2.8	6.0	5.8
9.	OGDEN	27.2	4.2	23.0	Board has three consultants and a lawyer who do business with company	2.0	1.5	2.0	2.5	2.0	8.4	4.0
10.	MAXAM	28.3	4.3	24.5	Tiny board with little business experience dominated by CEO	1.5	2.0	1.0	3.5	3.6	2.0	6.0

Business Week's Worst and the Best: Disney vs. Campbell Soup

<i>BEST PRACTICES</i>	<i>CAMPBELL SOUP</i>	<i>DISNEY</i>
Majority of outside directors	Only one insider among 15 directors	7 of 17 members are insiders
Bans insiders on nominating committee	Yes	No: CEO is chairman of panel
Bans former execs from board	Yes	No
Mandatory retirement age	70, with none over 64	None
Outside directors meet w/o CEO	Annually	Never
Appointment of 'lead director'	Yes	No
Governance committee	Yes	No
Self-evaluation of effectiveness	Every two years	None
Director pensions	None	Yes
Share-ownership requirement	3,000 shares	None

Who's on Board? Boeing and The Home Depot

	<i>Boeing</i>	<i>Home Depot</i>
Board Size	15 directors	11 directors
Board Independence	High - 1 insider - No other connections	Low - 4 insiders - Business connections
Accountability to Stockholders	All but one own more than \$ 10,000 of stock	All own more than \$10,000 of stock
Quality of Directors	Tough to gauge	Tough to gauge

⌚ Application Test: Who's on board?

- Look at the board of directors for your firm. Analyze
 - How many of the directors are inside directors (Employees of the firm, ex-managers)?
 - Is there any information on how independent the directors in the firm are from the managers?

So what next? When the cat is idle, the mice will play

■ No stockholder approval needed..... Stockholder Approval needed

When managers do not fear stockholders, they will often put their interests over stockholder interests

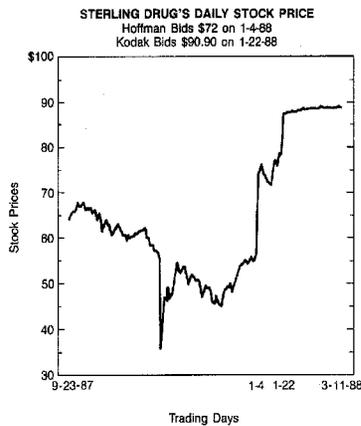
- **Greenmail:** The (managers of) target of a hostile takeover buy out the potential acquirer's existing stake, at a price much greater than the price paid by the raider, in return for the signing of a 'standstill' agreement.
- **Golden Parachutes:** Provisions in employment contracts, that allows for the payment of a lump-sum or cash flows over a period, if managers covered by these contracts lose their jobs in a takeover.
- **Poison Pills:** A security, the rights or cashflows on which are triggered by an outside event, generally a hostile takeover, is called a poison pill.
- **Shark Repellents:** Anti-takeover amendments are also aimed at dissuading hostile takeovers, but differ on one very important count. They require the assent of stockholders to be instituted.
- **Overpaying on takeovers**

Overpaying on takeovers

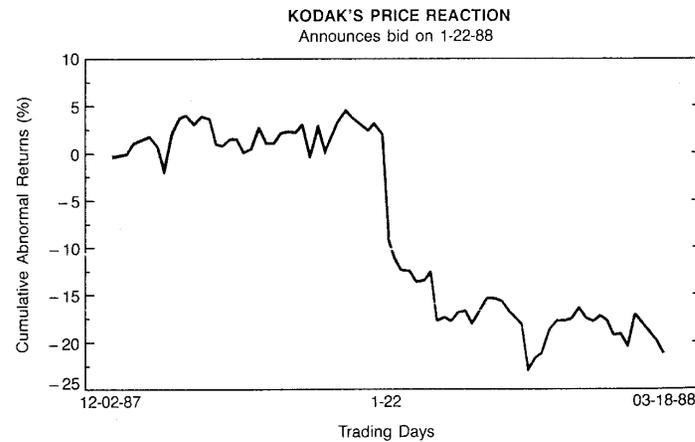
- The quickest and perhaps the most decisive way to impoverish stockholders is to overpay on a takeover.
- The stockholders in acquiring firms do not seem to share the enthusiasm of the managers in these firms. Stock prices of bidding firms decline on the takeover announcements a significant proportion of the time.
- Many mergers do not work, as evidenced by a number of measures.
 - The profitability of merged firms relative to their peer groups, does not increase significantly after mergers.
 - An even more damning indictment is that a large number of mergers are reversed within a few years, which is a clear admission that the acquisitions did not work.

A Case Study: Kodak - Sterling Drugs

■ Eastman Kodak's Great Victory



KODAK'S PRICE REACTION
 Announces bid on 1-22-88



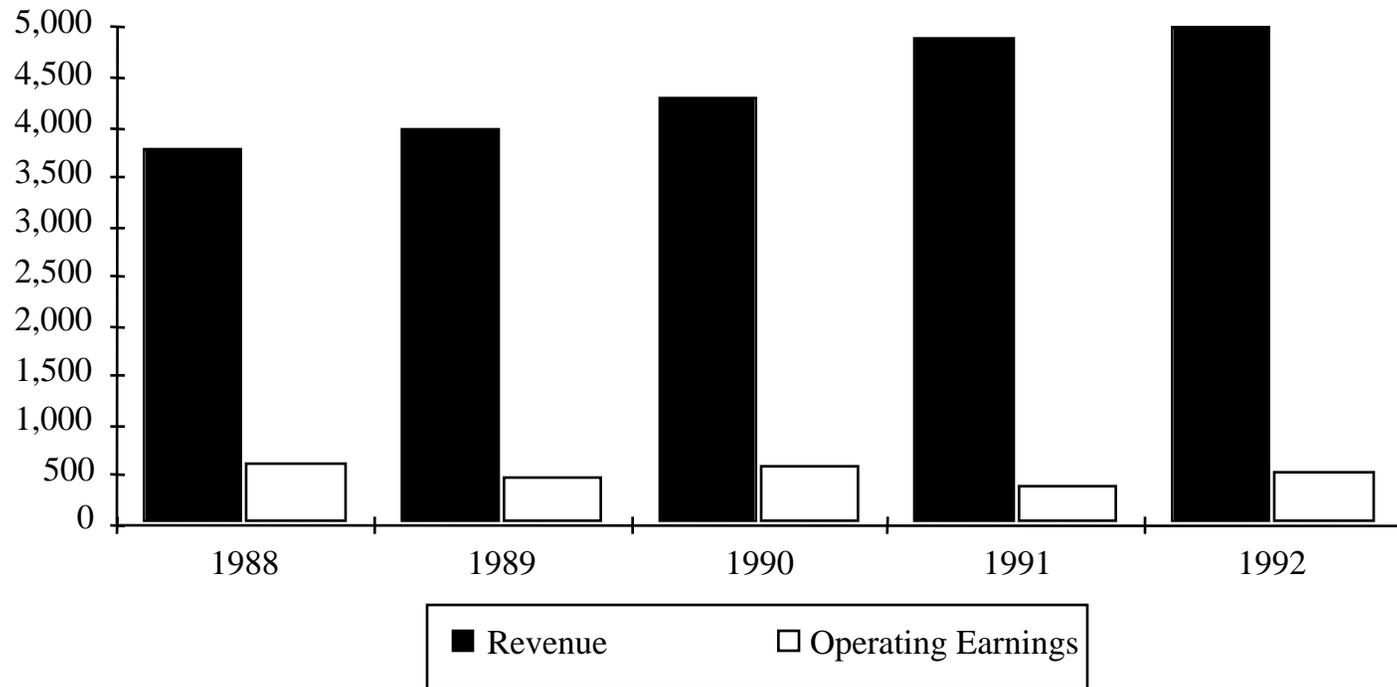
Kodak's market reaction indicates that investors expected no synergies:

Kodak's bid =	\$5.1 billion
Sterling's market value 30 days prior to announcement =	<u>3.0 billion</u>
Premium bid	\$2.1 billion
Decrease in Kodak's market value =	\$2.2 billion

SOURCE: The Alcar Group, Inc.

Earnings and Revenues at Sterling Drugs

Sterling Drug under Eastman Kodak: Where is the synergy?



Kodak Says Drug Unit Is Not for Sale (NYTimes, 8/93)

- Eastman Kodak officials say they have no plans to sell Kodak's Sterling Winthrop drug unit.
- Louis Mattis, Chairman of Sterling Winthrop, dismissed the rumors as “massive speculation, which flies in the face of the stated intent of Kodak that it is committed to be in the health business.”

But did they really mean it?

- Taking a stride out of the drug business, Eastman Kodak said that the Sanofi Group, a French pharmaceutical company, agreed to buy the prescription drug business of Sterling Winthrop for **\$1.68 billion**.
 - Shares of Eastman Kodak rose 75 cents yesterday, closing at \$47.50 on the New York Stock Exchange.
 - Samuel D. Isaly an analyst , said the announcement was “very good for Sanofi and very good for Kodak.”
 - “When the divestitures are complete, Kodak will be entirely focused on imaging,” said George M. C. Fisher, the company's chief executive.
- Smithkline Beecham agreed to buy Eastman Kodak’s Sterling Winthrop Inc. for **\$2.9 billion**.
 - For Kodak, the sale almost completes a restructuring intended to refocus the company on its photography business.

⌚ Application Test: Who owns/runs your firm?

Looking at the top 15 stockholders in your firm, consider the following:

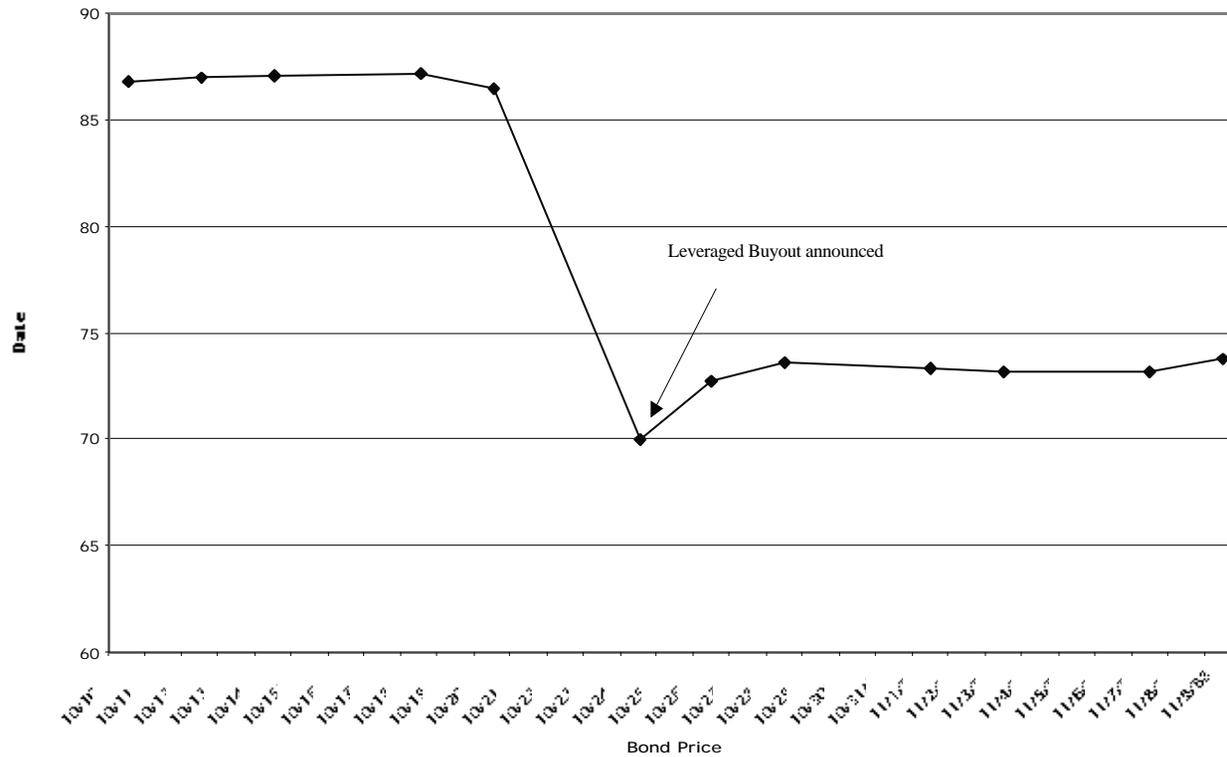
- How many of the top 15 investors are institutional investors?
- How many of the top 15 investors are individual investors?
- Are managers significant stockholders in the firm?

II. Stockholders' objectives vs. Bondholders' objectives

- In theory: there is no conflict of interests between stockholders and bondholders.
- In practice: Stockholders may maximize their wealth at the expense of bondholders.
 - Increasing dividends significantly: When firms pay cash out as dividends, lenders to the firm are hurt and stockholders may be helped. This is because the firm becomes riskier without the cash.
 - Taking riskier projects than those agreed to at the outset: Lenders base interest rates on their perceptions of how risky a firm's investments are. If stockholders then take on riskier investments, lenders will be hurt.
 - Borrowing more on the same assets: If lenders do not protect themselves, a firm can borrow more money and make all existing lenders worse off.

Unprotected Lenders? The Case of Nabisco

Figure 2.4: Nabisco Bond Price



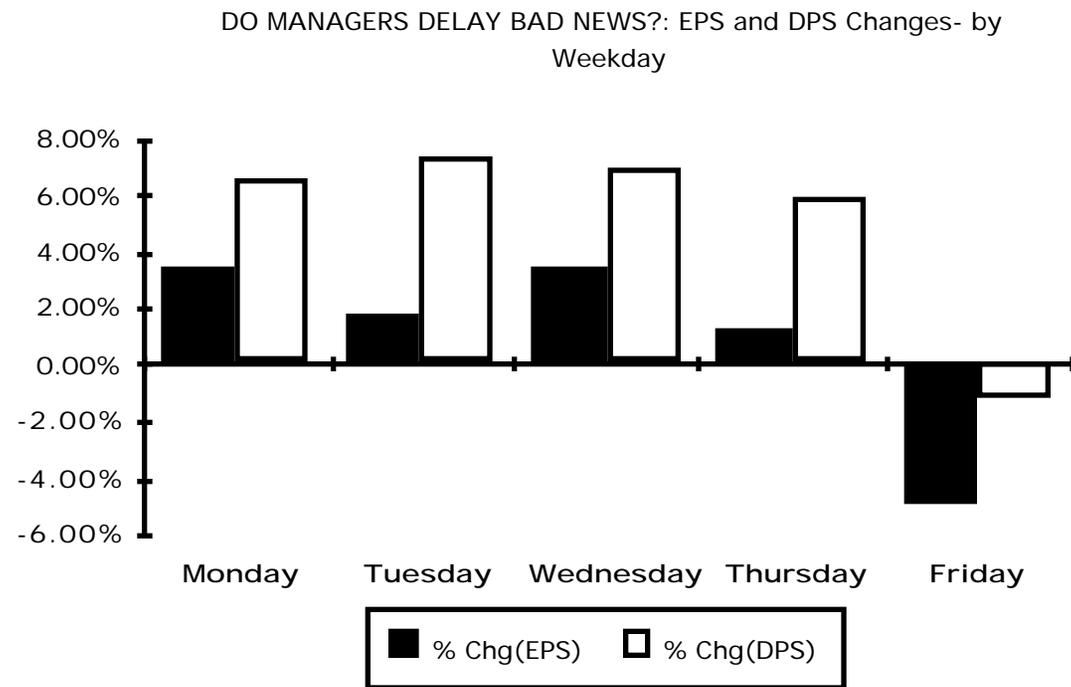
III. Firms and Financial Markets

- **In theory:** Financial markets are efficient. Managers convey information honestly and truthfully to financial markets, and financial markets make reasoned judgments of 'true value'. As a consequence-
 - A company that invests in good long term projects will be rewarded.
 - Short term accounting gimmicks will not lead to increases in market value.
 - Stock price performance is a good measure of management performance.
- **In practice:** There are some holes in the 'Efficient Markets' assumption.

Managers control the release of information to the general public

- There is evidence that
 - they suppress information, generally negative information
 - they delay the releasing of bad news
 - bad earnings reports
 - other news
 - they sometimes reveal fraudulent information

Evidence that managers delay bad news..



Even when information is revealed to financial markets, the market value that is set by demand and supply may contain errors.

- Prices are much more volatile than justified by the underlying fundamentals
 - Eg. Did the true value of equities really decline by 20% on October 19, 1987?
- Financial markets overreact to news, both good and bad
- Financial markets are short-sighted, and do not consider the long-term implications of actions taken by the firm
 - Eg. the focus on next quarter's earnings
- Financial markets are manipulated by insiders; Prices do not have any relationship to value.

Are Markets Short term?

Focusing on market prices will lead companies towards short term decisions at the expense of long term value.

- I agree with the statement
- I do not agree with this statement

Are Markets Short Sighted? Some evidence that they are not..

- There are hundreds of start-up and small firms, with no earnings expected in the near future, that raise money on financial markets
- If the evidence suggests anything, it is that markets do not value current earnings and cashflows enough and value future earnings and cashflows too much.
 - Low PE stocks are underpriced relative to high PE stocks
- The market response to research and development and investment expenditure is generally positive

Market Reaction to Investment Announcements

<i>Type of Announcement</i>	<i>Abnormal Returns on</i>	
	<i>Announcement Day</i>	<i>Announcement Month</i>
Joint Venture Formations	0.399%	1.412%
R&D Expenditures	0.251%	1.456%
Product Strategies	0.440%	-0.35%
Capital Expenditures	0.290%	1.499%
All Announcements	0.355%	0.984%

IV. Firms and Society

- **In theory:** There are no costs associated with the firm that cannot be traced to the firm and charged to it.
- **In practice:** Financial decisions can create social costs and benefits.
 - A social cost or benefit is a cost or benefit that accrues to society as a whole and NOT to the firm making the decision.
 - -environmental costs (pollution, health costs, etc..)
 - Quality of Life' costs (traffic, housing, safety, etc.)
 - Examples of social benefits include:
 - creating employment in areas with high unemployment
 - supporting development in inner cities
 - creating access to goods in areas where such access does not exist

Social Costs and Benefits are difficult to quantify because ..

- they might not be known at the time of the decision (Example: Manville and asbestos)
- they are 'person-specific' (different decision makers weight them differently)
- they can be paralyzing if carried to extremes

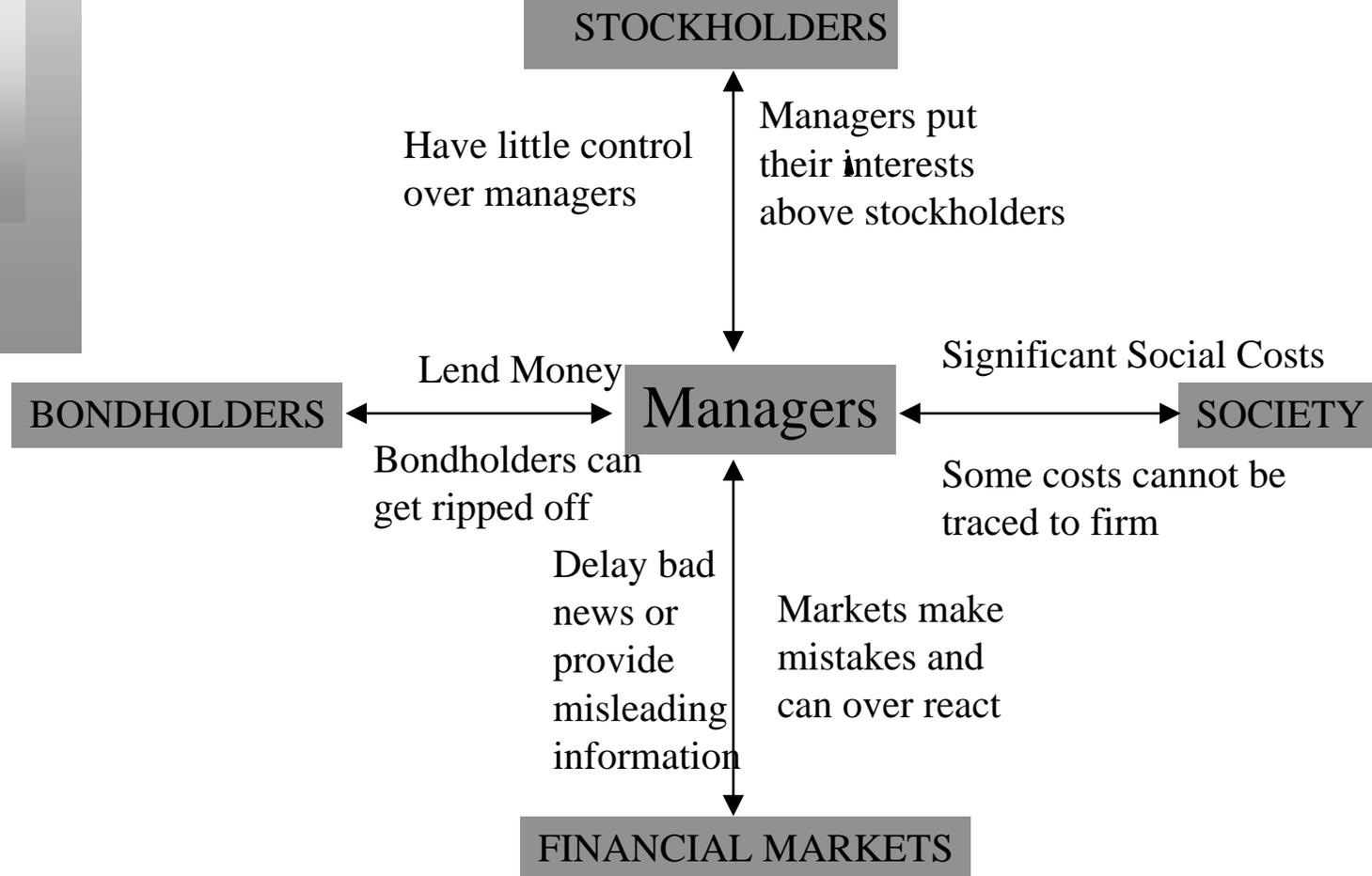
A Hypothetical Example

Assume that you work for The Home Depot and that you have an opportunity to open a store in an inner-city neighborhood. The store is expected to lose about \$100,000 a year, but it will create much-needed employment in the area, and may help revitalize it.

■ Questions:

- Would you open the store?
 - Yes
 - No
- If yes, would you tell your stockholders and let them vote on the issue?
 - Yes
 - No
- If no, how would you respond to a stockholder query on why you were not living up to your social responsibilities?

So this is what can go wrong...



Traditional corporate financial theory breaks down when ...

- The interests/objectives of the decision makers in the firm conflict with the interests of stockholders.
- Bondholders (Lenders) are not protected against expropriation by stockholders.
- Financial markets do not operate efficiently, and stock prices do not reflect the underlying value of the firm.
- Significant social costs can be created as a by-product of stock price maximization.

When traditional corporate financial theory breaks down, the solution is:

- To choose a different mechanism for corporate governance
- To choose a different objective:
- To maximize stock price, but reduce the potential for conflict and breakdown:
 - Making managers (decision makers) and employees into stockholders
 - By providing information honestly and promptly to financial markets

An Alternative Corporate Governance System

- Germany and Japan developed a different mechanism for corporate governance, based upon corporate cross holdings.
 - In Germany, the banks form the core of this system.
 - In Japan, it is the keiretsus
 - Other Asian countries have modeled their system after Japan, with family companies forming the core of the new corporate families
- At their best, the most efficient firms in the group work at bringing the less efficient firms up to par. They provide a corporate welfare system that makes for a more stable corporate structure
- At their worst, the least efficient and poorly run firms in the group pull down the most efficient and best run firms down. The nature of the cross holdings makes it very difficult for outsiders (including investors in these firms) to figure out how well or badly the group is doing.

Choose a Different Objective Function

- Firms can always focus on a different objective function. Examples would include
 - maximizing earnings
 - maximizing revenues
 - maximizing firm size
 - maximizing market share
 - maximizing EVA
- The key thing to remember is that these are intermediate objective functions.
 - To the degree that they are correlated with the long term health and value of the company, they work well.
 - To the degree that they do not, the firm can end up with a disaster

Maximize Stock Price, subject to ..

- The strength of the stock price maximization objective function is its internal self correction mechanism. Excesses on any of the linkages lead, if unregulated, to counter actions which reduce or eliminate these excesses
- In the context of our discussion,
 - managers taking advantage of stockholders has lead to a much more active market for corporate control.
 - stockholders taking advantage of bondholders has lead to bondholders protecting themselves at the time of the issue.
 - firms revealing incorrect or delayed information to markets has lead to markets becoming more “skeptical” and “punitive”
 - firms creating social costs has lead to more regulations, as well as investor and customer backlashes.

The Stockholder Backlash

- Institutional investors such as CalPERS and the Lens Funds have become much more active in monitoring companies that they invest in and demanding changes in the way in which business is done
- Individuals like Michael Price specialize in taking large positions in companies which they feel need to change their ways (Chase, Dow Jones, Readers' Digest) and push for change
- At annual meetings, stockholders have taken to expressing their displeasure with incumbent management by voting against their compensation contracts or their board of directors

The Hostile Acquisition Threat

- The typical target firm in a hostile takeover has
 - a return on equity almost 5% lower than its peer group
 - had a stock that has significantly under performed the peer group over the previous 2 years
 - has managers who hold little or no stock in the firm
- In other words, the best defense against a hostile takeover is to run your firm well and earn good returns for your stockholders
- Conversely, when you do not allow hostile takeovers, this is the firm that you are most likely protecting (and not a well run or well managed firm)

The Bondholders' Defense Against Stockholder Excesses

- More restrictive covenants on investment, financing and dividend policy have been incorporated into both private lending agreements and into bond issues, to prevent future “Nabiscos”.
- New types of bonds have been created to explicitly protect bondholders against sudden increases in leverage or other actions that increase lender risk substantially. Two examples of such bonds
 - Puttable Bonds, where the bondholder can put the bond back to the firm and get face value, if the firm takes actions that hurt bondholders
 - Ratings Sensitive Notes, where the interest rate on the notes adjusts to that appropriate for the rating of the firm
- More hybrid bonds (with an equity component, usually in the form of a conversion option or warrant) have been used. This allows bondholders to become equity investors, if they feel it is in their best interests to do so.

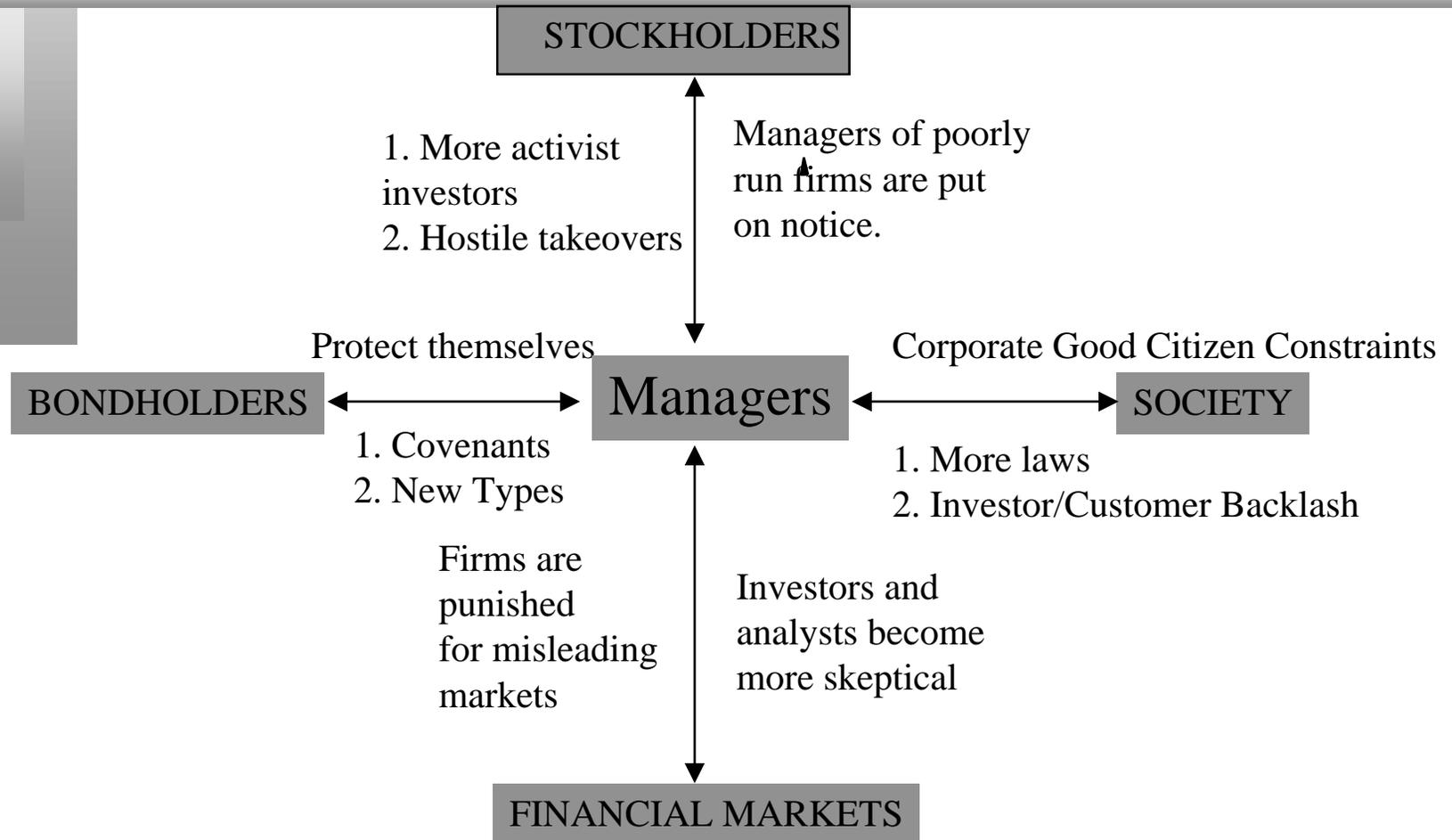
The Financial Market Response

- While analysts are more likely still to issue buy rather than sell recommendations, the payoff to uncovering negative news about a firm is large enough that such news is eagerly sought and quickly revealed (at least to a limited group of investors)
- As information sources to the average investor proliferate, it is becoming much more difficult for firms to control when and how information gets out to markets.
- As option trading has become more common, it has become much easier to trade on bad news. In the process, it is revealed to the rest of the market (See Scholastic)
- When firms mislead markets, the punishment is not only quick but it is savage.

The Societal Response

- If firms consistently flout societal norms and create large social costs, the governmental response (especially in a democracy) is for laws and regulations to be passed against such behavior.
 - e.g.: Laws against using underage labor in the United States
- For firms catering to a more socially conscious clientele, the failure to meet societal norms (even if it is legal) can lead to loss of business and value
 - e.g. Specialty retailers being criticized for using under age labor in other countries (where it might be legal)
- Finally, investors may choose not to invest in stocks of firms that they view as social outcasts.
 - e.g.. Tobacco firms and the growth of “socially responsible” funds (Calvert..)

The Counter Reaction



So what do you think?

- At this point in time, the following statement best describes where I stand in terms of the right objective function for decision making in a business
 - ❑ Maximize stock price or stockholder wealth, with no constraints
 - ❑ Maximize stock price or stockholder wealth, with constraints on being a good social citizen.
 - ❑ Maximize profits or profitability
 - ❑ Maximize market share
 - ❑ Maximize Revenues
 - ❑ Maximize social good
 - ❑ None of the above

The Modified Objective Function

- For publicly traded firms in reasonably efficient markets, where bondholders (lenders) are protected:
 - Maximize Stock Price: This will also maximize firm value
- For publicly traded firms in inefficient markets, where bondholders are protected:
 - Maximize stockholder wealth: This will also maximize firm value, but might not maximize the stock price
- For publicly traded firms in inefficient markets, where bondholders are not fully protected
 - Maximize firm value, though stockholder wealth and stock prices may not be maximized at the same point.
- For private firms, maximize stockholder wealth (if lenders are protected) or firm value (if they are not)