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Ethics, Fairness, Efficiency, and Financial Markets



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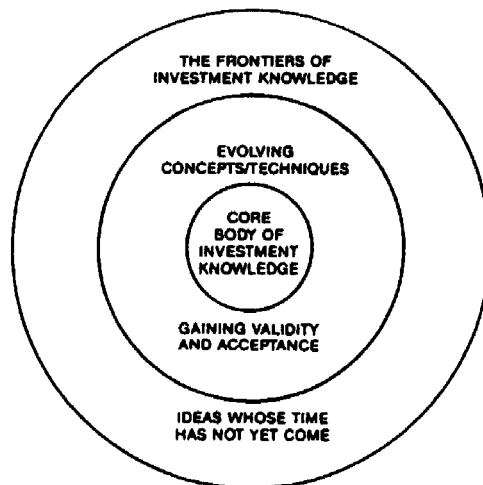
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The mission of the Research Foundation is to identify, fund, and publish research material that:

- expands the body of relevant and useful knowledge available to practitioners;
- assists practitioners in understanding and applying this knowledge; and
- enhances the investment management community's effectiveness in serving clients.



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Foreword

Understanding the basis for financial market regulation in the United States is impossible without an appreciation of the elements of the debate that shaped those regulations. They are the outcome of a continuous tug-of-war between efficiency and fairness, in which relative strength continues to shift from side to side even today.

In this monograph, the main interest of authors Hersh Shefrin and Meir Statman is not so much the extent to which financial markets are fair but the role that *perceptions* of fairness have played in shaping market regulations. The shaping process is not static; debates continue today about volatility, leverage, insider trading, and other issues. Although financial economics has contributed many new insights about the way financial markets operate—shedding light on the achievement of well-functioning markets—its overly narrow definition prevents it from addressing some key regulatory issues. By and large, while academic finance is concerned with the intersection between public policy and financial markets, the public policy arena admits norms that are outside the paradigm used in academic finance. The standard academic argument for dismissing the concerns falling outside its paradigm—namely, that “smart money” and arbitrage will render these concerns irrelevant—cannot be used in the public policy arena.

Two elements that influence financial markets but lie outside the standard framework of academic finance are cognitive errors and self-control. These elements play a principal role in this study; they are central to understanding the concepts of fairness that underlie our financial market regulation. The notion of fairness used in academic finance centers on the principle of consumer sovereignty or autonomy. The authors use the ideas of cognitive errors and self-control to broaden the definition of fairness. They seek to provide a framework within which to bring concerns of fairness, which fall outside the paradigm of academic finance, together with concerns of efficiency, about which academic finance has much to offer.

The Research Foundation is pleased to bring this stimulating and provocative discussion before practitioners. It also is grateful to the authors for the history they depict, the evolution they describe, and the base they build for assessing present regulatory practice.

James R. Vertin, CFA

Preface

When laymen read newspaper accounts of insider trading, they think about *ethics*. When typical financial economists read about insider trading, they think about *efficiency*. It is as if the two groups speak different languages. The differences in perspectives usually translate into differences in prescriptions for public policy.

What many financial economists seem to overlook is that the regulation of financial markets is shaped by considerations that go beyond efficiency or self-interest. The regulation of financial markets is also affected by concern for ethics or fairness. In this study, we seek to bridge the gap between the two perspectives as they meet in the arena of public policy. The regulation of financial markets in the United States cannot be understood without an appreciation of the continuous debate that has shaped it. Regulations are the outcome of a continuous tug-of-war between efficiency and fairness in which relative strength continually shifts from side to side.

Our focus in this study is positive; we describe the world of regulations as it is. Of course, not everyone agrees that the world should be as it is. Some people hold the normative view that too much emphasis is placed on fairness to the detriment of efficiency, some hold the normative view that too little emphasis is placed on fairness, and some hold the normative view that too much emphasis is placed on some aspects of fairness at the expense of other aspects of fairness. We seek to highlight the contest among these views and illuminate the process by which a balance between fairness and efficiency is struck by the citizenry through the legislative process. The shaping of regulations is hardly a matter of the past alone. Serious debate is taking place today about stock market volatility, junk bonds, and insider trading, and such debate is certain to continue.

We are grateful to many for good questions and stimulating discussions while this monograph was being prepared. Special thanks go to Peter Bernstein, Dean LeBaron, Charles A. D'Ambrosio, Larry Siegel, and Larry Speidell.

Hersh Shefrin
Meir Statman

1. Fairness and Efficiency

Financial markets unite entrepreneurs seeking funds for new ventures and investors seeking a store of value for savings. Investors initially allocate capital to entrepreneurs through a trading system in which securities issued by entrepreneurs are priced as they are sold to investors. Securities continue to be priced as one investor sells them to another.

Financial markets are regulated by rules requiring companies to disclose information about their assets and earnings, rules allowing state regulators to prohibit sales of securities that fail merit tests, and rules setting minimum levels of margins on purchases of securities.

What is the goal of such regulation? Regulation of financial markets is an attempt to enhance both *efficiency* and *fairness*. Enhancement of fairness increases efficiency in some cases, but in other cases, a conflict exists. We seek to understand the nature of each set of financial market regulations by analyzing the fairness and efficiency goals they serve and the trade-offs they entail.

Promotion of efficiency is generally accepted as a goal of the financial market and its regulation, but does fairness matter? Yes and no. For example, the New York Stock Exchange (NYSE) assembled a panel on market volatility and investor confidence. As an aid to its work, the panel surveyed individual investors and market professionals. A prominent finding of the surveys is that individual investors are concerned about whether the markets are operated fairly and honestly (*Market Volatility and Investor Confidence* 1990, p. 12).

Concern about fairness might be common among investors, but economists tend to set aside considerations of fairness in discussion of public interest and public policy. Watts (1980, p. 3) is typical: "I shall define public interest in the manner long used by economists and some politicians, namely, as Pareto optimality or economic efficiency."

The role of fairness in the formulation of public policy cannot be so easily dismissed, however. As Baumol (1982) notes,

Persons who design public policy are, typically, at least as concerned with issues of equity as with allocative efficiency. The economist's influence is therefore impeded by his inability to deal with issues of fairness in applied problems. (p. 639)

Concern for fairness is sometimes set aside in the belief that, although people pay lip service to fairness, they are not willing to pay money for it. Studies demonstrate, however, that people are willing to forgo money to gain fairness. Consider the ultimatum game, for example. The experimenter provides \$1,000 to be divided between you and another player. The other player begins the game by making an offer about the division of the \$1,000, such as keeping \$700 and giving you \$300. The rules specify you have a right to accept or refuse the offer, but you cannot counteroffer. You and the other player get to divide and keep your shares of the \$1,000 as you agree. If you fail to agree, however, then the experimenter takes the entire \$1,000 and you receive nothing.

How would you behave if the other player offered to take \$850 and give you \$150? Does the idea of a \$850/\$150 split seem so unfair that you would forgo the \$150 offered? In experiments with the ultimatum game, people exhibited such a strong preference for an equal split of the \$1,000 that they were willing to forgo money rather than agree to a split they considered inequitable.

Kahneman, Knetsch, and Thaler (1986) conducted surveys that extend our understanding of the perception of fairness. One case involved a company for which production costs have fallen, perhaps because a change in the exchange rate has lowered the price of imported goods. The question was: Does fairness imply the company should share the benefits of lower costs with its customers? The authors found that most people believe the company is entitled to keep the entire gain because no losses have been imposed on its customers. In another case, a snowstorm has increased the demand for snow shovels, thereby providing sellers of shovels with an opportunity to raise prices. In this situation, most people believe it is unfair for the sellers to raise the price of shovels in their inventories. Presumably, people believe fairness does not entitle a company to higher profits when they bring losses to its customers. Quantity rationing is regarded as fairer than price rationing in this situation.

Baruch Lev (1988) presented a framework explaining disclosure regulations as those influenced by considerations of fairness. Lev defines fairness as entitlement to equality of opportunity, whereby all parties in a fair market are entitled to equal access to information relevant for asset valuation. Lev rejects notions of fairness that extend entitlements beyond equal access to information. As he writes,

The equity-orientation of disclosure regulation advanced here differs markedly from the traditional, moralistic concepts of equity in accounting, which are generally phrased in terms of maintaining fairness, eliminating fraud, and protecting the uninformed investors against exploitation by insiders. In contrast to such vague, anachronistic, and unattractive notions, the equity concept advanced here is state of the art and operational, being linked directly to recent theoretical developments in economics and finance. (p. 1)

Lev's concept of equity may well be state of the art and operational, and it may also be consistent with disclosure regulations. His concept of equity, however, cannot provide a framework for merit regulations, suitability regulations, or margin regulations. We suggest that a framework consistent with the wide range of regulations in financial markets requires broader notions of fairness than Lev's, including notions that Lev brands anachronistic and unattractive.

Fairness and efficiency are terms that tend to be loosely used. Therefore, we have classified the various notions of fairness and efficiency. We begin with efficiency.

Efficiency

We distinguish Pareto efficiency from informational efficiency. The Pareto notion of efficiency takes as given the subjective beliefs of all people. Also given are the amounts of available resources and technology, which define feasibility. An allocation is Pareto efficient if no other *feasible* allocation exists such that at least one person's situation can be improved without harming another person. Pareto efficiency assures maximization of production by precluding wasteful use of resources. It also assures that the riskiness of investment projects undertaken matches the attitudes of investors toward risk; that is, all mutually beneficial transfers of risk take place, and investors are subjectively content with the riskiness of their portfolios. Pareto efficiency does not imply, however, that investors never make mistakes. Investors might take on more risk than is objectively appropriate, they might overreact to information, and they might cause security prices to be excessively volatile.

We turn now to informational efficiency. If all investors hold objective beliefs and information is common, then competitive prices accurately reflect that information. When prices accurately reflect information, prices are considered informationally efficient. Note that prices can be informationally efficient even when not all investors have objective beliefs. If subjective errors contain no systematic component (so that investor errors aggregate to zero) and the

covariance between wealth and error is zero (so that no investor exerts a disproportionate effect on the market), then competitive prices will be informationally efficient.

Informationally efficient prices provide proper guidance to entrepreneurs, managers, and investors. Entrepreneurs and managers who observe correct prices have an opportunity to avoid projects with negative expected net present values. Investors who observe correct prices can design and hold optimal portfolios. Informational efficiency, however, does not ensure that the guidance offered by correct prices will be followed. Entrepreneurs and managers might select projects with negative expected net present values, and investors might choose undiversified portfolios.

Common information is essential to the fundamental theorems of welfare economics. Asymmetric information is a well-known destroyer of efficiency. Moral hazard can interfere with efficiency by causing the market to collapse.¹ The preceding notions of efficiency are termed *first best*, because feasibility is defined in terms of resource and technology availability. The introduction of additional constraints to cope with information asymmetries leads to *second-best* efficiency notions.²

Fairness

A claim to fairness is a claim to entitlements. Seven classes of fairness are identified by the entitlements they provide:

- Freedom from coercion
- Freedom from misrepresentation
- Equal information
- Equal processing power
- Freedom from impulse
- Correct (efficient) prices
- Equal bargaining power

In the category *freedom from coercion*, fairness comes in two forms, a positive form and a negative one. The positive form entitles people to the right

¹ Moral hazard describes a situation in which two parties are in a contractual relationship and one exploits his possession of confidential information at the expense of the other.

² Economists use the term “second best” to describe situations that are prevented from being fully Pareto efficient by the presence of particular nonresource constraints. Examples of such constraints include noncompetitive pricing, market failures resulting from externalities, and incentive compatibility constraints in the face of asymmetric information.

not to be coerced into a transaction. The negative form entitles people to the right not to be prevented from engaging in a transaction. Thus a transaction is fair if all people enter into it voluntarily. Each person is free to engage in a search for information but not to compel another to reveal information. Moreover, no person is to rely on information received from another as truthful. For example, bargainers might be allowed to say, "This is my last offer," even when that is not true.

Fairness in *freedom from misrepresentation* entitles all people to rely on information voluntarily disclosed by others as truthful. For example, laws pertaining to contracts provide that a person has a valid claim against another if information provided was willfully untrue. A claim is not valid, however, because a product or service simply did not meet the buyer's expectations. Fairness in freedom from misrepresentation does not compel people to reveal information.

Fairness regarding *equal information* entitles all people to equal access to a particular set of information. Therefore, a person who has the set of information is compelled to disclose it to the others. For example, some states require sellers of houses to disclose to buyers information about defects in the houses. Similarly, people with inside information on securities are prohibited from using it in trades.

Fairness in *equal information processing* entitles all people not only to equal access to a common set of information but also to a "competency floor" of information processing skills. This class of fairness recognizes that some people commit cognitive errors as they process information. For example, although information about state lotteries is available to the public, some people are unable to estimate correctly their odds of winning. Protection from deficiencies in information processing can take the form of compulsory disclosure in a "processed" form, such as disclosure of interest rates in the annual percentage rate form prescribed by the Truth-in-Lending Act, or prohibition of certain transactions, such as lotteries, in which people might be at an information processing disadvantage.

Fairness in *freedom from impulse* entitles all people to protection from imperfect self-control. Lack of self-control might cause a discrepancy between what people claim they should do and what they actually do. Overeating, drug abuse, and overspending are examples of self-control problems. Protection from such problems is sometimes provided through outright prohibition, such as outlawing the use of drugs, or through remedial mechanisms, such as the Truth-in-Lending Act, which requires sellers to provide buyers with a three-day "cooling-off" period during which they can cancel an impulsive transaction.

Provision of rights to equal processing power and to freedom from impulse

are usually called *paternalism*, because outsiders are charged with protecting people from their own mistakes, as parents protect their children.

Fairness regarding *efficient prices* entitles all people to trade at prices they perceive as efficient or correct. Fairness in the efficient prices class is the entitlement that underlies the notion of fairness inherent in the term “fair and orderly market.” NYSE specialists are responsible for preserving a fair and orderly market by trading from their own inventories in response to order imbalances that might distort prices. The alternative is to let prices adjust by whatever amount necessary to equate supply and demand by investors, even if this process creates “excessive” volatility.

Note the difference between informationally efficient prices and the entitlement to prices perceived as correct. For example, a level of volatility that comes with efficient prices might be perceived by investors as excessive. If so, specialists might well interfere with efficient prices by buying and selling from their inventories in an attempt to maintain prices perceived (incorrectly) to be efficient.

Fairness in *equal bargaining power* entitles all people to differential alternatives to a negotiated agreement. Unequal bargaining power can occur when one person in a transaction has deficiencies in information processing or imperfect self-control. Unequal bargaining power can also exist, however, in the absence of such deficiencies. For example, poor people might be at a power disadvantage relative to rich ones. The ultimatum game provides another example. The inequality in bargaining power is created by the first-player advantage; the second player is disadvantaged because he or she faces a take it or leave it position. One example of a remedy to a perceived inequality in bargaining power is a state-mandated limit on interest rates charged by credit card companies.

An additional notion of efficiency, called *ex post efficiency*, is a hybrid of Pareto efficiency and fairness. Recall that Pareto efficiency rests on the subjective judgments of individuals to ascertain whether one situation is more efficient than another. The *ex post* notion replaces subjective judgments with objective ones. *Ex post* efficiency is, in effect, what Pareto efficiency would be if all investors had equal information, equal processing capabilities, and no self-control difficulties. The implicit notion of efficiency is *ex post* in some regulatory issues.

Fairness and Ethics

Most people use the terms “fairness” and “ethics” synonymously. When people say they have been treated unfairly or unethically, they usually mean they believe one of their rights has been violated. The subjective approach to fairness around which our discussion is built should be related to its formal treatment in the field of ethics.

Our subjective framework of fairness is built around the seven rights described earlier. Philosophy offers two schools of thought about the role rights play in an ethical system. The *utilitarian* school is concerned with the optimal overall welfare across the individuals in a society. Notably, the utilitarian school views rights only as instruments for achieving the optimal aggregation of utility. In contrast, the *deontological* school views rights as intrinsic and fundamental. The deontological school is regarded as the predominant school of thought within philosophical circles. What is more germane from our perspective is the fact that subjective notions of ethics have a strong deontological dimension that is reflected in the seven rights.

Philosophers disagree about which rights are intrinsic and how conflicts between rights are to be resolved. As Sandel (1984) notes,

Of course, proponents of the rights-based ethic notoriously disagree on what rights are fundamental, and on what political arrangements the ideal of the neutral framework requires. Egalitarian liberals support the welfare state, and favor a scheme of civil liberties together with certain social and economic rights—rights to welfare, education, health care, and so on. Libertarian liberals defend the market economy, and claim that redistributive policies violate people’s rights; they favor a scheme of civil liberties combined with a strict regime of private property rights. (p. 4)

Discussions about ethical issues in economics tend to involve at least one of the following elements:

- Distributive justice
- Externalities
- Information asymmetries
- Paternalism

These issues arise in our discussion of ethics and financial markets.

Distributive justice, sometimes referred to as “sharing the pie,” deals with rights to a fair distribution of a society’s resources among its members. For example, the fairness issue, in political parlance, focuses on the amount transferred from rich to poor through taxes. Involved in this issue is whether the poor have a right to an income floor. Similarly, entrepreneurs might have an advantage as they bargain with investors. Do investors have the right to a larger share of a company than they can obtain through negotiations with entrepreneurs?

Externalities are side effects—beneficial or costly—experienced by one person because of the activities of another. The critical question of externalities

from the standpoint of ethics is how equally the benefits and costs are shared. For example, homeowners who invest in manicured lawns generate a beneficial side effect to their neighbors, and automobile commuters generate harmful side effects to their community by their cars' pollution. Does a beneficiary of a positive externality receive unfair enrichment? Do residents of a community have the right to clean air or to compensation for air polluted by commuters?

Asymmetric information exists when one person knows more than another. For example, the seller of a used car knows more about its condition than a potential buyer, and an insider has more information about a company than an outsider. As with distributive justice and externalities, ethical issues surrounding asymmetric information focus on rights. Does the buyer of a used car have the right to full disclosure by the seller? Does the buyer of a stock have the right to know if the seller is an insider?

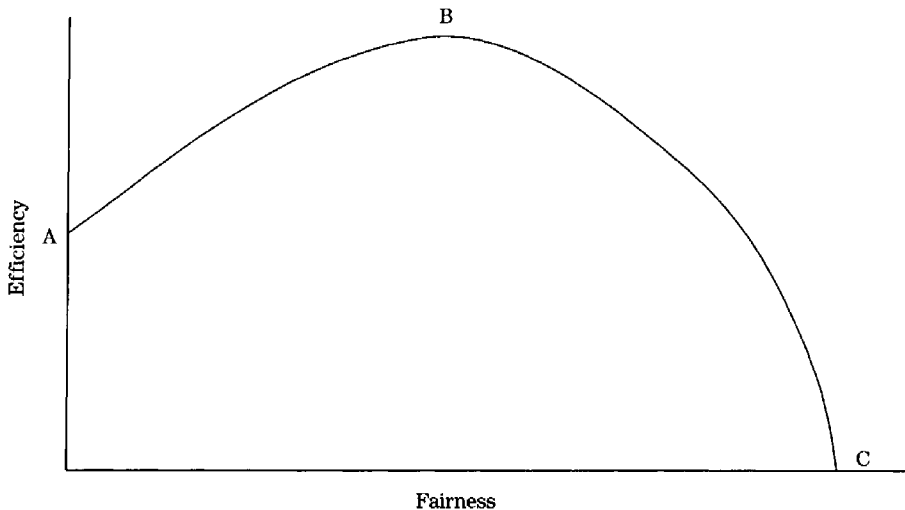
Paternalism is designed to benefit people who might make mistakes on their own. People make mistakes because they lack information, experience, intelligence, or self-control. Parents, of course, are paternalistic with their children. Similarly, Social Security is a paternalistic, forced-savings program. Do people have the right to be protected from their own mistakes?

The Efficiency/Fairness Frontier

We suggest that policymakers operate as if they had a utility function that depends on both efficiency and fairness. The efficiency/fairness space can be considered an analog to the familiar mean/variance space. Some combinations of efficiency and fairness dominate other combinations that are lower in both efficiency and fairness. The efficiency/fairness frontier comprises combinations that are not dominated. That frontier is represented in the curve from Point B to Point C in Figure 1. Choices along the frontier involve reductions in efficiency so as to increase fairness or reductions in fairness so as to increase efficiency. The frontier's negative slope from Point B to Point C indicates that increased fairness can only be achieved through a reduction in efficiency. An upward sloping curve, such as from Point A to Point B, indicates that increased fairness brings increased efficiency.

Lev's (1988) argument is an illustration of a move from Point A to Point B. Point A represents a world with voluntary disclosure. Point B represents a world with mandatory disclosure. Lev argues that a move from Point A to Point B increases efficiency as mandatory disclosure alleviates the problem of asymmetric information. At the same time, mandatory disclosure improves fairness in the sense that equal access to information is fairer than unequal access.

Next, consider a regulation that prevents entrepreneurs from offering the

FIGURE 1. The Efficiency/Fairness Frontier

public stock in high-risk ventures. The imposition of such a regulation can be described as a move from Point B to Point C. Fairness is higher at Point C, where the right to freedom from impulse is enhanced, than at Point B. Specifically, impulsive people who choose overly risky portfolios because they lack self-control are now protected because stocks in high-risk ventures are prohibited. Efficiency, however, declines as worthy risky ventures are denied funding.

Figure 1 is suggestive of our underlying framework, but it is also somewhat misleading, because fairness and efficiency are each multidimensional. We have identified two efficiency notions and seven fairness rights. Each configuration of regulations can be described as a point in the multidimensional efficiency/fairness space, and each regulation is on the frontier unless another regulation improves both fairness and efficiency. We seek to describe the efficiency and fairness characteristics of each category of financial regulation and identify the trade-offs between efficiency and fairness.

We discuss six major regulations: disclosure regulations; merit, or blue-sky, regulations; suitability regulations; margin regulations; trading-interruption regulations; and regulation of insider trading. We divide the discussion of each regulation into three parts. First, we describe the regulation; second, we describe the historical context and circumstances shaping each regulation; and third, we note each regulation's effect on efficiency and fairness.

The recognition that people are subject to cognitive errors and imperfect

self-control affects considerations of both fairness and efficiency. As to fairness, protection from cognitive errors and imperfect self-control is at the center of the regulations we discuss. And as to efficiency, cognitive errors and imperfect self-control have a direct impact on informational efficiency and an indirect effect on Pareto efficiency. This study discusses the impact of cognitive errors and imperfect self-control on informational efficiency but not their impact on Pareto efficiency. When we discuss Pareto efficiency, the assumption is that people are free of cognitive errors and possess perfect self-control.

To illustrate our approach to the efficiency and fairness of regulations, consider the housing market. Houses vary in characteristics—the nature of the neighborhood, termite damage, the condition of the plumbing, and many others. Some characteristics, such as the nature of the neighborhood, might be known equally to sellers and potential buyers, but other characteristics, such as termite damage, might not be known to either. Some characteristics, such as the condition of the plumbing, are known to sellers but not to potential buyers. Sellers of houses in the State of California must now provide complete and truthful disclosure of defects known to them, a requirement that did not exist until a few years ago. Significant penalties for incomplete or untruthful disclosure accompany this mandatory disclosure requirement. Which issues of fairness and efficiency underlie this regulation, and to what extent are efficiency and fairness affected by its implementation?

An analysis of a regulation must begin with a comparison to a benchmark, which can be another regulation or a state free of regulation. We assume that, before California adopted mandatory disclosure regulations, houses had been sold on an “as-is” basis. Once they moved into a house, buyers had no recourse against sellers if they discovered defects not noticed at time of purchase. Of course, voluntary disclosure is consistent with the rules of an “as-is” sale.

Five major elements can interfere with the achievement of Pareto efficiency: monopoly power, externalities, asymmetric information, restrictions on trades, and costs. The issues of *monopoly power* and *restrictions on trades* are unlikely to play a role as we move from a world of “as is” to a world of mandatory disclosure, because in both worlds neither buyer nor seller has monopoly power and neither is prohibited from trading. The element of *externalities* might arise, however. Consider a case in which several adjoining houses share a common problem, such as proximity to an earthquake fault line. Disclosure of the fault line in connection with one house informs buyers about the condition of other houses as well. Mandatory disclosure is not, of course, the only way to solve the problem of externalities. Instituting agencies offering information on earthquake zones is an alternative solution.

The most important element of Pareto efficiency in the move from the as-is

world to the world of mandatory disclosure is *adverse selection*, the “lemons” problem articulated by Akerlof (1970). Rational buyers who cannot distinguish defective from defect-free houses will offer no more than the value of defective houses. In turn, sellers of defect-free houses will not find it worthwhile to sell their houses. Therefore, only the houses that are lemons will be offered for sale.

Two types of private remedies for the lemons problem are signaling and *ex post* settlement. One example of signaling is the private use of property inspections (the analog of auditing). Another example is the reputations of the real estate agencies representing the two parties; agencies can build reputational capital by acting as “inspectors” and providing “seals of approval” to properties for sale. *Ex post* settlement means that buyer and seller settle after both know the true condition of the house. An example of *ex post* settlement is the use of escrow to allow buyers time to live in the house and acquire, through experience, the information known to sellers at the time of sale.

The lemons effect is a problem for Pareto efficiency to the extent that private remedies are costly. If inspection is an expensive undertaking and *ex post* settlement requires large deposits to be left in escrow, then asymmetric information causes the housing market to be significantly inefficient.

If mandatory disclosure is to improve the situation, then, it must offer a remedy that is less costly than private remedies. Mandatory disclosure is a public *ex post* settlement procedure. Note that mandatory disclosure does not guarantee that sellers will tell the truth; rather, it establishes a legal framework enabling buyers to use the judicial system to recover damages if sellers knowingly misrepresent or ignore the truth. Because the judicial system involves costs of its own, however, mandatory disclosure is not necessarily superior to all private remedies. Nevertheless, a case can be made that mandatory disclosure is superior to private *ex post* settlement mechanisms if the latter require, for example, large escrow deposits.

As to informational efficiency, in situations in which buyers and sellers are rational, all houses are sold at correct prices; that is, informational efficiency prevails. Hence, mandatory disclosure cannot improve matters. Consider, however, a situation in which buyers suffer from cognitive errors that lead them to underestimate a seller’s incentives to lie. In this case, some house buyers in the as-is world might pay more than informationally efficient prices for their houses. Mandatory disclosure might then move prices closer to informationally efficient levels if disclosure served as a “cold shower” forcing buyers to notice important facts they might have ignored.

Consider now the impact on fairness of a move from “as is” to mandatory disclosure. Mandatory disclosure is inconsistent with freedom from coercion,

because it coerces sellers into disclosing information they might otherwise withhold. It promotes freedom from misrepresentation, because sellers are forced to put a representation on paper, and they know that penalties exist for misrepresentation. Mandatory disclosure promotes equal (access to) information. (This effect is tautological, because sellers are required to divulge all material information.) Mandatory disclosure does not necessarily promote freedom from impulse, because it does not prevent an impulse house buyer from making a purchase sure to generate the buyer's remorse. Mandatory disclosure might help, however, by providing a cold shower to an impulsive buyer. Mandatory disclosure does not directly contribute to equal processing power, because access to information and ability to analyze information are quite distinct; but the cold shower nature of disclosure might help processing. The right to correct prices has been discussed in connection with informational efficiency. As stated, disclosure has no impact on informational efficiency unless it removes the element leading to cognitive errors. Buyers might be regarded as having power in a buyer's market, in which many houses are available, but in a seller's market, the opposite situation prevails. Disclosure might increase buyers' power by increasing the number of homes offered for sale. Disclosure also increases the power of naive buyers by forcing them into the disclosure cold shower.

We suggest caution about the analysis that follows. To draw general conclusions about Pareto efficiency in settings involving imperfect information is difficult. Important examples have counterintuitive properties. For example, intuition suggests that mandatory disclosure will enhance Pareto efficiency, but Hirshleifer (1971) illustrates how increasing the amount of public information *can* leave everyone in worse shape. Hart (1975) describes a related issue in which the opening of a new market causes everyone to be worse off. Milne and Shefrin (1988) offer a unified treatment of the issues raised by Hirshleifer and Hart by placing them within the context of the second best. Second-best features can be subtle, and they are often ignored in discussions about policy. In the remainder of this study, we follow that practice and ignore second-best counterintuitive properties. The reader should be aware, however, of that implicit assumption.

Fairness and Self-Interest

California real estate agents were major proponents of the law mandating disclosure, because in the as-is world, they are targets of house buyers who find unpleasant surprises after their purchase. Economists have long recognized that self-interest underlies regulations. Nevertheless, more than money and lobbying are needed for a successful campaign to change a law. Interest groups

understand that a change in law requires an appeal to notions of fairness and efficiency. The California real estate agents argued publicly that mandatory disclosure is needed because it is unfair for sellers to withhold information from buyers. Thus, although the real estate agents may have been promoting their own interests, they did so by appealing to fairness.

Rational house buyers assume the worst unless they have reliable information to the contrary. Therefore, rational buyers are never disappointed. On the other hand, buyers who suffer from cognitive errors or imperfect self-control are often disappointed. When such buyers find, *ex post*, that sellers have taken advantage of their cognitive errors and imperfect self-control, they believe that rules of fairness have been violated. The nature of cognitive errors and imperfect self-control is the topic of the next chapter.

2. Cognitive Errors and Imperfect Self-Control

A key premise of our framework is that some aspects of regulations in financial markets are designed to protect people from cognitive errors and imperfections in self-control as they make choices in financial markets.

Cognitive Errors

A study by Solt and Statman (1988) showed that writers of investment newsletters, judged as a group, cannot predict the direction of the stock market any better than a person tossing a coin. Why, then, do investors pay for investment newsletters? The belief in the usefulness of investment newsletters despite evidence to the contrary is one of many examples in which cognitive errors interfere with proper learning. Errors may persist, and the usual claim that learning will eliminate errors may not hold. Solt and Statman suggest that persistent mistaken beliefs might reflect a tendency to fail to search for evidence disconfirming their beliefs. This tendency, analyzed by Einhorn and Hogarth (1978), is a special case of the error in cognition that Tversky and Kahneman (1974) call the “illusion of validity.”

Einhorn and Hogarth (1978) modeled the degree of confidence in a belief as an outcome of a function whose arguments are confirming evidence and disconfirming evidence. The theory of statistics tells us that we should observe the frequency of evidence consistent with a hypothesis and compare it with the frequency of evidence inconsistent with the hypothesis. Einhorn and Hogarth show, however, that people tend to focus on evidence consistent with their hypothesis, and their confidence in the validity of the hypothesis grows with the absolute, rather than the relative, frequency of confirming evidence. This tendency implies that people with much experience are especially susceptible to overconfidence in their beliefs, because they are most likely to have experi-

enced much confirming evidence. Therefore, exposure to data might reinforce errors rather than eliminate them.

Solt and Statman (1988) also show that writers of investment newsletters tend to become more optimistic about the prospects of the stock market after an increase in stock prices and more pessimistic after a decrease. The belief that recent trends will continue is an example of a cognitive error called *base rate underweighting*. A person commits this error by placing excessive odds on the continuation of recent trends and too little weight on “base rates” embodied within long-term averages. DeBondt and Thaler (1985, 1987) suggest that base rate underweighting leads to overreaction in security markets. Investors expect companies’ recent earnings experience to continue. Of course, overreaction is an important issue in financial market regulation, because in climbing markets, it leads to speculative bubbles that might end in crashes.

Important aspects of cognitive errors include their pervasiveness and the difficulty of learning to overcome them. Consider the “hot hand” in basketball, for example. Basketball players are said to have a hot hand when their shooting becomes extremely accurate. Players, coaches, and fans share a common belief that such players will continue their shooting streaks. In a study of basketball records, Gilovich, Vallone, and Tversky (1985) found that the hot hand does not exist and the probability of a hit is independent of the preceding shooting history. For example, 88 percent of Larry Bird’s second free throws after hitting the first one were hits, but 91 percent of his second free throws after missing the first one were hits. The serial correlation between shots is an insignificant 0.032. Similarly, the number of runs of hits and misses expected for Julius Irving is 442.4, a number that is not different in a statistically significant way from 431, the actual number of runs.

The evidence on the hot hand suggests that experience does not eliminate cognitive errors. Gilovich, Vallone, and Tversky (1985) found that the belief in the hot hand is more pronounced among avid fans than among casual fans. We suspect the same is true for participants in financial markets. Roberts (1959) demonstrated that the “head and shoulders” pattern of stock prices can be generated from a table of random numbers. He argues that “probably all the classical patterns of technical analysis can be generated artificially by a suitable roulette wheel or random-number table” (p. 4). Roberts suggests statistical methods that might help investors distinguish real patterns from illusory ones.

More than 30 years after the publication of Roberts’ article, we can apparently conclude that financial economists have been unsuccessful in persuading technical analysts and their customers that technical analysis is futile. Finance teachers still find it difficult to convince their students of that futility. As Elton and Gruber (1987) testify,

On a number of occasions we have given students a sequence of random numbers and asked them to predict the next number. The students receive additional numbers in the series that normally are inconsistent with any hypothesized pattern. Nevertheless, they continue to believe the sequence has a pattern. They revise their beliefs concerning the form of the pattern rather than rejecting the idea that there is a pattern. (p. 368)

We argue that much of financial regulation is designed to protect investors from their own and others' cognitive errors.

Self-Control

People have a self-control problem when emotions prevent them from taking rational actions. Compulsive gambling is particularly interesting in our context, because a gamble, such as a lottery ticket, has the features of an investment. A lottery chance requires an initial outlay, or investment, and it promises a payoff that depends on whether the number on the ticket matches the winning number.

Making the connection between imperfect self-control and financial regulations is not new. As noted in the Dickenson Report, which formed part of the deliberations leading up to the 1934 Securities Exchange Act,

It must always be recognized that the average man has an inherent instinct for gambling in some form or other. It has been recognized as a social evil, always inveighed against since early times. No method of combatting it has ever been completely successful. (see Ellenberger & Mahar 1973, Volume 5, Item 16)

Indeed, efforts to eradicate gambling go back to early times. A report by Fact Research (*Gambling in America* 1976) says,

Gambling was forbidden to early Christians, but an evasion of the code continued for centuries, extending often to the clergy itself. Constantinople, the seat of the Church, was also the 13th Century gambling capital of the world. Cardinal Raffaello Piario won 14,000 ducats from the son of Pope Innocent VIII, and Leo X was a compulsive cardplayer. On the other hand, a Christian burial was denied to cardplayers under Charlemagne, and early French law deprived them of the right to Holy Communion. (p. 5)

Sir William Petty made two points at the introduction of the lottery in England in 1566: First, lotteries are foolish investments; second, the sovereign should protect fools.

A lottery is properly a tax upon unfortunate self-conceited fools. The world abounds in such fools; it is not fit that every man that will may cheat every man that would be cheated. Rather it is ordained that the Sovereign should have guard of these fools, even as in the case of lunatics and idiots. (p. 9)

The English Sovereign guarded people who wished to gamble by making lotteries a crown monopoly.

The use of lotteries as taxes has, indeed, been common all over the world. The Fact Research report notes that, in the United States,

Between 1790 and 1860, 24 of 33 States had financed internal improvements by lottery, and for a total of 287 lottery authorizations, an estimated \$32 million had been raised. The proceeds were used to build transportation and communications facilities and to support orphanages, hospitals, and other humanitarian endeavors. Private organizations such as the Rhode Island Historical Society, the Redwood Library of Newport, the Order of Masons, and various churches also were lottery beneficiaries. Georgia once used the lottery to distribute land, and in Louisiana any resident could sell property by lottery provided the State appraised it and collected a 2-percent tax. (p. 17)

An ability to process information about the unfavorable odds of gambling does not seem a sufficient defense against gambling. People with self-control deficiencies fail to make intelligent choices about bearing risk. In a self-control model developed by Thaler and Shefrin (1981), a human being's mind has two parts. One part thinks carefully and plans rationally, and the other acts impulsively and cannot implement behavior decided upon through cool, dispassionate reflection. The two parts are referred to as "planner" and "doer," respectively. Rational strategy is identified with the planner, but the doer can interfere with rational decision making by seeking immediate gratification. Instant gratification as opposed to postponement of gratification is at the heart of the self-control problem. Analogously, the risk-averse planner in a gambler has to struggle with a risk-seeking doer who attempts to take on risk the planner regards as imprudent.

Individuals cope with self-control difficulties in two ways. The first is

willpower. Compulsive gamblers using willpower keep resisting the temptation to gamble, telling themselves over and over that the urge to gamble is self-destructive. The second way of coping is to restrict opportunities to act on impulse. Compulsive gamblers who are denied the opportunity to gamble may feel the urge to gamble, but they will not be able to act on it.

Restriction of opportunities can be executed by individuals through precommitment. For example, we have argued elsewhere (Shefrin and Statman 1985) that investors tend to postpone selling losing stocks; thus they may use stop-loss orders to precommit themselves to selling losing stocks. Selling a losing stock presents a self-control difficulty, because it imposes the pain of regret (“What a fool I have been to buy this stock!”). Stop-loss orders make the sale “automatic,” thereby overcoming the resistance of the doer to realizing losses.

An alternative to precommitment is a restriction of opportunities through regulations. For example, the imposition of Social Security withholding restricts the immediate consumption by those whose willpower is not sufficient to save adequately for retirement.

Note the interaction between cognitive errors and imperfect self-control. A person who miscalculates the prospects of a particular stock might buy too many shares of it and have a less-than-optimal portfolio. A person who miscalculates prospects and also lacks self-control, however, might leverage into financial ruin if not restricted by margin and other regulations.

3. Merit Regulations

Merit, or blue-sky, laws regulate the issuance and sale of securities and the registration of promoters and sellers of securities. The first of the merit laws was enacted in 1911 in Kansas. It empowered the bank commissioner to deny registration to any security the commissioner judged unfair, unjust, or inequitable to any class of investors. By 1933, every state except Nevada had adopted merit laws.

Types of Merit Laws

Merit laws differ from state to state by the restrictions they place on promoters of securities. Some states have “tough” reputations and others are considered lenient. Goodkind (1979), Wisconsin’s Deputy Commissioner of Securities, notes at least seven recurring subjects of substantive regulations designed to guide merit regulators as they separate unfair, unjust, and inequitable securities from other securities.

- *Underwriting commissions and offering expenses.* A large majority of states limit the amount of commissions and expenses incurred in connection with an offering. Wisconsin provides that an underwriter’s compensation is presumed reasonable if it does not exceed 10 percent of the aggregate selling price of the securities or if total compensation and other expenses do not exceed 15 percent.
- *Cheap stock.* Cheap stock is that which has been issued to the promoters of an enterprise at a price lower than the public offering price. Registration can be denied if state regulators consider the amount of cheap stock unreasonable. Wisconsin regards an amount of cheap stock reasonable if it does not exceed 10 percent of outstanding securities or if the ratio of price to earnings does not exceed 25 to 1.
- *Options and warrants.* Options and warrants are often given to officers and employees as well as to underwriters. Also, they may be attached as

“sweeteners” to other company-issued securities. As with cheap stocks, a state can deny registration when the offering involves an amount of options and warrants that regulators deem unreasonable. The amount of options and warrants considered reasonable by Wisconsin’s standards is 10 percent or less of shares outstanding.

- *Offering price.* Registration can be denied if state regulators believe the offering price is to work a fraud or if the price is unfair or inequitable. Wisconsin’s administrative code states that a price is considered presumptively reasonable if it does not exceed 25 times the earnings per share in the preceding 12 months or 25 times the average earnings per share in the preceding three years.
- *Shareholders’ voting rights.* Some companies issue several classes of securities with different voting rights. The Wisconsin rule states that an offering is deemed unfair and inequitable if the class of securities offered has voting rights different from those of other classes.
- *Interest and dividend coverage.* The Wisconsin law permits denial of registration if the financial condition of the issuer might make the offering unsound. Wisconsin rules may deem issuance of preferred stock unfair and inequitable if the issuer’s net earnings in both the prior year and the average of the prior three years is less than the dividends on the securities to be sold.
- *Promoters’ equity investment.* Many states require promoters to contribute tangible assets with a value equal to a minimum percentage of total equity. The Wisconsin law specifies a 10 percent minimum.

How Did the Laws Develop?

Merit laws were not the first state laws governing securities. States have been regulating securities of corporations they chartered since at least the mid-19th century. As Carosso (1970) notes, state incorporation laws sought to ensure honesty by specifying the amount of securities that could be issued. For example,

In 1855 a special Illinois law chartering the Wabash Mining Company established this corporation’s maximum allowable capitalization, stipulated the amount of stock that had to be sold and paid in before the company could borrow, limited the size of its indebtedness, and fixed the term and selection of its directors. That same year the Texas legislature wrote almost identical restrictions in the charters of three corporations, a telegraph and two railroad companies.

In 1859, after many of its citizens had been defrauded by unscrupulous promoters, Indiana enacted a general incorporation law for bridge companies, setting standards for these corporations. By the end of the Civil War most state incorporation laws included provisions fixing the capitalization of new corporations, regulating subsequent issues of new securities, and stipulating the rights of stockholders. (p. 157)

Enforcement of state laws proved difficult, however, and the public, especially farm groups, such as the Grangers and Populists, pressed for more effective regulation. Some states established regulatory commissions with powers over railroad companies. Rhode Island was the first to establish such a regulatory commission, but by 1900 more than half the states had established similar commissions. The commissions regulated the rates, services, and capitalization of railroads. For example, Carosso notes that in 1894 the Massachusetts commission passed an anti-stock-watering act restricting railroads' stock issues to market value.

The public demand for regulation increased in the wake of the stock market panic of 1901 and the depressed prices of stocks and bonds in 1903. The passage of the English Companies Act in Britain in 1900 focused attention on the secrecy surrounding the financial affairs of U.S. corporations and increased demands for full disclosure of information.

The English Companies Act provided a model for investor protection. Its guiding principle was that full disclosure will protect investors from fraud. Promoters were required to provide investors with full and accurate information about the company, its sponsors, its bankers, and the security itself.

The principle that companies owe full disclosure to investors had many supporters. Louis Brandeis, who later became an Associate Justice of the Supreme Court, stated that publicity is a remedy for social and industrial diseases, and a writer for *The Bankers' Magazine* called full disclosure a wise and moral doctrine. Connecticut passed a law in 1903 mandating disclosure of financial conditions and other corporate data, and Nevada followed in 1909. As Carosso (1970) notes:

This law aimed principally at achieving "full disclosure in the sale of mining stock." It required every Nevada mining corporation offering and selling stock in the state to file semi-annually "a sworn statement containing specified information as to its mining property and development, its use of the proceeds from the sale of stock, its capital structure, compensation paid to its officers, and other expenditures." The Attorney General and recorder of every county where the company was working

or developing mining property was to receive a copy, as was every stockholder. (p. 161)

Meanwhile, Kansas moved toward the first merit law. The value of Kansas farmland more than doubled during the period from 1900 to 1910, and the new prosperity attracted promoters. Bateman (1973) quotes a commentator at the time:

The state of Kansas, most wonderfully prolific and rich in farming products, had a large proportion of agriculturists not versed in ordinary business methods. The State was the happy hunting ground of promoters of fraudulent enterprises; in fact, their frauds became so barefaced that it was stated that they would sell building lots in the blue sky in fee simple. Metonymically they became known as the blue-sky merchants and the legislation intended to prevent their frauds was called Blue Sky Law. (p. 766)

When Walter R. Stubbs was re-elected governor of Kansas in 1910, he named as bank commissioner J.N. Dolley, who later initiated merit laws. By 1933, every state except Nevada had a blue-sky law.

In recent years, however, some states have repealed or modified their blue-sky laws. Greene (1983) writes,

At the moment, 36 states still have merit laws and about half rigorously enforce them. Illinois, Iowa and Wisconsin, however, are eliminating or reducing their merit regulations. And the Securities Industry Association is targeting other state legislation for attack. (p. 84)

Sosin and Fein (1987) describe the changes in the Illinois law as,

The major revisions of the Illinois Securities Law of 1953 (the "Act") enacted in 1983 and effective January 1 and July 1, 1984, were revolutionary in that they completely changed the securities registration philosophy of Illinois from the so-called "merit regulation" approach to that of "full disclosure." The 1983 amendments were the first substantial change in the Act in 30 years. The amendments were proposed by the non-partisan Securities Advisory Committee to Jim Edgar, secretary of state of Illinois, to address long-standing objections of the legal and financial communities that the Act stifled capital formation, deterred private investment and resulted in gross inequities in the operation of the

exemption from registration most frequently used in Illinois for limited offerings.

A principal change made by the 1983 amendments provided, in effect, that any issue of securities registered by the U.S. Securities and Exchange Commission . . . under the federal Securities Act of 1933 . . . was automatically permitted to be sold in Illinois upon the filing of copies of SEC registration documents and the payment of applicable fees. Also, registration requirements for local offerings not federally registered were equalized with those that are registered. This is based on the philosophy that local offerings should not be subjected to special requirements not imposed upon interstate offerings.

When the 1983 amendments were signed into law, Secretary Edgar commented that by removing unnecessary regulatory functions duplicating those at the federal level, the Illinois Securities Department could use more of its resources to combat securities fraud. Based upon the experience of that department under the revised Act, additional changes to the Act were submitted to the Illinois Legislature in 1985. . . . The 1985 amendments are evolutionary in nature, principally representing a fine tuning of the concepts adopted in the 1983 amendments, with particular emphasis on strengthening anti-fraud enforcement of the Act.

Sosin and Fein conclude,

The 1985 amendments continue the process of eliminating duplicative review, simplifying registration of securities and professionals, and strengthening enforcement powers begun in the landmark 1983 revision of the Act.

These dynamic changes have put Illinois in the vanguard of a number of states that have cast aside the artificial structures of "merit regulation." Our state has now had almost three years' experience as a "full disclosure" jurisdiction, with substantial benefits to business but with none of the horrible consequences predicted by those who opposed the 1983 amendments. (p. 511)

Fairness and Efficiency

In his evaluation of the Kansas blue-sky law, Carosso (1970) notes its paternalistic character: "Never before had a state sought to prevent its citizens from making unwise decisions" (p. 164). Carosso might have been overstating the novelty of the blue-sky law, however. Paternalistic laws restricting the

activities of promoters and sellers of securities were not new when Kansas enacted its law in 1911. As Carosso notes, by the end of the Civil War, most state laws included regulations of the issue of new securities, such as anti-stock-watering provisions and stipulations of the rights of shareholders.

Indeed, the laws passed in Connecticut in 1903 and in Nevada in 1909 can be seen as shifts *away* from the paternalism that permeated earlier laws and toward the principle that investors should be free of paternalistic restrictions so long as they have access to full information. Moreover, the disclosure and paternalistic frameworks were not the only contenders when Kansas enacted its blue-sky law. A third contending framework was voluntary disclosure, which includes, of course, the possibility of no disclosure. Loss and Seligman (1989) quote the following conversation between a member of Congress and the president of American Sugar Refining Company in a 1900 hearing:

- Q. You think, then, that when a corporation is chartered by the State, offers stock to the public, and is one in which the public is interested, that the public has no right to know what its earning power is or to subject them to any inspection whatever, that the people may not buy this stock blindly?
- A. Yes; that is my theory. Let the buyer beware; that covers the whole business. You can not wet nurse people from the time they are born until the time they die. They have got to wade in and get stuck, and that is the way men are educated and cultivated. (p. 179)

We will set aside for now a comparison of the fairness and efficiency characteristics of voluntary disclosure and mandatory disclosure and analyze blue-sky laws against the backdrop of mandatory disclosure laws. Consider a comparison of merit regulations and mandatory disclosure regulations in the context of Wisconsin's merit regulations, which require the prices of shares offered for sale to be fair and equitable. In contrast, mandatory disclosure regulations might require underwriters to *disclose* the price of shares but not to *limit* the price in any way.

Does a move from mandatory disclosure regulations to merit regulations diminish Pareto efficiency? The answer requires consideration of five items: monopoly power, externalities, asymmetric information, restrictions on choice, and costs. The first three items are unlikely to have a role. Neither the entrepreneurs who offer shares for sale nor the investors who consider the shares have monopoly power, because many entrepreneurs are offering many ventures to many investors, who are considering each venture. The issue of externalities is not likely to arise, because the ventures considered are not

public goods. Of course, the ventures might have externalities, both positive and negative, but we see no reason to believe the ventures that do not come to market because of merit regulations are those ventures with negative externalities. Finally, merit regulation in the presence of mandatory disclosure does nothing to alleviate the problem of information asymmetry.

A move from mandatory disclosure to merit regulation clearly diminishes Pareto efficiency, because it restricts entrepreneurs' and investors' choices. Merit regulations prevent some entrepreneurs and investors from entering into desired transactions. The prohibition of certain transactions by merit regulators diminishes the optimality of the portfolios of investors and the optimality of resource allocation. As Bateman (1973) argues, mandatory disclosure is superior to merit because:

No public official is given the impossible task of passing on the merits of each securities distribution on behalf of all members of the public under the disclosure philosophy. Instead, each prospective investor is free to make his own investment decisions on the basis of his own assessment of the potential risks and the potential rewards involved in each distribution, and in order to do so he is supplied with complete and reliable investment information. If he chooses to do so, he may take large risks in the hope of large returns on speculative investments. He is not denied this liberty by a public official who may have a more conservative investment philosophy and who will not permit high-risk or speculative securities offerings to be made to the public under his interpretation of the traditional merit standards. (p. 781)

Tyler (1982) argues against those who believe that the misallocations resulting from merit regulations are severe:

The really unmeasurable costs are those of lost production from companies which are never organized because the promoter is dissuaded by the problems of complying with blue-sky merit requirements from seeking the needed public financing. Although some of the critics of merit regulation have wailed long and loud about this deterrence, I question whether the problem is really as severe as they would have us believe. As Bateman has pointed out, the entrepreneur with a brilliant idea but no resources has four options:

1. He can seek financing from a small group of investors, relying on an exemption from registration under the blue-sky laws.

2. He can give in to the state requirements and adjust his holdings or consideration for his shares and raise whatever public funds he can successfully raise.
3. He can sell his idea to an established company, which may be able to finance the development through internally generated funds, or may be better able to satisfy the conditions imposed by merit regulators (perhaps by virtue of not being classified as a “promotional” company).
4. He can give up his idea.

If he chooses the first option, the business will still be formed. The entrepreneur may have a smaller stake in it than he would prefer, however, because the small group of investors may have sufficient bargaining leverage to require the entrepreneur to secure for the investors a large slice of the action. If he chooses the second option, again the business will be formed, and again the entrepreneur may retain less control than he wants. In the third case, the public will still get the benefit of the opportunity to invest, but the entrepreneur’s reward may be less than with either of the first two options. This will depend on his ability to negotiate with the buyer. Only if the entrepreneur takes the fourth option and gives up in disgust is the public deprived of the benefit of his idea. I suspect that this is the option the entrepreneur is least likely to take. The potential rewards, if he truly believes in his idea, are simply too large for an ambitious promoter to pass up. In any case, I know of no way to determine how many businesses are not formed because potential promoters are discouraged by the requirements of merit regulators. . . . Large numbers of virtually worthless securities are probably sold each year in states which do not impose merit standards. (pp. 932–33)

As to costs, merit regulations do involve administration and enforcement costs. These costs diminish Pareto efficiency unless they bring about Pareto-efficient benefits of a higher magnitude than the costs. A move from a mandatory disclosure world to a merit world, however, does not have any Pareto-efficient benefits. The move diminishes Pareto efficiency because it leads to inefficient portfolios and inefficient resource allocation.

Consider now the effect of a move from a mandatory disclosure framework to a merit framework on informational efficiency. Imagine an issue of shares that might sell at a particular price in a world with disclosure but without merit regulations. If that price is the informationally efficient price, then a deviation from it brought about by the requirements of merit regulations is a movement

away from informational efficiency. Note also that some shares sold at informationally efficient prices in a world without merit regulations will not even have prices in a world with merit regulations if merit regulations lead entrepreneurs to withdraw their ventures from the market.

Merit regulations have no impact on the rights to freedom from misrepresentation and equal information, because these rights are already available with mandatory disclosure. Merit regulations interfere with the right to freedom from coercion in two ways: first, investors who wish to buy some securities are prevented by regulators from doing so; second, entrepreneurs are prevented from offering securities unless they agree to modify their offerings to the conditions of merit regulators.

All the commentators on merit regulations agree that the regulations are paternalistic; they improve the rights to equal processing power and, mostly, to freedom from impulse. Tyler (1982), a defender of merit regulations justifies the paternalistic nature of merit regulations as follows:

His freedom is restricted to some degree, certainly, and he may resent the state's "paternalistic" attitude about protecting him from himself. We all surrender some of our liberty by living in a pluralistic society. In view of the demonstrated dangers of fraud and deception in unregulated states, I do not see that the restrictions on investor liberty resulting from merit regulation are any more severe than the degree of freedom surrendered by joining society. (p. 936)

Bateman (1973), a critic of merit regulations, concedes that the paternalistic characteristic of merit regulations might have been useful when the Kansas law was enacted:

American capital markets and public securities distributors were in their relative infancy, particularly outside the northeastern United States. The public generally was neither well informed nor experienced in the matter of securities investments to any significant degree. Most of the population was agrarian, modestly uneducated, and easy prey to unscrupulous promoters and securities salesmen, who were essentially unregulated and unrestrained by any effective professional standards. Thus, conditions were ripe for legislative reform to protect the public from overreaching by promoters and securities salesmen, and the financial turbulence precipitated by the panic of 1907 provided the catalyst, while Populist economic philosophy directed the substantive nature of that reform. (p. 766)

Bateman goes on to argue, however, that merit regulations are no longer necessary, because investors are now more sophisticated and well protected by mandatory disclosure regulations.

Merit regulations change the bargaining powers of entrepreneurs and investors by taking power away from entrepreneurs and granting it to investors. The regulations represent a move toward equal power only if we accept that entrepreneurs have more power than investors.

The right to “correct” prices is a right to prices that are perceived as efficient. Merit regulations cause deviations from informationally efficient prices, but the underlying reason for these deviations is not to make prices seem efficient but rather to shift wealth from entrepreneurs to investors.

Conclusion

A move from a mandatory disclosure world to a merit world diminishes Pareto efficiency and informational efficiency. The move also diminishes fairness by diminishing the right to freedom from coercion. The move makes no sense in a world where investors commit no cognitive errors and have perfect self-control. Merit regulations are obviously paternalistic attempts to improve fairness by providing investors rights to equal processing power and freedom from impulse. Merit regulations also seem designed to enhance the right to equal power by shifting power from entrepreneurs to investors.

4. Mandatory Disclosure Regulations

The Securities Acts of 1933 and the Securities Exchange Act of 1934 focus on mandatory disclosure of truthful information. The disclosure requirements include both positive and negative forms. In the positive form, the acts require securities issuers to disclose such information as provisions of the corporate charter and the purpose of the funds the company proposes to raise. In the negative form, the acts prohibit disclosure of some information and delay the disclosure of other information. As Easterbrook and Fischel (1984) note, the acts require companies to refrain from activities viewed as touting their securities until their registration statements are filed. Similarly, until 1979, the SEC discouraged managers of companies from making projections of profits and similar forecasts. Rule 175, issued in 1979, permits disclosure of forecasts only if they are supported adequately by current data.

Jarrell (1981) stresses that the acts require disclosure only of truthful information and that the acts are not merit regulations. He writes,

The 1933 law, SEC documents, and other articles on the law all stress that the SEC is not legally responsible for the ultimate merit of the issuers' undertakings. The responsibility of the SEC ends when the registration and prospectus contain the required information, set forth in a manner so as not to mislead the investors. The SEC does not function to approve or disapprove of certain entrepreneurial undertakings. Its legislated purpose is to protect investors from insufficient and misleading information, rather than to protect or to prevent them from choosing risky securities. (pp. 621–22)

How Did the Laws Develop?

Two frameworks of securities laws competed for a role as the basis for the 1933 act. The first is the merit framework, and the second is the mandatory disclosure framework. Although the disclosure framework won, the effects of the merit framework are evident in the 1933 and 1934 acts and, especially, in their implementation.

By 1933, all states except Nevada had adopted some version of merit laws, but their enforcement remained inadequate. As Seligman (1982) notes,

Even in New York, which was widely regarded as having the most effective blue-sky agency, enforcement was inadequate. In 1932, the attorney general's Bureau of Securities employed more than a hundred men, secured injunctions against 1,522 persons and firms, and instituted 146 criminal prosecutions. At approximately the same time, officials of the New York Stock Exchange estimated that of the billion dollars or so of fraudulent securities annually sold in the United States, about half were sold in New York State. (p. 46)

Many securities bills aimed at correcting enforcement problems of merit laws were introduced into Congress between 1919 and 1927. The most important of these was offered by Congressman Edward Dennison in 1920. Seligman continues,

The Dennison bill would have plugged the largest loophole in the enforcement of state blue-sky laws by making it illegal for any person to use the mails or any of the facilities of interstate commerce to sell securities in any state until there had been compliance with the formalities of that state's blue-sky law. Although there was some doubt as to whether a federal statute whose sole purpose was to aid in the enforcement of state laws was constitutional, Dennison briefly won the grudging support of the Investment Bankers Association by agreeing to exempt a wide range of securities transactions. After being favorably reported out by the House Commerce Committee, the bill was passed almost unanimously by the House of Representatives. But in the Senate, the Dennison bill was referred to the Judiciary Committee, which never reported out the measure to the full Senate. (p. 50)

Huston Thompson, who had previously served as chair of the Federal Trade Commission (FTC), knowing that President Franklin D. Roosevelt wished to pass a securities bill quickly, took the leadership in creating a new securities bill

in 1933, shortly after Roosevelt's inauguration. Seligman notes that Thompson and his aides, after studying blue-sky laws and earlier federal proposals, drafted a bill combining features of several of these precedents as well as the mandatory disclosure provisions of the English Companies Act. The Thompson draft empowered the FTC to investigate and prosecute fraudulent securities sales. The spirit of the merit laws in Thompson's draft is evident in the FTC's authority to revoke the registration of securities of which the issuers have been "dishonest" or "about to engage in fraudulent transactions," or whose business is "in unsound condition" or "not based upon sound principles," or where "revocation is in the interest of the public welfare." The Thompson draft also incorporated Dennison's proposal that the federal government prosecute violations of blue-sky laws when securities are sold across state lines.

Some argued against the merit features in Thompson's draft. Seligman quotes Congressman Sam Rayburn in the hearings on the Thompson bill as follows:

Now, we have passed a lot of laws since we met here on the 5th of March, but I do not think we have given anybody that much power yet. . . . Do you believe that an administrative officer of the Government ought to be given that much power, as a general principle—to pass upon whether or not a man's business is based on sound principles? It is mighty easy when you go to write a statute, if you want to delegate absolute authority; you can write that in a very short statute; but the question that this committee has got to determine is whether or not you want to give anybody that kind of authority. (p. 56)

Rayburn told Roosevelt that the Thompson bill was too stringent. Roosevelt quickly agreed, for two reasons: First, he wished to enact a securities bill rapidly and was concerned that a debate would delay enactment; second, he felt most strongly about the disclosure principle. In a note accompanying the Thompson bill, Roosevelt wrote,

The Federal Government cannot and should not take any action which might be construed as approving or guaranteeing that newly issued securities are sound in the sense that their value will be maintained or that the properties which they represent will earn profit. There is, however, an obligation upon us to insist that every issue of new securities to be sold in interstate commerce shall be accompanied by full publicity and information, and that no essentially important element attending the issue shall be concealed from the buying public. This

proposal adds to the ancient rule of *caveat emptor* the further doctrine: "Let the seller also beware." It puts the burden of telling the whole truth on the seller. It should give impetus to honest dealing in securities and thereby bring back public confidence. (*Congressional Record*, 73rd Congress, 1st Session, March 29, 1933, pp. 937 and 954)

Roosevelt selected Felix Frankfurter, then a professor of law at Harvard, to supervise the preparation of a new securities bill, and Frankfurter selected James Landis and Benjamin Cohen as his aides. Landis and Cohen agreed with Frankfurter that the English Companies Act should constitute the basis of the U.S. Act. Seligman (1982) quotes from Landis's recollection 25 years later:

Our draft remained true to the conception voiced by the President in his message of March 29, 1933, to the Congress, namely, that its requirements should be limited to full and fair disclosure of the nature of the security being offered and that there should be no authority to pass upon the investment quality of the security. . . . We also provided for the passage of a period of time before a registration statement could become effective, giving the Commission power during that period to issue a stop-order because of misrepresentation or inadequacy of disclosure. . . . This device of a waiting period, then completely novel, in our opinion would accomplish several things. It would slow up the procedure of selling securities and the consequent pressures that the underwriters could exert upon their selling group or other dealers to take sight unseen an allotment of the issue. It would give an opportunity for the financial world to acquaint itself with the basic data underlying a security issue and through that acquaintance to circulate among the buying public as well as independent dealers some intimation of its quality. (pp. 63–64)

Fairness and Efficiency

Consider three frameworks of law. The first is *buyer beware*, in which investors take full responsibility for their purchases and the government does not protect investors who have been misled by misrepresentations. The second is *no misrepresentation*, in which disclosure is voluntary but the government enforces truthful disclosure by penalizing those who have been found guilty of misrepresentation. The third is *mandatory disclosure*, in which the government mandates disclosure of certain data and applies penalties for misrepresentation of all disclosures, both voluntary and mandatory. We divide our analysis into two parts: first, we discuss the efficiency and fairness trade-off as we move from the *buyer beware* to the *no-misrepresentation* framework; and second, we discuss

the trade-off as we move from a no-misrepresentation to a mandatory disclosure framework.

Consider the effect on Pareto efficiency of a move from a buyer beware to a no-misrepresentation framework. The issue of monopoly power is not likely to arise in the move, because neither buyers nor sellers of securities have monopoly power. Entrepreneurs face many potential investors, and investors can choose among many enterprises. Similarly, the issue of restrictions on choice does not arise, because the move does not restrict choice. As to externalities, the nature of information as a public good is likely to give rise to externalities, but a move from a buyer-beware to a no-misrepresentation framework does not remedy any problems of externalities. The issue of asymmetric information is central in the move, however, because entrepreneurs have more information than investors. A buyer-beware market is a lemons market if sellers of high-quality securities cannot signal to potential buyers the quality of their securities. In the absence of signaling, only low-quality securities will be sold. Therefore, a mechanism that allows sellers of high-quality securities to signal quality to buyers leads to an improvement in Pareto efficiency as sellers and buyers transact in the high-quality securities.

Signaling mechanisms exist in the buyer-beware framework, but they are not costless. For example, entrepreneurs offering high-quality securities can signal that quality through audits by reputable accountants or investment bankers. The recognition of the power of such signaling is not new. Carosso (1970) quotes Charles R. Flint, the organizer of the United States Rubber Company, who suggested in a 1900 congressional hearing that natural laws provide proper amounts of disclosure and protection to investors. Specifically, Flint said, "The careless banker has lost his reputation; the careless investor has lost his money; and the result of it is, more care will be taken" (p. 160).

Indeed, as Carosso notes, the use of reputation as an enforcer of truthful disclosure might account for the growth of investment banking at the turn of the century. He writes,

By 1900 the passive, relatively detached merchandiser of securities typical of the pre-railroad era had been replaced by the active investment banker, the central figure in a more integrated stage of capitalistic development. Shortly before the turn of the century, Jacob Schiff attributed the growth of investment banking and the prominence of firms like his own to "the fact that they have been *more honest* than those who, thirty and twenty years ago, were among the leading banking firms. Not more honest, as construed in the literal sense of the word, but honest in their respect for the moral obligation assumed toward those who

entrusted their financial affairs to them, be it investing in the securities of corporate enterprises which these bankers brought before the public, or otherwise; *more honest* in keeping their own capital from becoming immobile, so that their credit and prestige should not be called into question during times of financial peril and uncertainty; *more honest* in the ways which, not taking alone into account the monetary pecuniary profit, are certain, in the long run, to determine position, credit, and prestige.” (p. 49)

A move from buyer beware to no misrepresentation improves Pareto efficiency if it reduces the cost of signaling relative to signaling's cost in the absence of a law against fraud. As Easterbrook and Fischel (1984) note, a law against fraud can reduce the cost of signaling, especially for new companies:

The penalty for fraud makes it more costly for low-quality firms to mimic high-quality ones by making false disclosures. An antifraud rule imposes low or no costs on honest, high-quality firms. Thus it makes it possible for high-quality firms to offer warranties at lower cost. The informational warranty, if enforced, makes it unnecessary for buyers to verify information or for sellers to undertake expensive certification. The expenses of offering high-quality securities go down while the expenses of passing off low-quality securities rise. (p. 677)

Easterbrook and Fischel also indicate that federal laws against misrepresentation, such as the 1933 and 1934 acts, may be superior to state laws in the context of Pareto efficiency if they reduce the costs of enforcing all claims arising from a single transaction. Although a law prohibiting misrepresentation might help remedy the problem of asymmetric information, it does not necessarily improve Pareto efficiency. First, the law might be underenforced; second, enforcement costs can be substantial, and these costs diminish Pareto efficiency.

As to fairness, a move from buyer beware to no misrepresentation certainly diminishes freedom from coercion, because sellers are coerced not to misrepresent. Of course, the move adds to freedom from misrepresentation. The move does not affect the right to equal access to information, because it does not involve mandatory disclosure. The move might improve the right to equal processing power and the right to freedom from impulse, but only in an indirect way if it deters sellers from using misrepresentation to take advantage of buyers' cognitive errors and imperfect self-control. The move improves the

right to equal bargaining power if sellers of securities are considered more powerful than buyers.

A move from buyer beware to no misrepresentation also affects correct prices, depending on whether buyers are subject to cognitive errors. Without cognitive errors, prices are informationally correct in both frameworks. The existence of penalties for misrepresentation, however, contributes to a perception that prices are correct.

A move from buyer beware to no misrepresentation might improve informational efficiency if the enforcement of the law offers a more effective signaling scheme than the methods existing in a buyer beware framework. To understand the nature of the improvement in informational efficiency, consider a case in which entrepreneurs offer three levels of projects—A projects, B projects, and C projects. When all information about these projects is known equally to entrepreneurs and investors, they are worth \$120, \$100, and \$80, respectively.

Consider first a case in which entrepreneurs cannot signal the quality of their projects and in which both entrepreneurs and investors are well diversified. In that case, only the lemon, C projects sell, and they sell at \$80, the informationally efficient price. Next, consider a case in which entrepreneurs have undiversified portfolios, they desire to sell portions of their enterprise to increase diversification, and *investors know that fact*. Imagine that entrepreneurs with A projects, worth \$120, are willing to sell at \$100 to achieve diversification. Under these circumstances, investors will pay \$100 for each project and will receive projects with an average value of \$100. Some of these projects will be A projects sold below their value, some C projects sold above their value, and some B projects sold at the “right” value. (Of course, this situation entails deviations from informationally efficient pricing, as projects A and C sell for prices that deviate from value.)

Now imagine that the threat of a penalty for misrepresentation leads each entrepreneur to reveal the true quality of each project. A projects sell for \$120, B projects sell for \$100, and C projects sell for \$80, thus achieving informational efficiency. Note, however, that although a no-misrepresentation framework might improve informational efficiency, informational efficiency does not clearly promote Pareto efficiency, because the cost of enforcement of the no-misrepresentation law might exceed the benefits of its informational efficiency.

Consider now the effects on Pareto efficiency of a move from no misrepresentation to mandatory disclosure. As discussed earlier, neither the issue of monopoly power nor the issue of restrictions on trade is significant in this move. In addition, obstacles to Pareto efficiency arising from asymmetric information between buyers and sellers have already been addressed in the move to no

misrepresentation, and the further move to mandatory disclosure does not affect them.

Clearly, however, mandatory disclosure adds costs not existing in the no-misrepresentation framework, and these costs diminish Pareto efficiency. Are the extra costs wasted, or do they bring offsetting benefits? Benston (1973) argues that much disclosure existed before 1933 and that no benefits have come with mandatory disclosure:

One could argue . . . that the disclosure policy followed by corporations in the absence of legislation is in the best interests of their stockholders. If management believed that the marginal revenue to the stockholders as a group from disclosure would exceed the marginal cost of preparing and supplying the information, they would disclose their financial and other data. (p. 133)

Benston (1979) notes, however, that mandatory disclosure might improve Pareto efficiency because it alleviates the problem of externalities:

One problem that could cause an exception to this general rule is what economists call an externality. That is to say, there is an advantage from disclosure that cannot be captured fully by the company making that disclosure. If Ford Motor tells investors something about itself, and the investors are thinking about buying General Motors stock, they might like to know how General Motors fits into the whole milieu of the alternate investments they may want to make. It would be very difficult to obtain this information if General Motors does not disclose. The first corporation may not receive the full benefit of this disclosure unless some other corporation also discloses, if this information is, in fact, useful for making investment decisions. If it were useful for making investment decisions, then there is a benefit to all potential investors and corporations if everyone discloses, which benefit cannot be fully captured by any individual firm. This is a limitation of voluntary disclosure, to the extent that it exists empirically. (pp. 1476–77)

Enforcement of antifraud laws might alleviate the asymmetric information problems arising from the buyers' suspicions that sellers might misrepresent securities. Laws imposing no misrepresentation, however, leave us in a world of voluntary disclosure, not mandatory disclosure. In a world of voluntary disclosure, entrepreneurs and managers might have information they neither disclose nor trade on. If so, security prices will not reflect the undisclosed

information, and prices will be inefficient with respect to all available information. A move from a voluntary disclosure to mandatory disclosure framework improves informational efficiency if it leads to disclosure of information that would not otherwise have been disclosed. Note, however, that any improvement in Pareto efficiency that accompanies informationally efficient prices has to be weighed against the damage to Pareto efficiency that accompanies the costs of mandatory disclosure. The net effect of mandatory disclosure on informational efficiency and Pareto efficiency is an issue resolved only by empirical analysis.

As to fairness, a move from a no-misrepresentation to a mandatory disclosure framework clearly expands the right to equal information but takes away the right to freedom from coercion, because it coerces those with information to reveal it. The move to mandatory disclosure does not necessarily expand the rights to equal processing power or freedom from impulse, however, because investors are free to choose securities and are offered no direct help in processing the additional information supplied to them. Added information such as disclosure of risks may, however, serve as a cold shower forcing investors to pause and reconsider their decisions. The added information would thereby indirectly improve the rights to equal processing power and freedom from impulse. The right to equal bargaining power is improved if entrepreneurs and managers are viewed as having more power than managers. The right to correct prices is improved in an objective way as informational efficiency increases. Moreover, if investors perceive equal access to information as a prerequisite to efficient prices, then mandatory disclosure will also add to the subjective perception of prices as efficient.

Empirical Evidence

The 1933 and 1934 securities acts were a move from a buyer-beware to a mandatory-disclosure framework that also encompassed no misrepresentation. Therefore, the effects of a shift from buyer beware to no misrepresentation are difficult to disentangle empirically from the effects of a shift from no misrepresentation to mandatory disclosure. Nevertheless, evidence that mandatory disclosure increases informational efficiency is good.

Starting in 1970, the SEC required multiproduct companies to release line-of-business information. Collins and Simonds (1979) observed line-of-business information for the 1967–70 period and found that investors who had private access to this information would have gained abnormal returns had they traded on it. Such a finding indicates the line-of-business information was not previously reflected in stock prices, and mandatory disclosure of that information led to an improvement of informational efficiency. (Note that companies

always had the option of voluntary disclosure of line-of-business information, but not all chose to disclose.)

Similar inferences can be drawn from studies by McNichols and Manegold (1983), Atiase (1985), and Grant (1980). McNichols and Manegold found that the release of annual earnings reports had a smaller effect on stock prices of companies that release quarterly reports than on stock prices of those that do not release quarterly reports. As Lev (1988) notes, this finding indicates that release of quarterly reports makes prices more informationally efficient; it also implies that mandating quarterly disclosure would increase informational efficiency.

Similarly, Atiase and Grant both found that the release of earnings reports of companies selling their stock over the counter had a greater effect on their stock prices than the release of earnings reports of NYSE-listed companies. The reason might be that small companies generally disclose less than large companies. Again, the findings imply that mandating greater disclosure would reduce price reactions to earnings announcements by increasing informational efficiency.

Informational efficiency is also at the center of Jarrell's study (1981) of the 1933 and 1934 securities acts. Jarrell reaches three major conclusions. The first two suggest that the law provided no gains in informational efficiency, and the third raises important questions of interpretation. The first conclusion is "the pre-SEC market for new equity issues was efficient, for the most part" (p. 666). Second, "the mandatory registration of new equity issues did not improve the net-of-market returns over five years to investors who purchased the issues" (p. 666). Third, "SEC regulation has reduced the risk of the portfolio of new issues available for purchase by public investors. The comparison of registered with unregistered new equity issues reveals that measures of both systematic and unsystematic risk were lower for the registered securities. Regression analysis of default rates and of yields for publicly issued corporate bonds indicate that the default risk and risk premia of bonds has fallen from pre- to post-SEC regulation. Consistent with this finding, some evidence is presented that suggests the post-SEC growth in private placements was concentrated among bonds of higher risk" (p. 667).

Jarrell notes two possible explanations for the risk reduction of new registered issues. The first, advanced by Friend and Herman (1964), interprets the risk reduction as an indication that mandatory disclosure increased informational efficiency. Specifically, mandatory disclosure provided investors with more complete and accurate information about the fundamental values of securities than was previously available and therefore reduced uncertainty. Prices thus moved closer to their informationally efficient levels.

Jarrell (1981) disagrees with this interpretation. Specifically, he argues, mandatory disclosure might have placed a special burden on relatively risky new issues, thus deterring promoters from bringing risky new issues to the market. If so, the decline in risk of new registered issues might be the result of eliminating risky securities from the group of registered securities rather than the result of an increase in the informational efficiency of registered securities.

Jarrell admits his study presents no tests differentiating sharply between the alternative interpretations, but he notes three pieces of evidence consistent with the view that risk reduction is the result of eliminating some risky securities from the group of new issues:

First, the 1936 study by Cale, as well as other sources, shows that SEC procedures result in widely disparate “ineffective rates” between different industries. Furthermore, Cale’s data indicate that the higher rejection (ineffective) rates are for issuers from the relatively risky industries (precious metal mining, oil and gas wells and merchandising). This type of finding, if confirmed subsequently for most of the post-SEC period, supports the hypothesis that the actual SEC registration process has imposed differentially higher costs of registration on the new issues of riskier ventures.

The second piece of evidence consistent with the “differential registration cost” hypothesis is that bonds placed privately after 1934 are of higher risk than publicly offered bonds. The wholesale substitution after 1934 from public offerings to private placements was more intense among relatively risky bonds. This result is to be expected if registration costs were higher for the riskier bonds.

The final piece of relevant evidence is the across-industry shift after 1934 away from new equity issues and toward bonds. A new equity issue has higher risk than a substitute debt issue for the same firm. Therefore, by imposing higher registration costs for riskier securities, the SEC would induce issuing firms to substitute debt for equity securities at the margin.
(p. 669)

Conclusion

What have we gained and lost with the enactment of the 1933 and 1934 securities acts? On the efficiency side, the evidence is that greater disclosure leads to greater informational efficiency. The increase in informational efficiency, however, has not clearly improved Pareto efficiency, mainly because of the costs of disclosure. Moreover, Pareto efficiency is diminished if mandatory

disclosure regulations lead to the elimination of a class of risky ventures. Indeed, Jarrell concludes:

This type of regulatory discrimination against relatively risky ventures, absent any evidence that investors (for whatever reason) irrationally overprice systematically these risky new issues, is inconsistent with social welfare maximization. (p. 668)

We suggest the rationale for mandatory disclosure can be found in its effect on fairness rather than on efficiency. In particular, we suggest paternalism is not an unwanted side effect of mandatory disclosure but rather the central reason for its continuing existence. In other words, mandatory disclosure continues to exist because it can be implemented to achieve the effects of merit regulation. Recall that disclosure regulations won over merit regulations in 1933 not because mandatory disclosure is necessarily a better principle but because of political expediency and a view that the “sunlight” of mandatory disclosure would achieve the goals of merit regulation. Indeed, mandatory disclosure *would* achieve the goals of merit regulations if investors were free of cognitive errors and imperfect self-control. Because investors are not free of cognitive errors and imperfect self-control, however, the SEC continues to seek ways to use the disclosure language of the acts to affect the substance, or merit, of investments. As Easterbrook and Fischel (1984) note,

The Securities and Exchange Commission occasionally uses the rubric of disclosure to affect substance, as when it demands that insiders not trade without making “disclosures” that would make trading pointless, when it requires that a going private deal “disclose” that the price is “fair,” and when it insists that the price of accelerated registration of a prospectus is “disclosure” that directors will not be indemnified for certain wrongs. (p. 669)

Moreover, and most important, we suggest mandatory disclosure remains law because it prevents the general public from buying high-risk securities by denying registration to such securities. In that respect, mandatory disclosure acts as the equivalent of a law prohibiting lotteries.

Note that Jarrell (1981) found that lotteries offered in the form of risky securities are fair lotteries. Investors in risky securities seem to get a return commensurate with the risk. The point is that even fair lotteries allow investors to take risks that are greater than they should when viewed from a paternalistic perspective. The possibility that mandatory disclosure regulations act as close

substitutes for merit regulations adds a twist to the debate about merit regulations as opposed to disclosure regulations; namely, disclosure regulations may be merely a move from one paternalistic regulation to another. A useful debate on mandatory disclosure cannot ignore its fairness characteristics. The debate must focus on whether the paternalistic benefits of mandatory disclosure are worth its efficiency costs.

5. Margin Regulations

Investors who buy common stock on margin pay a portion of the stock's price as a down payment out of their funds and pay the remainder out of a loan received from a brokerage company or another source. *Margin regulations* set minimum levels on the proportional size of the down payment.

Nature of the Law

The law regulating margin requirements on stock purchases is contained in section 7 of the 1934 Securities and Exchange Act. The act separated the responsibilities of promulgation and enforcement. It delegated the authority to promulgate rules governing margin transactions to the Federal Reserve Board of Governors (FRB) and the task of enforcing the various margin requirements to the SEC.

Consider the specific form of rules embodied in the 1934 act. The first rule concerns the maximum amount of credit advanceable to finance a purchase of individual stock ("initial margin," as distinct from "maintenance margin" described subsequently). The rule indicates that, under usual circumstances, the amount of credit extended cannot exceed 55 percent of the stock's current market value. In special circumstances, however, the amount of credit extended can reach as high as 75 percent. This exception occurs when the minimum stock price achieved during the preceding 36 months exceeds 55 percent of the current market price. In this case, maximum margin credit is equal to 100 percent of the 36-month low price or 75 percent of the current market price, whichever is smaller.

The FRB's rules for the extension of credit by broker/dealers is found in Regulation T, which stipulates that every margined security must be either traded on a national security exchange, or "actively" traded over the counter and be on an FRB-maintained list of margin equity securities. Also, the current

value of any additional securities purchased cannot be less than 50 percent of the margin account balance.³

In the original statement of the 1934 Securities and Exchange Act, the margin standard could vary between 55 percent and 75 percent. The flexible margin was designed to permit lower margins during declining markets. In fact, it was designed to permit an easier margin during the 1934 market itself.⁴ The FRB has modified the specific margin standards on several occasions; the range of variation has been 45 percent to 100 percent. The last modification, which left the margin standard at 50 percent, occurred in 1974.

The FRB is also empowered to impose minimum margin-maintenance requirements but has never done so. Securities are collateral for a margin loan. The SEC and the FRB have left to the lender's discretion how to respond in the event that a security price drops. Exchanges and the National Association of Security Dealers (NASD) impose margin-maintenance requirements, which specify that the current value of collateral must be at least 25 percent of the margin account's total value. Although the law does not require a "margin call" (meaning the provision of more collateral) unless a new security is purchased, brokerage firms have their own margin policies, which are usually stricter than the rules just described. Brokerage policy can also take the investor's portfolio diversification into account.

In overseeing broker/dealers, the SEC requires that margin accounts not be opened for customers lacking a full understanding of the transaction. In addition, brokers violate rule 10b-5 if they enter transactions knowing customers do not have sufficient funds in their margin accounts.

How Did the Laws Develop?

The practice of buying stocks on margin is long-standing. As Malloy (1989) notes, investors at the turn of the 20th century could have bought stocks with

³ Regulations X, G, and U are similar and apply to other cases.

⁴ House Report Number 1383 (Item 18 in Ellenberger and Mahar 1973, Vol. 5, p. 99) states that the rule "would operate to permit, at the present time, an average initial loan of 65½ percent of market value on the stocks now listed on the New York Stock Exchange, or, from the customer's point of view, a margin of only 34½ percent. Under this alternative standard, the margin is only 25 percent in the case of a security that is selling at not more than 33⅓ percent above its 3-year low. As the security increases in price, the margin required gradually increases proportionately until, when the security has reached a price that is more than 80 percent above its 3-year low, a margin of 45 percent is required. This flexible margin standard permits a relatively low margin in the case of stable securities such as bonds, while it requires a higher margin in the case of volatile securities after they have risen substantially in market price."

a down payment of 10 percent. The money panic of 1907 and the money-trust investigation of 1912 brought public attention and concern to the amount of loans used in connection with margin accounts. Such concern prompted the NYSE to regulate margin loans in 1913. Malloy notes,

The initial purpose for the regulation of margin was to protect speculators from their own poor judgment because low margin requirements allows individuals to purchase a large stock position with only a small margin of cash as a down payment. (p. 697)

The stock market crash of 1929 brought renewed attention to the regulation of margins, because margin was heavily used during 1928 and 1929. Report 1455 of the Committee on Banking and Currency, submitted to the Senate in 1934, stated that although only 15 percent of brokerage customers used margins in 1934, 39 percent used them from December 31, 1928, through July 31, 1929. Moreover, use of margin increased by 10 percent during this seven-month period.

In the deliberations leading up to passage of the 1934 Exchange Act, three distinct motivations underlying margin regulation can be distinguished (Karmel 1970): protecting investors from their own poor judgment, limiting volatility induced by low margin requirements, and allocating credit to productive investment rather than to speculation.

The protection of investors from their own cognitive errors and imperfect self-control remained a reason for regulating margins. Consider, for example, the following passage from the general analysis of the senate version of the bill underlying the 1934 act (Report 792):

Margin transactions involve speculation in securities with borrowed money. The ordinary procedure is for a broker to extend credit to his customer in order to finance the purchase of a security, the broker in turn borrowing from a banking institution or another broker. The ease and celerity with which such a transaction is arranged, and the absence of any scrutiny by the broker of the personal credit of the borrower, encourage the purchase of securities by persons with insufficient resources to protect their accounts in the event of a decline in the value of the securities purchased. Many thoughtful persons have taken the view that the only way to correct the evils attendant upon stock market speculation is to abolish margin trading altogether. A Federal judge furnished this committee with instances from his long experience on the bench, indicating that a large proportion of business failures, embezzlements and

even suicides in recent years were directly attributable to losses incurred in speculative transactions.

Although protection of individuals from their own cognitive errors and imperfect self-control remained a goal of margin regulations, the crash of 1929 and subsequent Great Depression emphasized the need to protect all investors and the economy from actions of those investors who lack self-control.

The goal of protecting investors and the economy is evident in President Roosevelt's March 26, 1934, letter to Senator Duncan Fletcher:

The people of this country are, in overwhelming majority, fully aware of the fact that unregulated speculation in securities and in commodities was one of the most important contributing factors in the artificial and unwarranted "boom" which has so much to do with the terrible conditions of the years following 1929.

I have been definitely committed to definite regulation of exchanges which deal in securities and commodities. In my message I stated, "It should be our national policy to restrict, as far as possible, the use of these exchanges for purely speculative operations."

I am certain that the country as a whole will not be satisfied with legislation unless such legislation has teeth in it. The two principal objectives are, as I see it First, the requirement of what is known as "margins" so high that speculation, even as it exists today, will of necessity be drastically curtailed; and

Second, that the Government be given such definite powers of supervision over exchanges that the Government itself will be able to correct abuses which may arise in the future.

We must, of course, prevent insofar as possible manipulation of prices to the detriment of actual investors, but at the same time we must eliminate unnecessary, unwise, and destructive speculation.

Margin regulations were viewed as a way of preventing the excesses of one group from spilling over and damaging innocent bystanders through unnecessary volatility. Thus, the second purpose of margin regulations was also the facilitation of a fair and orderly market. A 1934 Commerce Committee report states,

So far as possible, the aim should be to try to create a condition in which fluctuations in security values more nearly approximate fluctuations in the position of the enterprise itself and of general economic conditions—that

is, tend to represent what is going on in the business and in our economic life rather than in mere speculative or “technical” conditions in the market. . . . The real evil in this situation is that the resulting speculation affects the national economy. (Ellenberger and Mahar 1973, Vol. 5, p. 5)

The link between margins and volatility is that raising margin requirements reduces the effective demand for stock by speculators who overvalue the market. Reducing demand would reduce overvaluation in the market (President Roosevelt’s “artificial and unwarranted ‘boom’”). Therefore, any subsequent correction would not require a steep fall. Moreover, in a market decline, higher margin requirements would reduce margin-call selling and, thus, would dampen the extent of a decline.

The implicit assumption in the above argument is that a definitive relationship exists between volume and price movements. In other words, by using margin requirements to reduce trading volume during speculative sprees, speculative price bubbles would be dampened, if not extinguished. Speculative overoptimism, however, can be counteracted by informed short selling; high volume and speculative fervor do not necessarily produce a price bubble. Nevertheless, short selling came to be viewed in a negative light after the 1929 crash, and consequently, margin requirements were seen as a partial substitute for short selling to dampen the effect of overly enthusiastic investors.⁵

The third purpose of margin regulations was to prevent capital from being diverted from sound economic investment into speculative activity. This issue appears to have been stressed in the House of Representatives as being the most important of the three issues. As stated in House Report 1383:

The main purpose of these margin provisions in section 6 is not to increase the safety of security loans for lenders. Banks and brokers normally require sufficient collateral to make themselves safe without the help of law. Nor is the main purpose even protection of the small speculator by making it impossible for him to spread himself too thinly—although such a result will be achieved as a byproduct of the main purpose.

⁵ A fascinating parallel exists between the debates about margin following the 1929 and the 1987 stock market crashes. Futures margin is different in form from stock margin, but both are techniques for increasing leverage. In particular, low margin requirements associated with the sale of index futures enable investors who anticipate a decline in stock prices to achieve the equivalent of short sales of stock. Therefore, the same broad policy questions apply to the 1987 crash as the 1929 crash.

The main purpose is to give a Government credit agency an effective method of reducing the aggregate amount of the nation's credit resources which can be directed by speculation into the stock market and out of other more desirable uses of commerce and industry—to prevent a recurrence of the pre-crash situation where funds which would otherwise have been available at normal interest rates for uses of local commerce, industry, and agriculture, were drained by far higher rates into security loans and the New York call market. Increasing margins—i.e., decreasing the amounts which brokers or banks may lend for the speculative purchase and carrying of stocks—is the most direct and the most effective method of discouraging an abnormal attraction of funds into the stock market.

Efficiency and Fairness

The three forces motivating margin regulations—investor protection, volatility, and credit allocation—represent different facets of efficiency and fairness. By and large, the prevailing view at the time of the Securities and Exchange Act was that margin requirements enhanced both efficiency and fairness—efficiency by reducing volatility and improving the allocation of credit, fairness by protecting individual investors.

We suggest that all the major efficiency categories have a bearing on margin regulation: Pareto efficiency with respect to portfolios and resource allocation and informational efficiency. The following discussion is also prompted by the following questions: Relative to the situation prior to the 1934 act, how were efficiency and fairness improved? How were they diminished?

Margin regulations are detrimental to Pareto efficiency not because of monopoly power, externalities, or asymmetric information, but rather because of restrictions on choice. Recall that the notion of Pareto efficiency is based on investors choosing “subjectively” optimal compositions of their wealth, unencumbered by additional constraints. Margin requirements deny investors the opportunity to engage in trades perceived by all parties at the time of contract as mutually beneficial. The credit allocation issue can also be viewed in Pareto terms, although no actual grounds support the view that margin requirements generate a superior allocation of credit. Nevertheless, an argument was made in the House of Representatives when the Securities Exchange Act was being debated that the main reason for margin requirements is the achievement of superior resource allocation. Specifically, margin regulations would prevent capital from being diverted from sound economic investment into speculative activity. Based on Pareto efficiency, this argument rests on “objective” rather than subjective criteria and is *ex post* rather than *ex ante*.

The efficiency reasoning used by the House is widely accepted today to have been based on its inaccurate understanding of how financial markets work. Indeed, some commentators understood this point even at that time. The FRB's director of Research and Statistics explained the fallacy of the House argument quite succinctly in his testimony at the congressional hearings on the Exchange Act:

It is often said that the stock exchange diverts funds from business to the stock market. As a general statement, that statement is not, strictly speaking, correct, because that credit does not stay in the stock market.

As to informational efficiency and the volatility motivation, the argument was that low margins allow investors who act on poor judgment to prevent financial markets from achieving informational efficiency. Although disagreeing with Congress about how effective margin requirements would be in allocating credit, FRB staff members did support the view that margin requirements would dampen the tendency for security prices to rise too high and fall too fast (Karmel 1970).

The extent to which margin requirements improve the market informational efficiency is an empirical question. On balance, the current evidence is mixed.

Flexibility in margin standards permits variation in margins, which permits one to test whether margins do, in fact, dampen volatility. A study by Hsieh and Miller (1990) found no evidence that stock market margin requirements have served to dampen stock market volatility. This finding parallels the findings of earlier work by Moore (1966) and Officer (1973) but is opposite to the conclusion drawn by Hardouvelis (1988).

If a statistical relationship does exist between margins and volatility, then a key question is whether changes in margins lead or lag changes in volatility. Evidence shows that adjustments of margin standards consistently *lag* changes in volatility. Schwert (1988) found that the FRB has tended to raise margin requirements when the market was booming and cut them after a fall. Of course, this result is exactly the way the flexible formula built into the 1934 act was intended to work (higher margins in boom markets).⁶

As to fairness, freedom from misrepresentation, equal information, and equal bargaining do not apply to margin requirements. The pertinent fairness issues concern freedom from coercion, correct prices (fair and orderly markets), equal processing power, and freedom from impulse.

⁶ Whether such flexibility affects subsequent volatility is unclear.

The objective of protecting individual investors permeates the Securities Act of 1933 and the Securities Exchange Act of 1934. The prevalent perception of fairness in the minds of those advocating margin requirements appears to have been paternalism, by which we mean equal processing power and freedom from impulse. Remarks by President Roosevelt link margin to unwise risk bearing based on cognitive error:

Such speculation has run the scale from the individual who has risked his pay envelope or his meager savings on a margin transaction involving stocks with whose true value he was wholly unfamiliar . . .

The paternalistic view was echoed by the Dickenson Committee. As the following quotation suggests, however, the committee emphasized margin requirements as a treatment for compulsive gambling (lack of self-control):

It must always be recognized that the average man has an inherent instinct for gambling in some form or other. It has been recognized as a social evil. . . . If, as your committee believes, it is desirable to curb excessive speculation, one of the principal points of attack must be the restriction within sound limits of margin trading.

Although an investor might suffer from both cognitive errors and insufficient self-control, possibly only one may apply to behavior. An example of behavior resulting from a cognitive error is forming a highly undiversified portfolio of high-risk stocks purchased on margin. An investor might choose such a portfolio by overestimating the return and underestimating the risk inherent in the choice. This choice might be reasonable if the beliefs were correct, in which case the issue does not involve self-control. An example of behavior resulting from a failure of self-control but not cognitive error is an investor holding a well-diversified stock portfolio (such as an index fund) but not being able to refrain from margining the portfolio to the hilt. A higher margin limit can be beneficial to either type of investor.

Ideally, margin requirements would be imposed only on those investors who engage in excess speculation rather than using a “wide net” approach of subjecting all investors to such requirements. Using a wide net raises additional fairness issues beyond paternalism. Specifically, investors not subject to cognitive errors or self-control difficulties are coerced into taking less-risky positions than they wish. Consequently, margin requirements enhance paternalistic fairness for one group, but only by treading on the rights of others.

Deliberations about the fairness of margin requirements have also involved

the notion of correct prices—a fair and orderly market. Recall that this notion combines both fairness and efficiency, because it is based on the right to what is perceived as informational efficiency. In 1934, this aspect of fairness was discussed in connection with the externalities dimension of excess volatility. At issue was uninformed speculators driving stock prices out of line with value, thereby infringing on the rights of others to a fair and orderly stock market.

Conclusion

The perception in 1934 was that higher margin requirements make markets fairer in the sense of offering greater protection to investors prone to using margin as a means to take undue risks. Investors interested in highly leveraged positions but not prone to mistakes would thereby be coerced, but given that almost 40 percent of all transactions during 1929 were margin transactions, the sense was surely that protecting one group of investors was more important than coercing others. Higher margin requirements were also perceived to reduce excess volatility, thereby enhancing informational efficiency. As the 1988 Brady Commission report testifies, the perception that margin requirements reduce volatility has persisted into the present, despite the mixed reviews from academicians in this regard. Margin requirement adjustments appear to follow periods of high volatility. Agreement is uniform, however, that margin requirements interfere with Pareto efficiency. In terms of trade-off, then, fairness as equal processing power and freedom from impulse is achieved at a cost in Pareto efficiency and increase of coercion. The impact on informational efficiency is still an open question.

6. Suitability Regulations

Suitability rules revolve around the responsibilities of securities brokers to their customers. As Roach (1978) notes, the sources of suitability principles are fragmented and elusive, which makes generalizations about suitability difficult. To anchor the discussion, we begin with some frameworks defining the responsibilities of brokers to their customers.

Frameworks for Suitability Rules

The first framework, *no suitability*, allows brokers to misrepresent securities. The second framework, *no paternalism*, requires brokers not to misrepresent securities they recommend to their customers. Brokers do not need to elicit information about the financial situations and needs of their customers, nor must they refrain from recommending securities they believe are unsuitable to their customers.

The third framework is *limited paternalism*. Like the no-paternalism framework, the limited-paternalism framework prohibits brokers from misrepresenting securities they recommend to customers. The limited-paternalism framework also resembles no paternalism in not requiring brokers to elicit information about customers' financial situations and needs. The limited-paternalism framework does require brokers to recommend only securities they believe are suitable to their customers based on facts disclosed voluntarily by the customers and to refrain from selling securities unsuitable to their customers even if customers insist on such securities.

The fourth framework, *full paternalism*, is identical to limited paternalism but adds that brokers must elicit and verify information from customers about their financial situations and needs.

The current framework used in suitability regulations is apparently the full-paternalism framework. Consider a recent ruling by an American Arbitration Association panel reported by Geyelin (1991):

Even a discount broker can't let a client race headlong down the road to ruin.

That's the ruling of an arbitration panel in Fort Lauderdale, Fla., which determined that Charles Schwab & Co. breached its obligation to supervise the investment strategies of one of its customers by allowing him to rack up continued losses.

The ruling is believed to be the first in which a discount brokerage, which generally offers its customers no investment advice, has been held accountable for losses for failing to maintain ongoing supervision of the client's suitability as an investor. . . . [The client], Mr. Peterzell, was held responsible for the balance because "he contributed to his losses," according to the ruling.

The decision takes one step farther an arbitration decision in Mr. Peterzell's favor last November against Dean Witter Reynolds Inc. . . . The decision was among the first arbitration rulings to hold that brokers have a duty to protect customers from pursuing investment strategies destined to fail. . . .

At Schwab, . . . Mr. Peterzell misrepresented himself as the vice president of a mail-order catalogue company, a home business operated by his father. . . .

Despite Mr. Peterzell's misrepresentations, the panel held that Schwab should have kept an eye out on his mounting losses and realized that "they were disproportionate to his claimed net worth and annual income."

The *Peterzell* case can be considered an extreme case of full paternalism in the implicit requirement that brokers verify customers' claims about their financial condition and ability to bear risk. That requirement is, however, the current state of the suitability doctrine.

How Did the Laws Develop?

The full-paternalism framework may be where the law stands today, but it is not where the law started. Indeed, at the beginning, the law was probably closest to the no-paternalism framework. The origin of the suitability doctrine can be traced to the 1934 Securities Exchange Act and the events precipitating it. The 1934 act created the SEC and empowered it to enforce the 1934 and 1933 acts. Among other provisions, the 1934 act requires stock exchanges to

register with the SEC and provides the SEC with authority to approve the exchanges' rules.

The 1934 act defined the SEC areas of expertise only broadly, asking the SEC to create its own rules. Seligman (1982) notes that the 1934 act "conferred on the SEC vague powers to use its discretion in issuing rules where appropriate in the public interest or for the protection of investors" (p. 99).

The act's language is vague and unclear about whether Congress intended the SEC to protect investors through full and truthful disclosure, in the spirit of the 1933 act, or whether the SEC could go beyond disclosure in its effort to protect investors.⁷

The Pecora hearing in the wake of the 1929 crash revealed many abuses of investors at the hands of securities dealers. Seligman (1982) notes that the SEC wanted to play police of last resort in this situation. The SEC under William Douglas, its first chairman, encouraged securities dealers to form voluntary organizations to police dealers who bring disrepute to their profession. In 1937, Douglas invited leaders of the investment banking community to discuss voluntary policing organizations and their coordination with the SEC. Seligman notes,

Government would keep the shotgun, so to speak, behind the door, loaded, well oiled, cleaned, [and] ready for use but with the hope it would never have to be used. (p. 185)

⁷ Suitability rules are in the domain of the SEC, the NASD, and the stock exchanges. Some interpret the New York Stock Exchange "know-your-customer" rule as an implicit suitability rule. The "know-your-customer" rule provides:

Every member organization is required to . . . use due diligence to learn the essential facts relative to every customer, every order, every cash or margin account accepted or carried by such organization and every person holding power of attorney over any account accepted or carried by such organization.

Similarly, the SEC suitability rule is clearly in the full-paternalistic framework. As Roach (1978) notes,

By requiring both full disclosure of risk *and* an independent determination by the broker that the transaction is suitable for the customer, rule 15C2-5 apparently rejects the idea that a suitability requirement should be directed allowing a customer to determine for himself the appropriateness of the transaction after full disclosure of the risks involved by the broker. (p. 1089)

The 1934 act gave the SEC authority over dealers in the registered exchanges, not those in the over-the-counter (OTC) market, but Senator Francis Maloney introduced legislation to extend Douglas's policy principle to OTC dealers. Negotiations with the securities dealers on the provisions of the Maloney Act were difficult; dealers of municipal securities, for example, lobbied successfully for an exemption.

The Whitney scandal in March 1938 provided additional pressure to enact the Maloney bill. Richard Whitney, the president of the NYSE, was accused and later convicted of embezzling money from the exchange. The Maloney Act, which was enacted in June 1938, established the NASD to formulate rules to prevent abuse in the sale of securities and protect investors and the public interest. Article III, section 2, of the NASD Rules of Fair Practice states,

In recommending to a customer the purchase, sale, or exchange of any security, a member shall have reasonable grounds for believing that the recommendation is suitable for the customer on the basis of the facts, if any, disclosed by such customers as to his other security holdings and as to his financial situation and needs.

A review of SEC decisions by Roach (1978) reveals a shift from what he calls a "subjective" standard of suitability, to an "objective" one. Subjective suitability is suitability to the customer *in the customer's own eyes*, given the broker has not misrepresented the facts. It corresponds to our no-paternalism framework. Objective suitability is suitability to the customer *in the eyes of a broker*. A broker violates the objective suitability rule by recommending securities counter to a customer's needs, as the broker judges those needs based on voluntarily disclosed knowledge. Objective suitability thus corresponds to our limited-paternalism framework. Mundheim (1965) states the difference as follows:

Imposition of any suitability doctrine has a revolutionary flavor, because it shifts the responsibility for making inappropriate investment decisions from the customer to the broker-dealer. It does so in what seems to me the correct belief that disclosure requirements and practices alone have not been wholly effective in protecting the investor—including protecting him from his own greed. (pp. 449–50)

Roach (1978) spells out suitability requirements in quotes from SEC decisions in which brokers were found at fault because their recommendations

were regarded as inappropriate in view of the known investment objectives and financial conditions of their customers:

Whether or not customers Z and E considered a purchase of the stock . . . a suitable investment is not the test for determining the propriety of applicants' conduct in the situation before us. The test is whether [the broker] fulfilled the obligation he assumed when he undertook to counsel the customers of making only such recommendations as would be consistent with the customer's financial situation and needs. The record shows that [he] knew all the facts necessary to enable him to realize that reasonable grounds for his recommendations did not exist. (p. 1126)

Roach notes:

Both the NASD and the Commission here suggest that suitability is an objective concept which the broker is obliged to observe regardless of a customer's wishes, a view that the NASD, at least, had previously rejected. The NASD's statement that the customer's "own greed" may well have been their motivation reinforces the idea that the customer is not sovereign for suitability purposes. (p. 1126)

The Securities Act Amendments of 1964 (the SECO suitability rules) empowered the SEC to issue regulations governing registered brokers who are not members of national securities associations such as the NASD. The SECO suitability rule provides:

Every nonmember broker . . . who recommends to a customer the purchase, sale or exchange of any security shall have reasonable grounds to believe that the recommendation is not unsuitable for such customer on the basis of information furnished by such customer after reasonable inquiry concerning the customer's investment objectives, financial situation and needs, and any other information known by such broker. . . .

As can be seen, the SECO rule takes us from the limited-paternalism framework to full paternalism. The rule goes farther than the NASD rule by requiring a broker to make "reasonable inquiry" into a customer's investment objectives and financial situation and needs; the NASD rule refers only to "the facts, if any" the customer discloses.

The SECO suitability rules were preceded by a "Special Study of Securities

Markets.”⁸ As Mundheim (1965) notes, the authors of the special study were concerned that the 1938 NASD rule on suitability allows brokers to avoid the responsibilities of suitability by avoiding information about customers’ investment objectives, financial situation, and financial needs. As Mundheim quotes from the special report, the concern was that:

Under this narrow interpretation of the NASD’s own suitability rule, a salesman might be encouraged to learn as little as possible about the customers to whom they recommend securities. (p. 459)

For example, the broker in the *Greenberg* case argued that he had not violated the NASD suitability rule because he did not have any information about the financial conditions and portfolios of his customers and, therefore, had no obligation to check the suitability of his investment recommendations.

The securities market conditions that prompted the initiation and development of suitability rules have played a large role in the rules’ evolution. As emphasized throughout this study, financial regulations are the outcome of a tug-of-war between views and interests promoting efficiency and those promoting fairness. Efforts of each side at persuasion take place continuously, and these efforts are aided or hindered by “historical accidents,” such as the Whitney scandal. Understanding the effect of historical accidents on the development of the suitability doctrine is important. In the context of suitability, the two important opposing views are paternalism and customer sovereignty.

The original NASD rule came in the wake of the 1929 stock market crash. The doctrine of consumer sovereignty (with mandatory disclosure) won against the paternalistic alternative in the 1933 act, but not for long. The paternalistic view, at least in the suitability context, won a partial victory in 1938, and it clearly rules today. The SECO rules emerged in the wake of a “historical accident” in the form of the 1962 market break. As Mundheim (1965) notes,

The Special Study had its genesis in the excesses of the speculative securities markets of the late 1950s and early 1960s and the disclosures concerning the breakdown in some of the controls over these markets as developed in the investigation of the American Stock Exchange. Further impetus came from the market break in May 1962. Thus, the Special Study was written at a time when investor confidence had been shaken.

⁸ SEC, Report of Special Study of Securities Markets, H.R. Doc. No. 95, 88th Congress, 1st Session, 1963.

One way of sapping investor confidence is by disappointing investor expectations. This is a danger inherent in overselling, and the aggressive merchandising practices of certain segments of the securities industry particularly worried the Special Study. The suitability doctrine is an important counter to such selling practices because of the emphasis it places on concerns for the customer's needs and resources. Moreover, insofar as it encourages the broker-dealer to discuss transactions with his customers—particularly to point out the risks of an investment and relate those risks to the customer's ability to bear them—the suitability doctrine prepares a customer to accept some of the disappointments which inevitably occur in connection with investments in securities. (p. 459)

Changes in market structure and conditions continue to lead to reconsideration and changes in suitability rules. With the 1973 introduction of exchange-traded options, the SEC became concerned that investors lacking sophistication and judgment might take on greater risks than were suitable for them. Roach (1978) notes in this regard:

The Commission required that brokers who sell options would be required to obtain the information relative to the customer's sophistication that is needed in order . . . for the broker . . . to make a reasonable judgment. (p. 1098)

Brokerage companies established additional suitability rules requiring that an investor have a specific minimum net worth as a condition for using options.

The case of the "hot issues" of the late 1960s and early 1970s was similar to the case of options, because a new market led investors to complain they were sold unsuitable securities. The SEC, conducting hearings on selling practices related to hot issues in 1972, noted the issues' high risk, and the NASD circulated proposed suitability language in early 1973:

In recommending to a customer the purchase, sale or exchange of any security which is part of the initial public offering of a company in the promotional, exploratory or developmental stage, a member shall have reasonable grounds for believing that the recommendation is suitable for such customer upon the basis of information furnished by the customer concerning the customer's investment objectives, financial situation and needs, and any other information known by a member. In connection with all such determinations, the member must maintain in its files the basis for and the reasons upon which it reached its determination.

The hot-issues regulations have not been pursued, however. As Roach writes, “Undoubtedly other matters were regarded as more pressing in the context of a bear market from which ‘hot issues’ had all but disappeared.” (pp. 1103–04)

Fairness and Efficiency

We have described suitability rules in three frameworks. We will discuss the trade-off between efficiency and fairness as we move from framework to framework, and we begin with a move from a world where no suitability rules exist to a world where the no-paternalism framework is added.

Recall that the no-paternalism framework requires brokers to provide customers with full and truthful disclosure about the securities they offer, but nothing more. The no-paternalism suitability framework conforms to the 1933 Securities Act, which requires full and truthful disclosure. Brokers within the no-paternalism framework of suitability do not communicate “new” information to their customers. Rather, they replicate existing information that customers can access independently of brokers, and, possibly, they add their interpretation of information available to customers.

Consider first a world where no suitability rules exist. Brokers are allowed to withhold information or misrepresent securities. How does a move from this world to one with a no-paternalism rule affect Pareto efficiency? We examine this question in light of the five major impediments to Pareto efficiency: monopoly power, externalities, asymmetric information, restrictions on choice, and costs.

Monopoly power is not an issue here, because neither brokers nor customers have monopoly power in either framework. Similarly, restrictions on choice are not an issue because customers have the final say in either framework. The issue of externalities is relevant, however, because effort is needed to put the data released under the 1933 act in a framework that is helpful in choosing securities and constructing portfolios. Of course, investors who have the appropriate skills can assemble the data into a useful framework, and investors who lack the skills can learn them, but clearly the nature of information as a public good is such that resources are wasted if investors replicate each other’s work as they transform data into frameworks useful for decision making. Nevertheless, no clear need exists for suitability regulations to solve the problem of externalities. The problem of externalities can be solved if agencies such as Standard & Poor’s, Value Line, Merrill Lynch, and Dean Witter assemble data into frameworks and sell their output to interested investors. Therefore, the move from a no-suitability to a no-paternalism world does not improve Pareto efficiency, because it does not alter the incentives to solve the problem of externalities.

Rating agencies, such as Standard & Poor's, and brokerage companies, such as Merrill Lynch, both can alleviate the problem of externalities, but the two solutions are different because the problem of asymmetric information does not arise with rating agencies but rather with brokers. Specifically, because brokers receive their compensation through commissions on customers' trades, they might be tempted to interpret the data in ways that lead to trades. Of course, rational investors realize they are at an information disadvantage relative to brokers and respond by minimizing trades. Thus, the lemons problem of asymmetric information results and takes away from Pareto efficiency. One way to alleviate the problem of asymmetric information is to create a policing agency, such as the NASD, which can enforce truth-telling by brokers. Therefore, a move from a no-suitability to a no-paternalism world improves Pareto efficiency if the cost of enforcing the law is lower than its benefits.

As to informational efficiency, the move from a no-suitability world to a no-paternalism world cannot be expected to add anything. Note the move does not add information, and it is unlikely to change the incentives to process information into conclusions about security prices as well.

As to fairness, the move to no paternalism clearly violates the right to freedom from coercion, because it coerces brokers to disclose only truthful information. The move does not promote any rights of rational investors, because rational investors are already aware of the asymmetric information problem, and they take proper precautions. The move might promote the right to equal processing power, however, and the right to freedom from impulse if disclosure acts as a cold shower, leading less-than-rational investors to pause and reconsider.

A move from no paternalism to full paternalism in the case of suitability clearly reduces Pareto efficiency.⁹ The move does not affect the issues of monopoly power and externalities because neither exists in this case. The issue of asymmetric information, if it existed, was resolved in the earlier move from the no-suitability to the no-paternalism world. Therefore, only the issue of restrictions on individual choice and the costs of enforcement remain. On that score, the move clearly diminishes Pareto efficiency because the full-paternalism framework prevents customers from buying securities they wish to buy if brokers determine, based on their judgment, that the securities are unsuitable for the customer. The fact that enforcement is costly further diminishes Pareto efficiency.

⁹ We skip the limited-paternalism framework because, although it has been an important way station in the law's development, it is identical to the no-paternalism framework in which brokers can keep themselves ignorant of their customers' financial situations and needs.

Many observers have argued that the suitability restrictions brokers impose on customers in the selection of securities are harmful. For example, Kerr (1985) notes that the focus of the suitability doctrine is entirely on risk and its minimization. She argues that efforts to minimize risk have gone too far:

Risk minimization leads to return minimization—the more conservative the investment, the lower the return. It would be erroneous to believe that all investors at all times would prefer to avoid risk at the expense of experiencing higher returns. The risk-of-loss-at-all-costs posture promoted by the legal approach is not in alignment with the desires of all investors. (p. 807)

Moreover, Kerr notes the suitability doctrine is biased against investors who seek high returns; that is, a broker recommending low-risk securities with inferior expected returns is judged prudent, but a broker recommending higher risk securities and superior expected returns is judged imprudent.

As to fairness, a move from no paternalism to full paternalism clearly diminishes the right to freedom from coercion, because brokers coerce customers to refrain from certain choices. The move adds to the right to equal processing power, however, when customers have less processing power than brokers, and it certainly adds to the right to freedom from impulse when customers who suffer from imperfect self-control are inclined to choose securities determined unsuitable by paternalistic authorities such as brokers.

Conclusion

Suitability rules present a clear case in which some fairness rights win over other rights and over efficiency. A move from a no-paternalism to a full-paternalism world diminishes Pareto efficiency, because it restricts individual choice. The move also diminishes the right to freedom from coercion but promotes the rights to freedom from cognitive errors and to freedom from impulse.

The paternalistic nature of suitability is evident in the incentives it provides to brokers to err on the side of low risk rather than high expected returns. Commentators who approach suitability from a normative perspective argue that the law takes much away and adds nothing. They would certainly be right in the absence of cognitive errors and imperfect self-control. The existence of suitability laws indicates legislators believe that problems of cognitive errors and imperfect self-control exist and should be remedied, even at the expense of efficiency and the right to be free of coercion.

7. Trading Halts

A trading halt is a temporary interruption of the normal course of trading. The law implicitly governing trading halts is the 1934 Securities Exchange Act. Although the act is actually silent as to when trading suspension is required, the SEC has authority to oversee temporary suspension. An SEC rule permits exchanges to suspend trading in accordance with their own rules. The exchange simply reports the dates of suspension and restoration, along with reasons for the suspension.

In addition to regulations regarding trading halts, this chapter discusses some practices related to the concept of trading interruption, notably price limits and short-sale restrictions. Price limits are those upper and lower bounds outside which trading cannot take place. Short-sale restrictions follow the “uptick rule,” which forbids short selling of stock when prices are declining; short selling is permitted only if an uptick has occurred in the price relative to the previous price at which the stock traded.¹⁰ The uptick rule, issued by the SEC in 1937, modified the 16th trading rule, which forbade short sales at a price lower than the price of the previous trade.

History of Trading Halts

In this section, we consider how the attitude toward and practice of halting trading have developed over the past 60 years. Trading halts were initially motivated by some of the manipulative stock-trading practices (e.g., pools) of the 1920s. The original justification for trading suspension was “to prevent fraudulent, deceptive, or manipulative acts or practices” (Loss and Seligman 1989). Therefore, the philosophy underlying the practice is consistent with the overall spirit of the 1933 and 1934 acts.

Brief suspensions of trading are frequent, at least for individual stocks, and

¹⁰ That is, after a plus or a zero-plus tick.

usually occur because of a substantial influx or imbalance of buy or sell orders, or in the event of a news announcement considered to have significant implications for stock prices. The NYSE now reopens trading within 30 minutes of a “news-pending interruption.”

Some trading interruptions result from the closing of the entire exchange. The NYSE will, for example, halt trading for one hour if the Dow Jones Industrial Average (DJIA) declines by 250 points from its previous day’s close and for two hours if the DJIA falls by 400 points. The occurrence of a significant disaster has also led the exchanges to suspend trading. For example, the NYSE closed 28 minutes after President John F. Kennedy’s assassination on Friday, November 22, 1963, and most of the other U.S. exchanges followed. The NYSE has also occasionally closed during the week in order to catch up on a paperwork backlog.

As mentioned earlier, the original legislative language viewed trading halts as justified to “prevent fraudulent, deceptive, or manipulative acts.” In a 1963 revision of the relevant legislation, the Senate Committee elaborated on this view:

. . . the Commission could invoke this suspension power in those cases in which fraudulent or manipulative practices of the issuer or other persons have deprived the security of a fair and orderly market, or where some corporate event makes informed trading impossible and provides opportunities for the deception of investors. Trading would be resumed as soon as adequate disclosure and dissemination of the facts material to informed investment decision were achieved. (Senate Report No. 379, 88th Congress, 1st Session.)

Within the spirit of fraud regulation, exchanges have chosen to suspend trading of a security when, upon an administrative or judicial determination, the security has been deemed to be without value.¹¹

Price limits provide an automatic rule for interrupting pricing in markets experiencing unusual price volatility. For example, some futures markets have a daily price-limit rule permitting trading only when prices stay within limits determined by the previous day’s settlement price. Should the equilibrium price

¹¹ Trade in worthless securities is an interesting issue in and of itself. A classic example is the trading of Russian Imperial Bonds on the American Stock Exchange, which actually reached a high in 1945! In another example, the NYSE did not delist the Imperial Chinese Government’s 5 percent Hukuang Railways Sinking Fund Gold Loan of 1911 until 1963.

move outside these limits, trading ceases. In fact, the trading halt continues until either (1) the equilibrium price moves back within the limits or (2) new limits are set the next day, based on the previous day's settlement price.

Debate about trading interruptions renewed in the wake of the October 1987 stock market crash. Notably, the Presidential Commission on Market Mechanisms (the Brady Commission; see *Report of the Presidential Task Force* 1988) recommended the use of a "circuit breaker" to interrupt trading when the market moves outside a defined range within a short time period:

Circuit breaker mechanisms involve trading halts in the various market segments. Examples include price limits, position limits, volume limits, trading halts reflecting order imbalances, trading halts in derivatives associated with conditions in the primary marketplaces, and the like. To be effective, such mechanisms need to be coordinated across the markets for stocks, stock index futures and options. Circuit breakers need to be in place prior to a market crisis, and they need to be part of the economic and contractual landscape. The need for circuit breaker mechanisms reflects the natural limit to intermarket liquidity, the inherently limited capacity of markets to absorb massive, one-sided volume.

Circuit breakers have three benefits. First, they limit credit risks and loss of financial confidence by providing a "time out" amid frenetic trading to settle up and ensure that everyone is solvent. Second, they facilitate price discovery by providing a "time out" to pause, evaluate, inhibit panic, and publicize order imbalances to attract value traders to cushion violent movements in the market.

Finally, circuit breaker mechanisms counter the illusion of liquidity by formalizing the economic fact of life, so apparent in October, that markets have a limited capacity to absorb massive one-sided volume. Making circuit breakers part of the contractual landscape makes it far more difficult for some market participants—pension portfolio insurers, aggressive mutual funds—to mislead themselves into believing that it is possible to sell huge amounts in short time periods. This makes it less likely in the future that flawed trading strategies will be pursued to the point of disrupting markets and threatening the financial system. (p. 66)

The push for a strengthened circuit breaker mechanism was reinforced by events on October 13, 1989—almost two years to the day following the 1987 crash—when in the absence of clearly discernible significant negative news, the

DJIA experienced a 190-point decline. Program trading was identified as the culprit.

To investigate the role of program trading, the NYSE formed a blue-ribbon panel on market volatility and investor confidence, headed by Roger Smith, former chairman of General Motors. The panel recommended a “four-tier circuit breaker” that would halt trading

- for an hour when the DJIA moves (up or down) 100 points from the previous day’s close,
- for 90 minutes when it moves 200 points,
- for two hours when it moves 300 points, and
- for two hours when it moves 400 points.

In making these recommendations, the panel argued that circuit breakers will “give buyers and sellers a chance to catch their breath and calmly assess their positions during periods of market stress.” (*Market Volatility and Investor Confidence* 1990, p. E-3)

The NYSE panel also made trading-halt recommendations for the futures markets. Its report suggested the following trigger points: percentage movements of 3.7 percent, 7.4 percent, 11.1 percent, and 14.8 percent. The Brady Commission had recommended that a single regulatory authority oversee both stock and futures markets and that futures margin levels be brought closer to stock margin levels.

In addition to its circuit breaker recommendations, the NYSE panel recommended uptick and downtick rules for index arbitrage. After a 50-point decline (advance), index arbitrage sell (buy) orders could occur only after an uptick (downtick). This recommendation reflects the view that index arbitrage can be destabilizing during times of volatility.¹² The uptick rule for index arbitrage parallels the uptick rule for short sales of individual stock.

The development of short-sale restrictions illuminates the attitudes toward particular stock-trading practices by the general public and elected representatives. In the aftermath of the 1929 crash, attention focused on many stock price manipulation schemes: pools, wash sales, matched orders, collusion with the

¹² The NYSE conducted an experiment, known as the “collar,” from January through October of 1988 in which index arbitrage orders were transmitted manually rather than through the computerized trading system if the DJIA moved outside a 50-point collar from its previous day’s close. The collar experiment got mixed reviews on the criteria of efficiency and fairness, and the experiment was subsequently terminated.

specialist, use of insider information, and bear raids (price manipulation schemes in which short sales are used to drive down stock prices artificially).

In May 1931, after newspaper accounts indicated that bear raiders were selling short to depress the market, Congress introduced several bills to restrict short selling. These bills focused on taxing short selling, although one bill proposed imprisonment for short sellers. None of the bills passed. They provide some insight, however, into the attitude of legislators toward short sales. The following remark by Senator Arthur Capper, who introduced two bills, is characteristic: "Short sales . . . exert a vicious influence and produce abnormal and disturbing declines of prices that are not responsive to actual supply and demand."

Short selling (and other practices) generated great animosity between the NYSE and Congress. The NYSE took some small actions, such as placing a temporary ban on short sales during 1931 and adding a "written permission" rule requiring brokers to have written permission from owners of stock before lending that stock for a short sale. Neither of these actions was particularly restrictive.

Interest in regulating short selling appears to have been renewed. A *Wall Street Journal* article dated May 24, 1991, discusses an SEC proposal to compel short sellers to disclose the size of their positions whenever the number of shares sold short exceeds 5 percent of the total shares outstanding. The rationale for the proposal seems to be that such disclosure is a partial substitute for the revelation of insider information. In other words, significant short selling of an individual stock suggests that the seller is in possession of negative nonpublic information about the company. The article quotes SEC Chairman Richard Breeden as saying, "Is it relevant to investors to know large short positions? It may be relevant."

The issue is not really a new one; it is a further indication of ebb and flow in a cyclical debate. A 1934 Senate report (No. 1455, Item 21 in Ellenberger and Mahar 1973) addressed a similar point in explaining why "selling against the box" became illegal for corporate insiders:

In such a transaction the seller owns and possesses stock which he can deliver but which for some reason he prefers not to deliver. This is a device which can be employed by corporate officials and insiders who desire to sell their corporation's stock short without disclosing such short selling. . . . It is contended by stock exchange authorities that a sale "against the box" is not a short sale, since the customer need not buy the stock back but may make delivery from the securities in his box. It is plain, however, that where a person initially makes a sale "against the

box” but subsequently changes his mind, there is nothing to prevent him from covering in the open market. In such case he is indistinguishable from any other short seller. (p. 52)

Efficiency and Fairness

The efficiency aspects of trading halts are Pareto efficiency (both portfolio and resource allocation) and informational efficiency. A financial market trading halt prevents two parties from entering into an agreement that both view as beneficial. Trading halts, therefore, are detrimental to Pareto efficiency with respect to portfolio selection. Note, however, that the argument is a first-best one.

The Brady Commission made the point that circuit breakers enhance efficiency during a sharp decline by permitting settling up “to ensure that everyone is solvent.” This aspect is a second-best feature.

Brennan (1986) points out that price limits provide a partial substitute for costly margin in futures markets. This approach is not only a second-best argument, but one that indicates that price limits enhance Pareto efficiency by reducing the costs incurred to deal with potential breach of contract. To understand Brennan’s point, observe that futures margin is used to achieve daily settlement of gains and losses in trading. Traders who suffer daily losses in excess of their current margin balance have a potential incentive to renege on the contracts to limit loss to their margin balances. Brennan argues that, when price limits are less than margin requirements, the traders might be denied knowledge of the equilibrium price, which would make the net benefit of breaching the contract unclear. The efficiency benefits come about because margin is costly for reasons concerning the adverse tax treatment of risk-free securities used for margin accounts and differential borrowing and lending rates that arise to cope with moral hazard in credit markets.

In theory, trading halts have the potential to interfere with resource allocation. For example, farmers may alter their seeding schedules if trading in futures on their crop has been halted for several days because the equilibrium price has declined below the lower limit, causing them to be unable to sell contracts on that crop. We are unaware of any evidence, however, that trading halts of the type experienced in financial markets introduce major resource allocation costs.

The impact of trading halts on informational efficiency depends on whether informational efficiency is achieved in the absence of trading interruptions. If prices correctly reflect public information, then trading halts reduce the informational efficiency of the market by driving a wedge between price and value. If prices reflect not only information but also panic, however, then a

trading interruption could theoretically enable market participants to recover from the panic that was causing price to deviate from value. This view was clearly the one expressed in the earlier quotation from the Brady Commission report that circuit breakers “facilitate price discovery by providing a ‘time out’ to pause, evaluate, inhibit panic, and publicize order imbalances to attract value traders to cushion violent movements in the market.”

Another view accepts volatility but rejects the notion that circuit breakers can mitigate that volatility. In an appendix to the NYSE panel report, Sanford Grossman argues that, in truly turbulent periods, natural trading interruptions, such as the closing bell, do not seem to dampen volatility. Ultimately, the impact of trading halts on informational efficiency is an empirical issue.

As to fairness, remember that the present analysis is a positive exercise, with the objective of explaining how perceptions of fairness interact with efficiency to shape regulation. In this regard, we note that the NYSE panel report includes a section titled “Concerns about Fairness, Trading Abuses, and Manipulation.” This section addresses a number of issues that arose from a survey the panel conducted in connection with program trading. The fairness issues this survey uncovered are pertinent to trading halts because circuit breakers were the panel’s main response to difficulties associated with program trading. In highlighting the findings, the report states

Investors have come to accept program trading and volatility as part of the operation of the marketplace. However, they feel there are ways in which the whole process can operate more fairly and are calling for constructive steps to be taken to protect their interests.

Brokers, even more than investors, feel that more things can be done regulation-wise to ensure a more equitable process. (*Market Volatility and Investor Confidence* 1990)

In the body of the report, the panel indicated that investors communicated concerns about several issues:

- *Front-running*—trading on the basis of nonpublic information about imminent block transactions or derivative securities
- *Volatility*—uncontrolled program trading, which may contribute to excess volatility
- *Index arbitrage*—market professionals can engage in index arbitrage at lower cost than can small investors

The fairness issues such concerns imply involve coercion, equal information, correct prices (fair and orderly markets), equal processing, freedom from impulse, and equal bargaining power. Only freedom from misrepresentation is not relevant to this discussion. With regard to the right not to be coerced, certainly trading halts coerce traders into refraining from trade.

Although trading halts were enacted “to prevent fraudulent, deceptive, or manipulative acts or practices,” the fraud in question does not pertain to acts of misrepresentation. The news-pending interruption seems rather to relate to equal access to information. Clearly, an insider has knowledge of news about to be released, so the trading interruption serves to diminish the opportunities for insiders to capitalize on the news. In the 1963 Senate Committee report quoted earlier, the reference to “fraudulent or manipulative practices of the issuer” is consistent with equal information. The investor complaints documented within the NYSE panel report about the unfairness of front-running are certainly based on the entitlement to equal information.

A correct prices interpretation of “fraudulent or deceptive” is also possible. Specifically, trading should be halted until private information is made public, regardless of whether insiders would trade on the information. The 1963 Senate Committee report contains remarks consistent with this interpretation. The most explicit of these is the outright use of the phrase “deprived the security of a fair and orderly market.”¹³

Other remarks in the same vein include “where some corporate event makes informed trading impossible and provides opportunities for the deception of investors” and “[t]rading would be resumed as soon as adequate disclosure and dissemination of the facts material to informed investment decision were achieved.” Certainly one of the primary notions of fairness is the entitlement to trade at what are perceived to be correct prices. This right has been emphasized since the 1987 crash, as evidenced by the NYSE survey, which found investors regard as unfair the perceived volatility caused by program trading.

¹³ An interesting link between correct pricing and ethics concerns the norm used by short sellers who cover themselves with call options in case the shorted security rises in price. The following passage from a 1934 Senate report indicates that, when short selling is responsible for a price reduction, the ethical norm at the time was for short sellers to exercise their options, even if the options were out of the money.

The failure to exercise an option after short-selling operations have driven the price of a security down is considered unethical among traders. Nevertheless, in the case of two options Cutten assumed a short position and when the market receded covered his short position by purchases in the open market, rather than by the exercise of his options.

Cognitive errors and deficient self-control are implicit in the many statements concerned with panic. For example, one reason the Brady Commission supported circuit breakers is to counter the cognitive error that order imbalance is a minor problem because markets have an unlimited “capacity to absorb massive one-sided volume.” Some evidence indicates investors think they need protection—for example, the NYSE panel’s statement that investors “feel there are ways in which the whole process can operate more fairly and are calling for constructive steps to be taken to protect their interests.” There is little evidence to suggest that trading interruptions have been viewed as a way to protect investors from their own mistakes. Rather, the protection apparently applies to information and cost asymmetries. Therefore, fairness as either equal processing or freedom from impulse strikes us as, at most, a minor concern with regard to trading halts.

The final fairness issue concerns index arbitrage. In a subsection entitled “Index Arbitrage Is Perceived to be Unfair” (p. 19), the NYSE panel report indicates that index arbitrage drew investor criticism because market professionals can engage in the activity at lower cost than small investors. Formally, this issue is akin to equal bargaining power in the sense that a fair bargaining outcome is invariant to bargaining power. In this case, power is derived from trading costs. For example, the 1988 NYSE collar experiment was regarded as unfair because it deprived those index arbitrageurs who relied on computerized trading but were not on the exchange floor operating when the collar was in effect.

One of the most intriguing elements of the efficiency/fairness trade-off issue is the tension between informational efficiency and the right to trade at what are perceived to be correct prices (fair and orderly markets). This tension results from the difference in perspective as to what constitutes correct prices. When specialists trade from their own accounts to alleviate order imbalances, do they assist or interfere with correct pricing? That is, do the specialists prevent overreaction to new information or cause underreaction?

The fair and orderly view is that specialists prevent overreaction; a contrary view is that the specialists’ actions make the market informationally less efficient. This difference in perspectives has been evident in various debates about financial market regulation. We offer two illustrative quotations. The first, from the NYSE panel report, concerns the difference between pricing in the futures and options markets and pricing on the NYSE:

While the futures and options markets are designed to allow prices to move rapidly, NYSE rules deliberately attempt to slow down price changes. These conscious choices reflect, on the one hand, for example,

the futures markets' desire to let prices adjust quickly to new information and, on the other hand, the NYSE's desire to increase the short-term predictability of transaction prices.

The difference in the speed of the two markets divides observers into two camps. One side believes that futures prices move too fast and/or too much and that index arbitrage then transmits these "excessive" movements to the cash market. The other side believes that individual stock prices move too slowly and that the stabilization efforts of NYSE specialists and the NYSE's price continuity rules slow down the incorporation of new information into stock prices. Therefore, when new information moves futures and options prices, index arbitrage opportunities arise.

The division of opinion between the "too fast" and "too slow" groups appears to reflect preferences rather than objective evaluations. Some want to maximize market efficiency by allowing prices to reflect news almost instantaneously, even if it means very sharp price changes (and possibly overreaction). Others are willing to sacrifice a little bit of market efficiency, slowing down the incorporation of news into prices so as to get smoother price changes (and possibly less overreaction). (pp. 17–18)

The second quotation, bearing on the difference between fair pricing and informational efficiency, is from *Stock Exchange Practices*, Report 1455, Committee on Banking and Currency, June 6, 1934. The quotation includes a summary discussion of short selling and then moves to an interchange during a Congressional hearing between Senator Carter Glass and Richard Whitney, then president of the NYSE.

Short selling. Few subjects relating to exchange practices have been characterized by greater differences of opinion than that of short selling. The proponents of short selling contend that it is a necessary feature of an open market for securities; that in a crisis short sellers are useful in maintaining an orderly market; and that their activities serve as a cushion to break the force of a decline in the price of stocks.^[14] Its opponents assert that short selling unsettles the market, forces liquidation, depresses prices, accelerates declines, and has no economic value or justification. . . . (p. 50)

¹⁴ Because they have to buy stock sold short in order to close out their positions.

Senator Glass: Mr. Whitney, I am beginning to wonder what we are here for. What culpability is involved in selling short?

Mr. Whitney: To make the distinction, if I understand your question, Senator Glass, as to what we consider selling short legitimately we know of no culpability. But bear raiding we are most antagonistic against, and—

Senator Glass (interposing): . . . I may understand why you abhor bear raiding, and yet I want to know what there is culpable in it. You talk about demoralizing the market. As I conceive it, the market could be more dangerously demoralized by being bet way up than it might be by short selling.

Mr. Whitney: That may be.

Senator Glass: Why do you make rules against demoralizing the market in short selling and put no restrictions upon betting the market up?

Mr. Whitney: Perhaps I failed, Senator Glass, to impress upon you just that point this morning when I stated that our rules were in both directions, that our rules covered absolutely any demoralizing of the market or depressing of the market and giving a tendency toward fictitious prices. . . . Anyway, it is in a single paragraph. The effect of the rule is to prevent doing something that will demoralize the market or create the impression of fictitious prices whether it be by bear raiding or bull raiding, as you describe it. (p. 51)

Some issues about short selling involve insider trading. Because the issues center on insider trading, however, and short sales are peripheral, we defer discussion of the relevant efficiency/fairness trade-offs to Chapter 8 (Insider Regulations).

Conclusion

Trading halts stem from the concern that prices may be driven away from their efficient values for a variety of reasons, including panic. Trading halts reduce Pareto efficiency by preventing trades that all parties perceive as beneficial. Nevertheless, an argument by Brennan (1986) suggests a compensating factor may exist in that trading halts help to economize on margin costs in futures markets. Whether trading halts contribute to informational efficiency is an issue about which opinions differ.

Trading halts are perceived to enhance fairness through the entitlement to correct prices and equal access to information. Fairness is impaired, however, because traders are coerced to refrain from trading.

8. Insider Regulations

The legal treatment of insider trading is unusual in that the prohibited activity is not defined by legislation. The “law” concerning insider trading has developed through a series of court decisions.

Insider trading law has its origins in state corporate law. Between 1900 and 1930, state courts developed three approaches to dealing with insider trading. The first, known as the *no-duty* rule, stipulates that insiders have no duty of disclosure and can trade on inside information in their possession. The second approach, *special circumstances*, permits insider trading without disclosure only in the absence of special circumstances. Finally, the *fiduciary-duty* rule requires insiders to disclose material information when buying from shareholders. During the 1930s, the latter two approaches were applied when insiders engaged in face-to-face transactions with existing shareholders. In exchange transactions, however, the no-duty approach was followed.

In the following discussion, we shall refer to modified versions of these approaches and add others. The no-duty concept will remain as is. Fiduciary duty will have two versions, the one provided previously (a weak form) and a strong form that precludes trading based on information obtained from an insider having a fiduciary responsibility. In addition, information as *property* precludes someone from trading on (nonpublic) information regarded as another person’s property. Finally, *outright prohibition* precludes trading based on any material nonpublic information. Strong contrasting views have developed about the appropriate approach to use in delimiting those insider trading activities that are illegal, which is an important reason the law has not defined insider trading.

Despite the fact that state insider trading laws are not preempted by federal law, the foundation of U.S. insider trading law is the 1934 Securities Exchange Act. Classic insider trading involves transactions between corporate officials possessing inside information and uninformed investors. Section 16 of the 1934 act contains a provision concerning people who own at least 10 percent of a corporation’s stock or who have particular positions of control within the

corporate organization. This section allows such insiders to trade but requires them to pay any profits derived from insider trading to the corporation if they buy and then sell the stock within six months.

Note that section 16 does not require disclosure, and fraud is irrelevant, but the 1934 act contains a general antifraud provision in section 10b on which all insider trading prosecutions since 1961 have been based. Rule 10b-5 makes it unlawful to

employ any device, scheme, or artifice to defraud, [or] . . . to engage in any act, practice, or course of business which operates or would operate as a fraud or a deceit upon any person, in connection with the purchase or sale of any security.

Curiously, the SEC took 25 years to recognize that section 10b and rule 10b-5 apply to insider trading. Neither was cited in connection with insider trading prosecutions until 1961, perhaps because “insider trading” is not explicitly defined in the act. Subsequent amendments to it have also failed to provide an explicit definition, so the law itself focuses on penalties and sanctions rather than on demarcating the border between acceptable and unacceptable behavior.

In 1984, Congress enacted the Insider Trading Sanction Act (ITSA), which expanded the enforcement mechanisms available to the SEC. Under pre-ITSA law, the SEC used civil injunctions, disgorgement, administrative proceedings, reports of investigation, and criminal prosecutions. ITSA amended the 1934 act to permit treble damages (a civil monetary penalty of up to three times the profit gained or loss avoided by the insider) in addition to disgorgement. ITSA also increased the maximum criminal fine from \$10,000 to \$100,000.

In 1988, Congress enacted the Insider Trading and Securities Fraud Enforcement Act, which holds financial firms liable for insider trading by employees and subjects them to treble damages, imposes 10-year jail sentences for violators, allows investors trading contemporaneously with insiders to sue for damages, and permits a bounty to be paid to informers on insider trading.

How Did the Laws Develop?

During the 1930s, when the Securities Act and the Securities Exchange Act were passed, transactions between corporate officials possessing inside information and uninformed investors were not regarded as fraudulent in most jurisdictions. The antifraud provisions of the 1934 act actually stemmed from a variety of stock price manipulation practices, such as pools, that were common during the 1920s. Recent prosecutions of insider trading have all been based on the antifraud provisions of the 1934 act.

Insider trading law has developed through a process of SEC rule making and judicial interpretation. In a 1961 administrative proceeding against a regulated broker/dealer, *In re Cady, Roberts, and Co.*, the SEC first contended that insider trading constituted fraud or deceit under rule 10b-5(C) of the Securities Exchange Act. In this case, a stockbroker began selling after being tipped by a director of the Curtiss-Wright Corporation that the company was about to reduce its dividend. The SEC appears to have been using, at the least, a strong version of fiduciary duty as its approach to characterizing illegal insider trading, although its philosophy may well have been outright prohibition.

Legal precedent was not set until the 1968 case *SEC v. Texas Gulf Sulphur Co.* The U.S. Court of Appeals for the Second Circuit held that anyone in possession of material nonpublic information must either disclose the information before trading or refrain from trading. In addition, the court extended the law to include the “tippee” as an insider and to cover selling as well as buying. In its opinion, the court described inside information as:

the existence of a relationship giving access . . . to information intended to be available only for a corporate purpose and not for the personal benefit of anyone, and . . . the inherent unfairness involved where a party takes advantage of such information knowing it is unavailable to those with whom he is dealing. (Cox and Fogarty 1988, p. 362)

This view implies support of outright prohibition as an appropriate model.

The disclose-or-abstain dictum was further refined in *Dirks v. SEC*, which involved Raymond Dirks, a securities analyst, and Equity Funding Corporation, an insurance firm engaged in massive fraud. Before the fraud became public, Equity Funding had sold \$17 million of its stock. Ronald Secrist, an Equity Funding official and insider, was under obligation to disclose or refrain, which he did. He passed along insider information about Equity Funding’s fraudulence to Dirks, however, who in turn, communicated the information to his clients, and they traded on that information. The SEC prosecuted Dirks, and the case was heard by the U.S. Supreme Court.

The Court ruled against the SEC, pointing out that, with disclose or abstain, the duty to disclose information intended only for corporate purposes arises from the insider’s fiduciary relationship with the corporation or seller of securities. The Supreme Court thus rejected the strong version of fiduciary responsibility in favor of its weaker form, thereby clearly moving away from outright prohibition.

The Supreme Court also ruled against the SEC in a case against Vincent Chiarella, who worked in the composing room of a financial printer that prepared

confidential information for corporate takeovers. To protect its identity, the name of a target firm would be coded in the printed forms. Chiarella, deciphered the code and traded on the basis of the deciphered information. The SEC charged him with violating insider trading prohibitions. The appellate court accepted the SEC position, but the Supreme Court did not. The majority Court opinion rejected the solicitor general's contention that fraud was committed because the confidential information was the property of the printer's customers. The majority held Chiarella did not have a duty to disclose because he had no fiduciary relationship to the sellers of the stock. Moreover, the Court indicated there is no "general duty between all participants in market transactions to forgo actions based on material, nonpublic information."

Because the *Chiarella* opinion ruled out access alone as the basis for insider trading violations, the government turned to a new theory of misappropriation. In this view, information is a form of property, which, like other property, can be misappropriated for personal gain. In *United States v. Carpenter*, a *Wall Street Journal* reporter, R. Foster Winans, was successfully prosecuted for leaking his column, "Heard on the Street," before publication. The prosecution argued that the column had a perceptible impact on market prices and that Winans and his tippees had benefitted by trading on the advance notice of what would appear in the column. The relevant legal issue was that the publication schedule was proprietary information of the *Wall Street Journal*.

The concept that information is property appears to be the current working definition of illegal insider trading within the law. The SEC's model is clearly outright prohibition, however. Moreover, the vagueness within the 1984 and 1988 acts, along with the penalty structure, liability of financial firms, and bounty provisions, serves to deter insider activities that are outside the purview of information as property. In this sense, the SEC has managed to create an environment that may be closer to outright prohibition than the Supreme Court decisions have provided.

In addition to rule 10b-5 of the Securities Exchange Act, rule 14e-3, which concerns tender offers, is important because it does not involve a fiduciary-duty provision. Those who trade on inside information about a tender offer can be prosecuted under rule 14e-3 even if no fiduciary duty is involved. Insider trading violations associated with tender offers involving individuals such as Dennis Levine, Ivan Boesky, and Michael Milken have been among the most publicized in recent years.

The use of rule 14e-3 has been controversial. In a recent case, stockbroker Robert Chestman traded on information about the takeover of Waldbaum, Inc., by Great Atlantic & Pacific Tea Company. Significantly, Chestman acquired the information from Keith Loeb, the husband of Ira Waldbaum's niece Susan. (Ira

Waldbaum was the former president of Waldbaum, Inc.) The chain of information transmission is interesting. Ira Waldbaum had called his elderly sister Shirley when he decided to sell his firm to A&P, instructing her to collect her stock certificates from the bank. Shirley asked her daughter Joyce to drive her to the bank, and this led to some carpool arrangements between Joyce and Susan. Susan, however, became concerned that their mother was ill. She communicated her concerns to Joyce, who told her the truth to alleviate those concerns. In turn, Joyce passed the information along to her husband, and he gave the information to Chestman, who was his broker at the time. Chestman then traded on the information.

The SEC prosecuted Chestman under rules 14e-3 and 10b-5. Chestman was initially convicted of all counts against him and sentenced to 18 months in jail. After Chestman had served almost a year, a three-judge appellate panel overturned the conviction because Chestman had not been explicitly informed that the information was confidential. Law enforcement officials had expressed concern that the panel's decision threatened the effectiveness of rule 14e-3. The case was closed when the full U.S. Court of Appeals for the Second Circuit reinstated the conviction under 14e-3 but not 10b-5. With regard to 14e-3, the court ruled that illegal insider trading in tender offers can occur even though the defendant receives no explicit indication that the information is confidential. As to 10b-5, the court concluded that the government had not demonstrated a fiduciary relationship between Susan and Keith Loeb, thereby illustrating the importance of 14e-3. Chestman was not required to return to jail, although he was required to disgorge his trading profits and was permanently barred from the industry.

Fairness and Efficiency

The trade-offs between efficiency and fairness have been most explicit perhaps in the debate on the merits of prohibitions against insider trading (Bainbridge 1986, Cox and Fogarty 1988, and Easterbrook 1981). In the following discussion, we consider the implications of a move from no duty to fiduciary duty and from fiduciary duty to outright prohibition in relation to restrictions against insider trading.

The efficiency portion of the argument has several components.¹⁵ The first component concerns adverse selection (lemons), an issue discussed previously. Insider trading involves a possible adverse-selection problem. Astute investors with access to public information alone may be reluctant to trade with insiders

¹⁵ We suggest that the resource allocation aspect of Pareto efficiency can be put aside.

who know more than they do. An investor can pay too much for a security just as a consumer can pay too much for a used car. Therefore, the disclose-or-abstain rule would arguably enhance efficiency by addressing the adverse-selection issue.

A second strand of the efficiency-based position, however, argues against disclose or abstain. The argument proceeds by recognizing that the production of information involves externalities, because information, once produced, is a public good that can be shared. A well-known second-best argument about public goods says that, unless people can be assessed as to their willingness to pay for the good in question, not enough of the good will be produced. The second-best argument is concerned with finding a corrective mechanism to provide the incentives for additional production of the public good.

This second strand holds that information is a public good and that producers of new information require appropriate compensation. Easterbrook (1981) argues that allowing insiders to benefit from trading on the information at their disposal, without disclosing it first, works to offset the standard market failure/public goods argument. Abnormal excess returns earned by insiders enable them to recover the costs of producing new information. Easterbrook makes his point by drawing an analogy with patent law:

The patent and copyright laws deal with the tension between creating incentives to create new information and obtaining the optimal use of existing information by limiting the duration and scope of the rights conferred. . . . Whenever the question of property rights in information arises, the legislature or the court must confront the tensions between principles that encourage the creation of new information and those that allow the existing stock of information to be well used. If the Court puts information cases in securities law or evidence law pigeonholes, it may overlook the need to consider the way in which the incentive to produce information and the demands of current use conflict.

Therefore, prohibiting insider trading, the argument goes, interferes with Pareto efficiency.

A third strand of the efficiency issue concerns informational efficiency. Preventing insiders from trading on their information also prevents prices from reflecting that information. This issue is largely one of timing, because most material information is released to the public eventually. The delay, however, may send the wrong signals to decision makers in the process of making real decisions about resource allocation. In such a case, prohibiting insider trading

would inhibit the achievement of Pareto efficiency as well as informational efficiency.

Conclusion

Restricting insider trading affects efficiency in three ways: It enhances Pareto efficiency by reducing the extent of adverse selection, it reduces Pareto efficiency by diminishing the incentive to create new information, and it interferes with informational efficiency by preventing prices from reflecting nonpublic information.

Essentially, the efficiency argument has been advanced in support of making insider trading a legal activity. The fairness issue has played the most prominent role in support of disclose or abstain. The fairness argument actually has two threads, one involving the right to equal information and the other the right to be protected from one's own mistakes.¹⁶ Equal information has been the more prominent of the two.

The basis of the (perceived) fairness of equal information is the notion of the "level playing field." This phrase is associated with the view that investment activity is a game of skill, much like bridge. As in bridge, investment also has a chance element. Over time, however, skill rather than luck determines the degree of success. In a fair game of bridge, the deck is not stacked, and players obtain direct information only about their own hands. What they learn about the others' hands has to be inferred from the bidding process. Stacking the deck or placing a mirror behind another player is unfair. Such behavior is also perceived to be unfair in the investment game.

A "fair" investment game is perceived to be a game of skill with equal access to public information. Investment success is perceived as a result of skillfully ferreting out from public information which securities are undervalued and which are overvalued. For a skilled investor, the public information available in the *Wall Street Journal* is as good as private information. The skilled interpreter of public information is like an insider, but the interpreter's success is a result of skill, and in fair games of skill, having winners and losers is permissible. Therefore, trading on inside information is unfair because it conveys an advantage to a trader not based on skill.

The fairness perspective figured prominently in the Supreme Court deliberations on the *Chiarella* case. The majority of the Court ruled that Chiarella had not acted illegally in trading on the inside information at his disposal. The

¹⁶ The fairness issues that can be set aside are misrepresentation, correct prices, and equal bargaining power.

chief justice dissented, however, accepting the appellate court's opinion that Chiarella had committed fraud and that his actions served no useful purpose except to enrich Chiarella at the expense of others. In another dissenting opinion, Justice Harry Blackmun, joined by Justice Thurgood Marshall, specifically indicated that trading on information unknown to other participants is inherently unfair.

Advocates of legalizing insider trading address the issue of adverse selection. For instance, Cox and Fogarty (1988) reject the idea that "investors would desert a market perceived as unfair" (p. 354). This view has empirical support in the sense that insider trading prohibitions have been prosecuted only relatively recently but active securities trading is a longtime phenomenon. Of course, from a theoretical perspective, outsiders should desert a market in which they are committing cognitive errors. Consequently, a second strand of the fairness issue involves protecting people from their own mistakes. If disclose or abstain were enforceable, noninsiders would receive such protection.

The history of insider trading prosecutions suggests that the prohibition against insider trading fails to offer protection to naive investors. Consequently, we are inclined to ask whether making insider trading legal would better serve naive investors as a group. After all, as things now stand, naive investors believe that the playing field is level, by and large, because insider trading is illegal. Legalizing insider trading would at least forewarn them.

Insider trading prohibitions affect fairness in three ways. Fairness as freedom from coercion is diminished by insider trading prohibitions, because insiders are coerced into disclosing or abstaining. Fairness as equal information is enhanced by insider trading prohibitions. Fairness as equal processing may be diminished by insider trading prohibitions if such prohibitions are ineffective.

9. Conclusion

The New York Stock Exchange created the panel on market volatility and investor confidence in 1990 in the wake of the 1987 stock market crash. Its recommendations were based on the following criteria:

They should decrease market volatility and/or increase investor confidence without altering the fundamental free market character of U.S. equity markets.

They should maintain or improve the global competitiveness of U.S. financial markets.

They should protect and enhance the ability of businesses to raise equity capital and provide an effective, fair and efficient marketplace for investors. (*Market Volatility and Investor Confidence* 1990, p. 3)

The criteria and the debate on the recommendations make clear that the panel was concerned with both efficiency and fairness. The panel also clearly realized there are trade-offs between the two.

Concern about efficiency, fairness, and the roles of market forces and regulation are not new. In 1900, Charles R. Flint, the organizer of the United States Rubber Company, spoke against a proposal to adopt mandatory disclosure laws. He stated in hearings before the Industrial Commission of Congress: "My idea is that affairs of trade are best regulated by natural law." However,

Other witnesses, realizing the extent to which the public was being cheated by the sale of watered and fictitious securities, were unwilling to leave the protection of the investor to the "natural laws" of the marketplace; they recommended that the states or, if "constitutionally possible," the Congress supervise the issue and sale of securities. (Carosso 1970, p. 160)

We suggest that observation of financial market regulations reveals a continuing attempt by society, through its legislative process, to find the right balance between fairness and efficiency. The legislative process begins with the opinions in the voting population. Some people believe Pareto efficiency is more important than the right to freedom from impulse or the right to freedom from coercion is more important than the right to freedom from cognitive errors. The views of each person might be motivated by self-interest or by ideological beliefs. A tug-of-war occurs when proponents of each view try to persuade others to join them. Of course, the legislators' opinions matter most, and proponents of each view try specifically to influence the opinions of legislators.

We suggest that people form their views about the proper ranking of fairness rights and efficiency by the *representativeness heuristic*. Specifically, they keep score of the ratio of the events where, for example, freedom from coercion seems more important than freedom from impulse. That ratio constitutes a base rate. A historical accident such as a stock market crash is likely to receive a high weight relative to the base rate and might create a majority necessary to change the law. Once a law is enacted, interest groups form, new historical accidents occur, and attempts to persuade continue. Occasionally those forces combine to lead to further change in the law.

Consider, for example, the 1933 and 1934 acts. The historical accident was the 1929 crash and the subsequent depression. A tug-of-war ensued between mandatory disclosure and merit regulation. Mandatory disclosure won, but not for long.

Mandatory disclosure and merit regulation differ pointedly in the implicit entitlements assigned to individual investors. Mandatory disclosure is centered on freedom from fraud and on equal information. It does not recognize freedom from cognitive errors or freedom from impulse as fairness entitlements. Merit regulation does.

As Easterbrook and Fischel (1984) note, proponents of merit regulations continue their attempts to shape the law in a form consistent with their views:

To be sure, the Securities and Exchange Commission occasionally uses the rubric of disclosure to affect substance, as when it demands that insiders not trade without making "disclosures" that would make trading pointless, when it requires that a going private deal "disclose" that the price is "fair," and when it insists that the price of accelerated registration of a prospectus is "disclosure" that directors will not be indemnified for certain wrongs. (p. 669)

Similarly, proponents of disclosure attempt to vanquish merit regulations. As Greene (1983) notes:

Congress then created the Securities & Exchange Commission, in 1934, on the premise that most any investment can be offered to the public if the risks and other material information are adequately disclosed. But the state blue-sky efforts lived on. And now, with deregulation popular nationwide, “merit” laws, which set acceptability criteria for investments, are under increasing attack. Critics gleefully point out that Massachusetts wouldn’t allow Apple Computer to sell its initial offering in that state.

At the moment, 36 states still have merit laws and about half rigorously enforce them. Illinois, Iowa, and Wisconsin, however, are eliminating or reducing their merit regulations. And the Securities Industry Association is targeting other state legislation for attack.

The dispute is straightforward. Merit law backers argue that many individuals are not sophisticated enough to evaluate the worth of a new issue. “Investors do not read or understand a prospectus,” says Texas Securities Commissioner Richard Latham. “Securities are distributed by people who are compensated by commission and will sell anything.”

But not every bureaucrat takes that position, even though a fair number of public employees do make their living regulating investments. Illinois Secretary of State Jim Edgar is happy that his state is abolishing merit laws. “Government really shouldn’t try to play Big Brother in telling investors that one stock is good and another one isn’t,” Edgar argues. “They’re all risky. As long as you have complete and honest disclosure, you should let the investors make up their own minds.”

Note that Jim Edgar pits one right against another. The right to be free of coercion by “Big Brother” is pitted against the right to be free of cognitive error and impulse. Indeed, note that even groups that act out of self-interest use fairness-based arguments to sway public opinion. Consider, for example, an advertisement by Merrill Lynch about three months after the 1987 stock market debacle:

Since October 19, a number of studies have sought to determine the causes of the stock market decline and its subsequent effects. Merrill Lynch has participated in those studies and is independently examining the issues as well.

Now it is clear that steps should be taken to reduce volatility in the securities markets. Investor confidence is of paramount importance to free, fair and efficient markets and the capital they generate for growth and jobs.

Market volatility has become a problem so serious that it has led many investors to lose their confidence in the market system as a whole, and to seriously question whether there really is a level playing field.

Merrill Lynch strongly supports a free market system that is both efficient and fair to all participants; we also support a reasoned and disciplined approach to changing the regulations that control the market. (*Wall Street Journal*, February 1, 1988)

We suspect that Merrill Lynch wanted (and still wants) lower volatility and higher confidence because those conditions generate more people who wish to trade, but it masked its self-interest in fairness arguments.

The set of regulations governing the U.S. markets today are different from the regulations that existed in 1929 and those existing in Japan, Switzerland, or New Zealand. We suggest that a comparative study of financial regulations across countries might be a useful way to uncover the factors defining the trade-off between fairness and efficiency. Indeed, such a comparative study is crucial in a world where financial markets are becoming more integrated. The behavior of Japanese brokers is not just an issue for Japan, and the behavior of U.S. brokers is not just an issue for the United States.

The ethical analysis in this study is descriptive, not normative. We have criticized financial economists for excluding issues of fairness and ethics from their models of regulations, because this omission precludes a critical part of the explanation for the regulations that developed. We make no normative claims, however, and reiterate that the deontological school does not provide a clear way of ranking competing rights. Attitudes concerning fairness are like attitudes toward public goods. Both are expressed within the political arena and determine the shape of government action. Moreover, attitudes toward public goods are not stable over time, and their changes are reflected in the way government spending changes, an observation that also applies to the continual tug-of-war between fairness and efficiency.

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