

FTC STAFF REPORT

**MINIMUM QUALITY VERSUS
DISCLOSURE REGULATIONS:**



**STATE REGULATION OF
INTERSTATE OPENED-END
INVESTMENT COMPANY
AND COMMON STOCK ISSUES**

JOHN C. HILKE

BUREAU OF ECONOMICS

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OPENED-END INVESTMENT COMPANY
AND COMMON STOCK ISSUES**

by

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I. INTRODUCTION

Although the distinction between disclosure requirements and minimum quality standards is a basic one in consumer protection regulation, few empirical comparisons of the effects of these alternative approaches have been conducted.¹ In part this may stem from the fact that many consumer protection regulations are relatively new and consequently there have been insufficient data to conduct such research. Another common research problem is determining appropriate measures of quality to use in comparing regulatory regimes. Adoption of national consumer protection regulations also has frustrated research efforts by eliminating the variations in regulatory approaches that are necessary to make statistical comparisons.

One area where empirical analysis is possible, however, is in the regulation of securities. Unlike many other types of consumer protection regulations, state securities regulations are venerable features of the legal landscape.

¹ Disclosure regulations generally require that the seller provide information about the producer and product to the buyer. For the purposes of this study, minimum quality regulations include disclosure but go beyond it to ban from the market those products missing specified attributes. Consequently, this study examines only the incremental effects of merit review and does not examine the effect of disclosure requirements relative to a regime with no disclosure requirements. For examples of efforts to examine the incremental effects of disclosure requirements, see Stigler (1964), Friend and Herman (1964), Jarrell (1981), and Hilke (1986). A number of theoretical treatments of alternative regulatory regimes have appeared. For example, see Leland (1979, 1978), Oi (1973, 1974) and Goldberg (1974). Earlier works on state securities laws may be viewed as contrasting disclosure and minimum quality regulation in a limited sense. These include Walker and Hadaway (1982), Goodkind (1976), Stone (1973), Pool (1974), and Payne et al. (1986). Issues that did not register in the state being studied were interpreted as issues that disclosed but did not meet the quality standards. More discussion of the methodological problems with this approach will follow.

Nearly all states have had securities regulations in place for 60 years or longer.² Another advantage of focusing on securities is that quantitative comparisons of the quality³ of securities are regularly made. Indeed, the primary work of securities analysts is producing and using just such measures. With respect to diversity in regulatory approaches, despite the presence of national securities regulations that supply a baseline of required disclosure for all states, the federal legislation explicitly grants authority to the states to maintain or establish their own supplementary regulations.⁴

Several states have taken advantage of this provision by maintaining extensive minimum quality requirements called merit standards. These standards rest on the assumption that characteristics of securities offers can be used to predict ex post performance (quality) by identifying

² By 1920, forty-one of the states had securities laws. By 1930, the only exception was Nevada.

³In this study, the quality of an investment is measured by its ex post performance. All investors are assumed to be concerned about the rate of return on investments over time. Some investors are also assumed to be concerned with the degree of variation in the rate of return over time, usually called risk. For these investors, performance includes both return and risk considerations.

⁴ Securities and Exchange Commission statutes explicitly allow each state to establish additional requirements that govern sales of securities in that state. The term "in a state" has been interpreted broadly by various courts to encompass any communication between buyer or seller taking place in the state. Thus, if a buyer in state "A" calls a seller in state "B", the buyer may have a reasonable chance of being subject to the laws of either state. For a discussion of court rulings in this area, see Long (1978). Federal securities laws do not apply to intrastate issues. Nearly all states apply disclosure regulations to intrastate issues and some apply merit standards to these issues as well. However, there is no method of tracking performance of intrastate issues that were denied qualification status because there is no market for the issue in other jurisdictions. Hence analysis is limited to examining performance of interstate issues and little direct evidence about the effects of merit review and disclosure regulations on intrastate issues can be adduced.

securities that either have a higher probability of being fraudulent or will not perform well on average even if they are not fraudulent. The fundamental question about these regulations is whether the relevant presale characteristics of securities have been good predictors of actual performance or quality.

As a result of these three elements, longstanding use, measurable realized quality, and diversity of regulations, state securities regulation makes an attractive setting in which to empirically compare disclosure and minimum quality regulations.

This report consists of two studies of the effects of state securities regulation on returns and risks for investors. No effort is made to quantify costs or benefits of merit review aside from effects on investors' realized returns. However, these other costs may be quite large and include administrative costs borne by firms and tax payers, a reduction in the number of new firms, and a reduction in investor diversification.⁵ The first study examines state regulation of opened-end investment companies (mutual funds). The second study examines state regulation of common stock issues. Separate studies of these two types of securities were developed because the regulatory approaches taken by states are not necessarily consistent across the types of securities. Some states take predominately a disclosure approach on common stocks and a minimum quality standards approach for investment companies. Other states reverse this order. In addition, the lack of a secondary market for opened-end investment company shares results in a substantial difference in the way these two types of securities are regulated.

Immediately following this introduction is a summary section that draws together the results from the two separate studies. The studies themselves follow.

⁵ A discussion of some of these additional potential costs of merit review, such as barriers to the financing of new firms and compliance costs, is contained in Baysinger et al. (1981).

II. SUMMARY AND CONCLUSIONS

Disclosure and minimum quality regulations each have potential theoretical advantages and disadvantages. Specifically, where lack of information is a major problem in the market, disclosure has the virtue of directly addressing the issue. Disclosure regulations also permit innovation and allow the market to satisfy the diversity of buyers' tastes.

Minimum quality regulations assume that regulators can judge quality from presale characteristics while buyers or market intermediaries cannot. Such regulations are apt to be relatively effective when investor or consumer preferences are quite uniform and information cannot be disclosed effectively (so that, absent regulation, low quality goods would be sold even though few purchasers would knowingly choose to buy them). Minimum quality regulations, however, may be subject to pressure from interested parties that would cause these regulations to become inflexible and may exclude some high quality offerings along with low quality ones.

With theoretical advantages and disadvantages associated with both forms of regulation, it becomes an empirical question which form provides better results for investors or consumers. This study assesses the incremental effect of utilizing minimum quality regulations in addition to disclosure regulations in the context of interstate investment company and common stock issues. The empirical results of the study are then used as the basis for making more general recommendations about applying consumer protection regulations.

Using a broad sample of investment companies observed over several years during the period 1973 - 1983, the statistical analysis in the first study indicates that minimum quality standards, as applied to opened-end investment companies, did not significantly improve the average performance experienced by an investor who invested at random or equally in all Securities and Exchange Commission

(SEC) registered funds qualified by his or her state. More mutual funds were rejected or failed to apply in states with extensive merit review. Generally, the funds excluded by states with the most intensive merit review, but not excluded by other states, were the most aggressive offerings of major families of funds, and several were among the best long-term performing funds in the country according to recent published rankings.⁶

In the second study, state regulation of common stock issues was examined. The effect of minimum quality regulation on common stock performance was to reduce average returns, risk, and risk-adjusted returns. The reduction in average risk was statistically significant, but small. The other effects on investment performance were not statistically significant. More common stocks were rejected or failed to apply in states with merit review.

In addition, the pattern of qualifications across merit states lacked consistency. For only a tiny proportion of issues did the merit states all agree to qualify or not qualify individual issues. Much of the effect of merit

⁶ The widely qualified funds that did not qualify in merit states were predominantly aggressive growth funds that employed leverage, concentrated their holdings, and pursued investments in new high technology firms or extractive industries. When new technologies were expanding rapidly, the price of gold was increasing by a factor of ten or more, and the price of oil was similarly increasing dramatically, the merit states were excluding funds that invested in high technology start-ups, gold mining, and oil exploration. Yet, the excluded funds performed relatively well even on a risk-adjusted basis. On a risk-adjusted basis, the widely qualified issues commonly excluded by merit states did significantly better than the market. A number of the widely qualified issues have outstanding and widely recognized long-term performance records. For example, Mutual Shares, Nicholas, American Capital Comstock, and Shearson Appreciation funds appeared on Money's (1987) list of the 25 best "All-Weather Funds that just won't quit." The funds commonly excluded by merit states, but not by other states, are listed in Appendix C. Most were and are managed as members of large groups of funds such as Fidelity, American General, Value Line, and Shearson.

regulations appears to be idiosyncratic to the particular time and state.

Merit review reduces the selection of both mutual funds and common stocks available to investors, and hence could impose a cost on investors by limiting their ability to reduce risk through portfolio diversification.⁷ Merit review also entails other costs that are apparently unbalanced by discernible investor benefits. In particular, merit review imposes administrative costs that are likely to be quite onerous, particularly for small firms raising capital.⁸ These higher administrative costs combined with an inability to obtain qualification in some states would increase capital costs, particularly for new firms. This would impede new entry and innovation.

A reasonable generalization from the empirical results of this study is that the task of setting minimum quality standards that benefit investors can be extremely complex and difficult. In particular, it is difficult to identify objective criteria that closely and consistently link pre-sale characteristics to post-sale performance (quality) of securities. (If it were easy, of course, there would be strong incentives for investors to select better issues themselves without intervention by the state.)

The more detailed data analysis in the study also suggests the potential importance of adjusting regulations to account for technological and institutional changes. In particular, several of the widely qualified investment company funds that did well during the period studied, but

⁷ Such an effect would occur particularly if the returns on excluded issues were not perfectly correlated with those of qualified issues.

⁸ Estimates from an SEC study completed in 1975 indicate that flotation costs are high for small firms even though SEC registration requirements for these firms have been simplified. For example, for direct offers (offers least likely to have significant underwriting compensation) up to \$500,000, flotation costs took more than 25% of proceeds on average. (Sumanski (1975), p. 10.) Also see Johnson et al. (1975).

were excluded by several merit states, emphasized investment in extractive industries or in new technologies.⁹ These investment areas, which may have been perceived as problematic in other periods and therefore good targets for minimum quality standards, did quite well in the changed environment created by OPEC, the birth of biotechnology, and computer chip advances. Adjusting in a timely fashion to such changes is an important component of investment success and seems to be a difficult challenge in specifying minimum quality regulations.

In the broader context of consumer protection research and policy, the findings of this study are consistent with the growing body of evidence that suggests that going beyond providing information to more direct regulation often does not significantly improve market performance and sometimes reduces it. Studies of the regulation of the professions, for instance, have found that restrictions on advertising advocated as a means of preventing deterioration of quality have led to higher prices for consumers without commensurate enhancement in the available quality measures.¹⁰ In standards setting organizations, codes envisioned as means of discouraging shoddy products have on occasion become convenient methods of discouraging more efficient rival innovations.¹¹ In this study of the

⁹ Several of these funds were members of large families of funds, individual funds offered by the same firm. In other fields, use of brand names to cover several products has been widely viewed as a means of privately assuring product quality. The emergence of such families of funds could be viewed in the same way. Where private quality assurance efforts are feasible, there may be less need for public quality assurance programs.

¹⁰ See, for example, the FTC staff studies on eye glasses (1980) and contact lenses (1983) as well as Maurizi (1982), Maurizi and Kelly (1978), Benham (1972), Feldman and Begun (1980, 1978) and Holmes, Zwirb, Pitsch, and Lean (1979).

¹¹ See, for example, the FTC staff studies on standards and certifications (1978, 1982). Major cases in the area have been Hydrolevel (1982), National Society of Professional Engineers (1978) and Silver (1963). Other articles include

sales of opened-end mutual fund shares and common stocks, minimum quality regulations, expected to screen out fraud and unrealistic investment schemes, have apparently excluded some of the best performing products and in several periods reduced the average performance of issues available to the public.

The general conclusion that follows from the results of the two studies presented here and the related regulation studies noted above is that minimum quality standards should be adopted only with great caution, including evidence that there is a significant market failure that cannot be remedied by disclosure. It is likely to be difficult to select a standard that will fully capture delivered quality, and there is a strong possibility that high quality offerings will be excluded along with less sterling offerings. It is also possible that standards that benefit one group of consumers will be detrimental to other consumers. Selecting standards that will stand the test of time is even more difficult as markets and underlying economic conditions change and as pressures and habits that rigidify the standards evolve.

Johnson (1982), Putman et al. (1982), Tassej (1982), and McCannachey (1978).

III. OPENED-END INVESTMENT COMPANY ISSUES

A. Introduction

This chapter presents the first of two studies of the effects of minimum quality standards and disclosure requirements in the area of securities regulation. The presentation begins with a description of state regulation of investment companies. Here the elements in typical minimum quality standards are briefly explained and each state is classified by the extent to which it uses these elements. A discussion of theoretical considerations about minimum quality and disclosure regulations follows to motivate the empirical work. In this discussion, the a priori cases for preferring disclosure standards or minimum quality standards are reviewed. Given the theoretical advantages of the disclosure approach, minimum quality standards are most likely to be justified when important information cannot be effectively disclosed¹² and regulators are likely to have an advantage in obtaining relevant information, or when regulators can reduce investors' search costs without overriding individual preferences because consumer preferences are very similar.

If state minimum quality standards are effective in protecting investors, investment companies that are not qualified for sale under minimum quality regulations should display poorer performance (lower quality) than funds that do qualify. The remainder of this section is devoted to testing this hypothesis. The empirical section begins with a description of the sample of investment companies and a discussion of the data employed in the analysis.

¹² "Effectively disclosed" means disclosed in a manner that allows investors to take reasoned account of the information. Obstacles to effectiveness might include extreme complexity and costliness of disclosures and time constraints.

B. Institutional Background

Although the Securities Acts of 1933, 1934 and 1940 created federal regulation of securities, an independent supplementary role was preserved for the states. States have the option of establishing requirements above and beyond those established by the SEC. Some states have taken this option, while others have retained only the mechanics of a separate regulatory system or have relied entirely on SEC regulations.

This general split in the way states approach securities regulation is reflected in state regulations of opened-end investment companies. Some states primarily content themselves with the disclosure requirements and monitoring performed by the SEC,¹³ although many of these states have active antifraud enforcement staffs and some have fees and other types of registration regulations as well. These states will be classified as disclosure states. Other states have elected to have minimum quality or merit standards that reach aspects of the operation or structure of investment companies not dealt with by the SEC. These standards must be met before an issue can be qualified for sale in the state. States with such additional standards will be classified as merit states. A further distinction will be made between states with extensive merit provisions and those with only a few such provisions. Table 1 below gives some examples of the provisions that have been used by different merit states. These are provisions that do not coincide with those of the federal regulations.

¹³ SEC regulation and monitoring of investment companies is quite extensive and much more direct than the reporting required of common stocks. These monitoring activities include on-sight inspections of records. For a survey of both federal and state regulations, see the Investment Companies Institute (ICI) (1982). It is interesting to note that the federal regulations were designed largely in response to practices of closed-end funds. These funds often engaged in substantial borrowing, which made such funds quite close to margin accounts. Today the vast majority of investment companies are opened-end. Ironically, it is the opened-end funds that are subject to the most state scrutiny, as noted later in this section.

Inspection of these items highlights a number of areas where the merit provisions appear to be potentially binding restraints on the operation of investment companies. Of particular interest is the cluster of provisions that make it difficult for investment companies to participate actively in providing capital for new firms (including new high technology firms). The provisions limiting investments in firms with less than three years of operating experience are a prime example. Other provisions may be more subtle obstacles to such investment. For example, restrictions on puts and calls limit use of an attractive means of investing in firms with a small probability of very large gains. Similarly, warrants are features of some new firm offerings that investment companies might be precluded from buying. The restrictions on portfolio turnover may also discourage investments in newer firms whose fortunes may vary over a shorter time horizon than those of older firms.

Table 2 provides a more general categorization of the level and type of regulations in place in the states. Three groupings of states have been established. The ten states with the most extensive merit standards are listed at the top of the table. States in this group clearly have minimum quality standards for investment companies that exceed the SEC provisions. The thirty-one states which rely primarily on disclosure through the SEC regulations and their own regulations are shown at the bottom of Table 2. Many of these states impose fees or have related regulations, however, that prevent interpreting them as "pure" disclosure states.

The nine remaining states have all subscribed to the North American Securities Administrators Association (NASAA) statement on regulations for opened-end investment companies, with the exception of California, which is included because its regulations fall between the first and second groups.

TABLE 1
EXAMPLES OF STATE MERIT REGULATIONS
PERTAINING TO OPENED-END INVESTMENT
COMPANY SECURITIES

- * An investment company may not engage in commodities futures trading. (CSAC,¹ Texas)
- * An investment company may not invest in oil, gas, or mineral exploration and development programs. (CSAC, Texas)
- * An investment company must limit its use of puts and calls. (California, CSAC, Iowa and Texas)
- * An investment company may not invest in real estate. (CSAC, Texas)
- * An investment company must limit its investments in companies with less than 3 years of operating experience and in issues not readily marketable. (CSAC, Iowa and Ohio - 5 percent, Texas - 15 percent, Maine and N.H. - completely prohibited)
- * An investment company must limit its borrowing. (Ohio, CSAC, Iowa - speculative disclosure)²
- * Portfolio turnover rates exceeding 100 percent per year are speculative. Investment companies with such turnover rates must disclose that their operation is speculative. (CSAC, Iowa)
- * An investment company may not engage in short selling. (California, Maine, and New Hampshire; CSAC and Iowa-speculative disclosure)
- * An investment company must limit its holdings of warrants. (Texas - 15 percent.)

¹ CSAC is the Central States Administrators Council. It consisted of Indiana, Michigan, Minnesota, Missouri, and Wisconsin during the observed period.

² Although this is technically a disclosure, the strong negative implication may make this more akin to a merit standard.

Source: The CCH Mutual Fund Guide and Blue Sky Reporter contain text and discussions of state regulations of opened-end investment companies. The ICI's Summary of Federal and State Investment Restrictions (1982) presents similar descriptions.

TABLE 2
 CLASSIFICATION OF STATES BY TYPE OF REGULATION
 OF OPENED-END INVESTMENT COMPANY SECURITIES

States with Extensive Merit Standards (10)		
Indiana	Minnesota	Ohio
Iowa	Missouri	Texas
Maine*	New Hampshire	Wisconsin
Michigan		
States with Less Extensive Merit Standards (9)		
Alabama*	Illinois*	Oregon*
Arkansas*	Kentucky*	South Carolina*
California	North Dakota*	West Virginia*
States with Few or No Additional Merit Standards (31)		
Alaska	Maryland	Oklahoma
Arizona	Massachusetts	Pennsylvania
Colorado	Mississippi	Rhode Island
Connecticut	Montana	South Dakota
Delaware	Nebraska	Tennessee
Florida	Nevada	Utah
Georgia	New Jersey	Vermont
Hawaii	New Mexico	Virginia
Idaho	New York	Washington
Kansas	North Carolina	Wyoming
Louisiana		

* These states specifically subscribe to the NASA (now NASAA) regulations for opened-end investment companies (CCH Blue Sky Reporter 7551).

Source: CCH's Mutual Funds Guide, CCH's Blue Sky Reporter, and ICI's Summary of Federal and State Investment Restrictions, pp. 56-67. States in the extensive merit group have separate sections describing their specific standards. The states with less extensive standards have only the adoption of the NASA statement, with the exception of California which has some of its own standards, but clearly fewer than the extensive merit group.

In some cases an issuer may be able to sell to some investors in the state even if it does not meet the state's standards. This is because some states explicitly differentiate between "sophisticated" investors and "unsophisticated" investors. These states permit sales to sophisticated investors of issues that are not qualified for general sales. Sophistication is generally measured by total assets and/or income. All states include exemptions for various types of institutional buyers such as bank trust departments and college endowments.¹⁴ Given the exemptions to merit regulation accorded to sophisticated investors, it is apparent that the focus of merit review is on unsophisticated investors.

The securities qualification system employed by states with merit standards involves several steps. The potential issuer must first decide whether to seek qualification in the state. Once an application is received by a state, including the fees and documents, the staff of the state securities agency may raise objections. If objections are found, the seller and the agency may negotiate changes in the offering to satisfy the agency, or the issuer may withdraw the application. Formal rejection procedures are almost never utilized. If no objections are found or an agreement is reached on changes in the offering, the issue is qualified for sale in that state. Efforts are made to coordinate state clearances with the date of SEC clearance.

Enforcement of the qualification/registration process comes from two sources.¹⁵ First, the state agencies themselves may bring actions against nonqualified issuers. Second, because qualification inhibits the ability of

¹⁴ Some of these buyers, however, may be constrained by separate fiduciary duty regulations that exclude issues on the same basis as the merit regulations.

¹⁵ In states with registration requirements for broker-dealers, the registrants are charged with upholding securities registration procedures. For competitive reasons, these dealers might be expected to report noncompliance by rivals.

disappointed investors to sue the issuer for misrepresentation, issuers may be reluctant to accommodate individual investors seeking to circumvent state regulations. If the sale can be tied to the buyer's home state and the issue is not qualified for sale in that state, the issuer could reasonably expect to face a rescission order, an order to repurchase the shares at the original price. Thus, the likelihood of successful private suit if prices fall exerts a strong incentive for issuers to comply with state qualification requirements.

Similar steps and incentives exist for the qualification of all securities, but there is one peculiarity in the treatment of opened-end investment companies that is of considerable importance for the design of the analysis in this study. This peculiarity stems from the absence of a secondary trading market for most opened-end mutual funds. Each transaction that takes place involves an investor and the investment company itself. There are usually no transactions directly between investors.¹⁶

The important consequence of this lack of a secondary market is that states treat funds as if they are firms that constantly sell new issues. As long as a fund is selling any shares,¹⁷ even if redemptions exceed sales, the fund must generally requalify each year. It must both meet the qualification criteria and pay fees each year. In essence, each fund is treated as a new issuer on any given day from the perspective of the state securities administrators. This contrasts with the conditions for common stock or bond issuers. Issuers of common stock can allow subsequent trades to take place in the secondary market. Once a common stock share has been sold to an investor by the issuer, future trades of the shares do not directly involve

¹⁶ Technically there may be such trades, but since the company itself stands ready to redeem the shares, there is little point in such transactions. The 1940 Act outlaws the use of brokers to sell shares when the firm is still offering shares publicly.

¹⁷ Fees are usually based on shares sold rather than on net shares sold.

the issuer. The issuers of common stocks or bonds are consequently free from any subsequent sales registration requirements with respect to these issues.¹⁸

C. The Theory of Consumer Protection through Minimum Quality Standards and Disclosure Requirements

As for most consumer protection regulations, the theoretical basis for securities regulation rests on a potential asymmetry between the information held by sellers and buyers.¹⁹ Such an asymmetry might lead buyers, in this case investors, to offer higher prices than they would if they were better informed.

Among the potential pre-purchase remedies for information asymmetries, the two most prominent have been minimum quality standards and disclosure standards. On theoretical grounds, the advantages of disclosure standards are considerable. Since lack of information is the problem, disclosure standards have the virtue of attacking the problem directly. They also provide flexibility. Buyers remain free to satisfy their diverse preferences so that all of the potential welfare gains from trades can be realized. Further, the market is free to develop new offerings that better meet buyers' preferences. Diversity of products and innovation are not restricted.²⁰

In contrast to disclosure regulations, minimum quality standards exclude some potential offerings from the market. Ideally, they reduce the loss from asymmetries of information by excluding from the market issues that informed investors would not select. In operational terms, an attempt is usually made to exclude what regulators

¹⁸ Sometimes firms do cooperate with major investors who must register sales of substantial numbers of shares. It is not uncommon for the company and such major holders to cooperate in a subsequent offering.

¹⁹ See Beales, Craswell and Salop (1981), pp. 491-539, especially 501-513.

²⁰ See Beales et al. (1981), pp. 513-514.

believe are the lowest quality products. If consumer tastes are sufficiently homogeneous, merit standards could save consumers time, energy, and money by eliminating products that consumers would not buy anyway once they had more complete information.

If the minimum quality standard is less than perfect, some higher quality offerings may be excluded along with low quality offerings. This may be a particular problem when characteristics observable before the sale must be used to screen out offerings that develop low quality characteristics only after the sale. Rigidity in the specifications of the standards may also limit the development of innovative products because they happen to have some of the characteristics of the excluded offerings. Previous studies have found reason for additional concern about the adaptability of minimum quality and similar standards because the views and livelihoods of administrators and interested parties become tied to the status quo.²¹

Minimum quality standards would be expected to be more effective if the standards reflect information that cannot be disclosed effectively. In principle, regulators might be able to gain access to information which buyers could not access themselves, or could not assess readily or cost effectively, or could not receive in a timely fashion. The regulators might then be able to improve investor welfare by acting for the buyers to exclude the low quality offerings, just as investors would do by themselves absent the information problem.

The questions, then, in judging the relative value of merit regulations versus information disclosure requirements in the market for investment company securities are (1) whether significant potential information asymmetries of this

²¹ There is a considerable and growing literature taking this position. Important works in this tradition include Huntington (1952), Kolko (1962), Stigler (1971), Posner (1974) and Peltzman (1976). The perspective that staff interests play a major role in the operation of agencies is discussed in Katzmann (1980).

type exist even after mandatory disclosures, and (2) whether minimum quality standards efficiently correct these information asymmetries.

In assessing potential information asymmetries, two points should be kept in mind. First, firms have incentives to voluntarily disclose pertinent information since such information reduces perceived risk and increases the price investors are willing to pay for shares of the firm.²² Second, the financial press, brokerage and advisory services, auditing requirements, the SEC, and other securities regulators²³ all contribute information on the status of investment companies.

Nonetheless, existing disclosures might not be adequate to solve all information problems, e.g., to provide investors with information concerning the ramifications of certain complex contractual terms.²⁴ Thus, one might argue that state securities regulators administering merit standards could discover and use certain information to protect investors. However, a review of the merit regulations listed in Table 1 suggests that disclosures concerning the relevant

²² See, for example, Barth and Condes (1980) and R. Dye (1986).

²³ Investment companies trade securities on the secondary markets just like individuals or other institutions.

²⁴ For example, contract terms could affect the incentives of the seller-manager of a fund to shirk on post-sale quality. However, the market itself provides checks on such shirking through incentives created by effects on repeat purchases and on sellers' reputations. Numerous treatments of consumer protection economics stress the value of potential repeat purchases in increasing quality. See, for example, Klein and Leffler (1981) and Shapiro (1983). Repeat purchases provide incentives for managers to honor the buyers' interests in mutual funds. Fund managers' fees are usually based on the total value of the assets being managed, so these fees will shrink if redemptions exceed sales.

investment practices of mutual funds would not generally be particularly difficult.²⁵

In summary, in order for merit review to protect investors effectively, important informational asymmetries must remain even after mandatory disclosures. Regulators must have an advantage over private investors in obtaining and using relevant information. For the latter to be the case, benefits from reduced search and other transactions costs and improved investment decisions due to government intervention must be sufficient to outweigh losses for investors (and also for customers of firms seeking capital) when regulators bar issues that would be suitable either for some investors with particular preferences or for all investors. Losses of investors are apt to be particularly significant if regulations cannot quickly accommodate innovation and changing economic conditions.

Given the theoretical reasons for preferring disclosure standards, the justification for using minimum quality standards would have to be that they are empirically more effective in improving the welfare of buyers.²⁶ To construct specific tests of the degree of protection provided to investors under minimum quality regulations, it is useful to define how successful minimum quality regulations would alter the distribution of issues qualified for sale from that under disclosure requirements. The aim of minimum quality standards is to eliminate issues from the bottom part of the performance distribution. Consequently, one test of the relative benefits of merit regulations should be to determine

²⁵ The peculiarity of state treatment of investment companies as continuous new issuers means that a high proportion of opened-end investment companies subject to merit review have been exposed to extensive market scrutiny as well as SEC supervision for many years. In such circumstances, the expectations that merit review will substantively improve the performance experienced by investors must be weaker for investment companies than for common stocks.

²⁶ Because disclosure regulations are subsumed by merit regulations, merit regulations are inherently more costly. Hence merit review cannot be justified with a lower cost argument.

whether merit states have been successful in not qualifying the worst performing investment companies.

In contrast to the benefits of excluding issues that perform poorly, there might be costs due to excluding issues that perform particularly well. To protect investors overall, the benefits from excluding issues that do poorly must exceed the costs of excluding issues that do very well. A second test is thus to determine whether the merit states qualify fewer of the issues that performed well.²⁷

Other than looking at the two ends of the distribution of performance, the major task of the analysis is to examine average performance. Did the screening undertaken by merit states improve the average performance or quality of issues available to the public relative to the performance that would have been available if these states had relied exclusively on SEC-level disclosures and accompanying regulations?

In undertaking such an analysis, it may be important to distinguish between different types of investors because state screening activities that help one type of investor may not help other types of investors. In particular, investors who hold only one issue (or a few issues) are likely to have different concerns than investors who own many issues. This difference arises out of the fact that holding many different issues reduces part of the fluctuation in return or risk. While single issue investors are likely to be concerned about the return and total variation in returns over time,²⁸

²⁷ Even if expected returns from excluded issues were equal to or less than expected returns from qualified issues, merit review could impose a cost on investors by limiting their ability to reduce risk through portfolio diversification if the returns on excluded and qualified issues were not perfectly correlated.

²⁸ Investors with small amounts of money to invest may rationally fail to diversify their holdings because the average transactions costs of trading small numbers of shares are generally higher than those of trading larger numbers of shares. Hence the savings in transactions costs associated with concentrating one's holdings may outweigh the advantages of diversification for investors with

investors with diversified portfolios are likely to be concerned about return and only that part of risk that cannot be diversified away. This is the portion of variation in return that is correlated with the fluctuations in the market.

Because the laws that authorize merit regulation were and are primarily rationalized by government's interest in protecting less sophisticated investors, the primary focus of this study is on measures of performance relevant to investors with undiversified portfolios and with relatively long investment horizons (one year or more). Return and risk-adjusted return measures relevant to investors with diversified portfolios are used to supplement the primary results. In addition, risk measures will be reviewed in light of previous research suggesting that securities regulations reduce the spread of the distribution of returns available to investors, regardless of the impact on average returns or risk-adjusted returns.²⁹

Given that specific merit regulations, such as those listed in Table 1, generally appear to restrict novel or otherwise risky securities, and given that investments are generally thought to involve a tradeoff between return and risk, it would be reasonable to expect that merit regulations reduce risk but at the cost of lower returns.³⁰

D. Study Design

1. Restatement of Hypotheses

In the previous section, three measures for evaluating the effectiveness of the screening conducted by merit states

relatively small amounts invested. If information costs per issue are high, information costs may also be a factor in decisions not to diversify.

²⁹ Jarrell (1981) and Stigler (1964).

³⁰ Findings of this type about the effects of SEC disclosure regulations are reported by Jarrell (1981).

were developed. These measures, restated as separate hypotheses, are: (1) investment company issues that performed very poorly ex post are more likely to be excluded from selling in merit states; (2) investment company issues that performed very well ex post are not more likely to be excluded in merit states; and (3) the average performance of qualified issues in merit states was better than the average performance of the whole sample of issues potentially available for interstate sales.³¹

2. Measurement Issues

Before the tests described above can be carried out, it is necessary to discuss measurement issues, chiefly the means of gauging quality and the data used to test the hypotheses.

a. The Quality of an Investment

The simplest measure of average quality for a group of assets is their average rate of return.³² This indicates what an investor receives on average from allowing groups of firms to make use of his or her funds. Returns are averaged across different issues and across jurisdictions. To avoid relying on a single year that might not be typical, rate of return data covering several years are used.

Although some investors may limit their investment evaluation criteria to simple average rates of return, other investors may be concerned about the degree of fluctuation

³¹ This can also be tested by comparing the quality (performance) of qualified issues to the quality of nonqualified issues in the merit states, since the potential population of interstate issues is the same across all states. Comparisons of qualified and nonqualified issues for a given state are possible because markets exist for an issue outside of a state, independent of the qualification status of the issue in the particular state.

³² The rate of return on an issue in a year is calculated as the net change in the value of investment over the year, including dividends and capital gains, divided by the value of the investment at the beginning of the year.

in returns over time. Fluctuations in rates of return are termed investment risk. The modern theory of investment has developed around a model of investors' preferences for returns and risk.³³ Investors are assumed to prefer more return and less risk. Different investments offer different combinations of these characteristics, usually involving a tradeoff between more risk and more return.³⁴ The rate at which investors are willing to make such trades reflects their degree of risk aversion.

Unlike the rate of return, which is measured using the same mathematical formula for all investors, the appropriate risk measure for an investor depends on the number of issues the investor owns. For small investors holding only one or a few issues, the relevant measure of risk is the average standard deviation of the rate of return on the issue(s) being held.³⁵ In comparing two investments, small investors in this model compare return and risk of one investment to the return and risk of the other investment. Investors unambiguously prefer an issue with a higher average return and a lower standard deviation.³⁶

³³ The model of capital asset pricing was initially developed by Lintner (1965) and Sharpe (1964). For a text treatment, see Levy and Sarnat (1984). Although empirical testing of this model continues (Tinic and West (1986)), the capital asset pricing model is the starting point for most of the modern theory of finance.

³⁴ Investors might rationally wish to avoid risk because they are uncertain about when they might need to liquidate their holdings. Given two otherwise identical issues, the one with greater fluctuations in return presents a higher probability that a random liquidation will result in a low cumulative rate of return.

³⁵ The average standard deviation of the rate of return computed over a period of years is the square root of the sum of the squares of the differences between each year's rate of return and the mean rate of return for the period of years.

³⁶ Each investor may have a different rate at which he or she is willing to exchange risk and return or each investor may have a rate of exchange between risk and return that varies with the risk and return of the portfolio

For diversified investors holding many issues, the standard deviation of an issue is not a good measure of risk. The effect of holding a particular issue on the investor's total exposure to risk depends on what other issues the investor owns. In particular, part of the fluctuation in an issue's rate of return can be offset by owning other issues that fluctuate in different ways. However, the extent to which the fluctuations in an issue's return coincide with fluctuations in return for the market average cannot be diversified away. This is called the nondiversifiable risk of holding the issue.³⁷

In comparing investments, diversified investors compare rates of return and nondiversifiable risks. Conveniently, a measure has been developed that combines these two considerations into a single observation, the Jensen index or the risk-adjusted rate of return. This index measures the return that would have been received on the issue if the portion of return that compensates for bearing nondiversifiable risk had been removed.³⁸

held. It is possible for a state to dictate what is an "acceptable" tradeoff rate, but this will leave some investors worse off than they were before because they will not be able to satisfy their investment preferences. Rather than assuming that a specific rate of trading risk for return is appropriate, the criterion used here is limited to assessing whether investors are unambiguously better or worse off.

³⁷ Nondiversifiable risk is calculated by running a linear regression in which the rate of return on the issue is explained by the rate of return on the market (the average return on all other investment options) and an intercept term. The coefficient on the market rate of return is the nondiversifiable risk or beta.

³⁸ See Jensen (1968, 1969). The basic idea of the Jensen measure is to compare the return from the market with the return from the particular security (or portfolio) with all risk removed, that is, as if it were transformed into a riskless security. Mechanically, the Jensen index is the intercept from the linear regression in which the return on the particular issue is the dependent variable and the return on a market index (the NYSE composite index in this case) is the

b. Data

There are two main components to the data. The first is qualification or registration data. This consists of the identity of states in which an issue has been qualified for sales by registration or exemption. The second is information used to calculate rates of return and the risk-adjusted returns. For this study, annual returns were used. Issues qualified in 1973, 1976, and 1979 were followed separately to provide evidence from a variety of initial market conditions. Data were collected through the end of 1983.

explanatory variable. For a text discussion, see Levy and Sarnat (1984), pp. 515-559.

Although the Jensen measure is perhaps the most widely used method of representing risk-adjusted performance (Murphy (1980)), there are other measures of investment performance available as well. For a discussion, see Levy and Sarnat (1984), Ross (1978), Rosenberg and Guy (1976), Harrington (1983), Fabozzi and Francis (1978).

Roll (1977; 1978) criticizes all performance measures based on the capital asset pricing model since such measures amount to a tautology. If the market index selected is really equivalent to a true market portfolio, all Jensen measures should be zero. Levy's (1984) rationale for continued use of performance measures is adopted here. "... most investors do not diversify their portfolios among all the risky assets. Nor do they confine their holdings to a single security. Thus the appropriate risk index is neither the variance nor the beta (calculated against an efficient portfolio), but some combination of the two. It is not easy to construct such a composite risk index. However, investors may perceive the beta as a proxy to the true risk when the beta is calculated against some portfolio which adequately reflects the market trend.... Beta is thus a proxy for the true risk index, even though it is calculated against a portfolio which is actually M(ean) V(ariance) inefficient." (p. 533)

The term "excess return" is used in most risk adjusted measures to indicate that a proxy for the riskless rate of return has been subtracted from both the market index and from the individual issue's return before performing the regression.

Qualification

State by state information about qualification of the opened-end investment company issues was taken from Wiesenberger's Investment Companies (1974-1984). An issue was considered to be qualified in the state if the issue of Investment Companies covering 1973, 1976, or 1979 (the first or beginning years for the three groups) indicated that the issue was qualified for sales in the state.³⁹

The sample of investment companies used in the report includes nearly all large investment company issues and most smaller issues available to the public at the beginning of 1973, 1976, and 1979. Approximately 75 percent of the universe of publicly available opened-end funds and 90 percent of the total assets of all such funds are included in the sample funds. Investment companies excluded from the universe included money market funds,⁴⁰ funds available only to qualified buyers⁴¹ and closed-end funds.⁴² Funds in the universe, but not in the sample, were deleted because of

³⁹ It is interesting to note that some issuers did not apparently realize their exempt status in some states. For example, in 1976, some funds did not report themselves qualified in Nevada, Connecticut, and New Jersey even though these states had no registration provisions. The same was true for the District of Columbia throughout the period although D.C. data were not analyzed. The Wiesenberger data pertain to the year prior to their publication date.

⁴⁰ Money market funds have no capital gains potential while the other funds do.

⁴¹ For example, several funds are restricted to the employees of a given company, members of a particular religious group, or members of a particular profession, or have similar restrictions. Funds were also excluded if they were available only under long term contractual purchase arrangements, had initial investment requirements exceeding \$24,999, or were not currently offering shares.

⁴² Closed-end funds have a secondary market and are exchange listed and consequently are exempt from most state regulations of the type discussed here.

incomplete information about where they were qualified for sale rather than because of incomplete returns data.

More than half the funds in the sample were followed from the initial date through the end of 1983 without any complications. Most of the remaining funds had name changes or were merged. When either of these events occurred, the fund was retained in the analysis using the data for the merged or renamed fund to complete the series of observations. Very few funds disappeared entirely from the sample.⁴³

Returns

To measure the rate of return, all of the dividends and capital gains (both realized and unrealized) over a period are combined and compared to the original investment.⁴⁴ Cash dividends were assumed to have been reinvested in additional shares of the investment company. In addition, standard adjustments were made for stock dividends and splits.

⁴³ The average disappearance rate for the three initial year groups was less than two percent, including funds that disappeared when funds investing primarily in other funds were forced to restructure. The relative continuity and completeness of this data set contrasts with those in previous studies where numerous offerings were not followed because of data problems. [For example, the Walker and Haddaway (1982) study suffered attrition of nearly half of the original sample of nonqualified issues. Somewhat less than twenty percent of this could be attributed to firms going out of business. See pp. 663-665)].

⁴⁴ Because investment company shares are being offered continuously, every day is a new issue date. For convenience, the first trading day of the year was chosen as the issue date for all of the issues. As a result, all of the issues for any given issue year (1973, 1976, or 1979) faced exactly the same general market conditions for the entire observation period.

Risk

To measure risk for small investors with undiversified portfolios, all that is needed is at least two longitudinal observations of the rate of return. These are used to calculate the standard deviation of each issue's returns.

In calculating risk for investors with diversified portfolios, one must select a risk free rate of return, a proxy for the market rate of return, the interval over which to measure the rate of return and risk, and a method for aggregating across individual securities. Each of these affects the measurement of quality and risk and is addressed below.

Risk free rate of return: Before the advent of higher rates of inflation, the risk free rate was often measured as the return on long term U.S. government bonds. Such instruments are still free of default risk but are now seen as subject to inflation risk. As a result, it is more reasonable, in the current setting, to use the return from repeated investment in short term U.S. government notes over the holding period.⁴⁵ The return on a series of 90 day Treasury notes was used.

Market rate of return: The New York Stock Exchange (NYSE) Composite Index, adjusted for dividends, is used.⁴⁶

⁴⁵ See Harrington (1983).

⁴⁶ The NYSE Composite Index is a commonly used proxy for the market, although other indexes are possible. Some recent evidence suggest that the choice of an index may be important in ranking portfolios. To the extent that findings point to consistently better performance by one portfolio relevant to another, the results must be viewed with caution. (Lehmann and Modest (1985)). Similar difficulties in determining appropriate proxies for the market portfolio have been found by Tinic and West (1986).

Interval: The measurement interval used here is one year because the rate of return data are on this basis.⁴⁷

Aggregation: In order to go from the risk and rate of return observations for individual investment companies to risk and return measures for portfolios of the qualified or nonqualified issues in a state, we have to aggregate the individual fund observations. In this study, as in previous studies, the return observation for the portfolio of qualified or nonqualified issues in each state is the mean value for the returns of the individual issues in that portfolio. Each issue in a group is equally weighted.⁴⁸ The various risk

⁴⁷ In general, the measurement interval should reflect something about the investment horizon of the individual investors. Because of tax and transaction cost considerations, it is assumed that this horizon is at least a year. Recent work suggests that this choice of interval is not a trivial one. Interval bias can be particularly important for high and low risk issues. Using monthly data, which is commonly done, could bias the results by finding high risk issues to be higher quality than appropriate. The converse is true for low risk securities. Consequently, annual data are used for all measures of individual securities. For a discussion, see Levy (1984) and Hawawini (1983).

Holding periods were last reported in the IRS Statistics of Income for 1973. In that year 41.3 percent of sales of corporate stocks had holding periods of less than two years. Lower income groups tended to hold issues longer at that time. (U.S. Department of the Treasury (1980).) Less detailed, but more recent, data on holding periods were reported for 1977 in the SDI Bulletin (1982). For 1977, 51.9 percent of corporate stocks and 68.6 percent of other securities were held for 16 or more months.

The use of annual data is a form of data aggregation relative to using hourly, daily, weekly, monthly, or quarterly data. That is, for example, the annual rate of return is the best available estimate of its composite returns if they were expressed on an annualized basis. Using annualized data makes each issue estimation more subject to error, but the estimates remain unbiased and when aggregated over several issues as is done here, the errors are expected to cancel out.

⁴⁸ Qualification permits investors in the state to purchase some amount of the security, but does not control how much can be purchased. (There is an exception in that a few States limit the amount of the sales of any one issue in aggregate.) As a result, there is no rationale for weighing the investment

measures for the portfolios are also the average measures for securities in the portfolio.⁴⁹

c. Temporal Matters

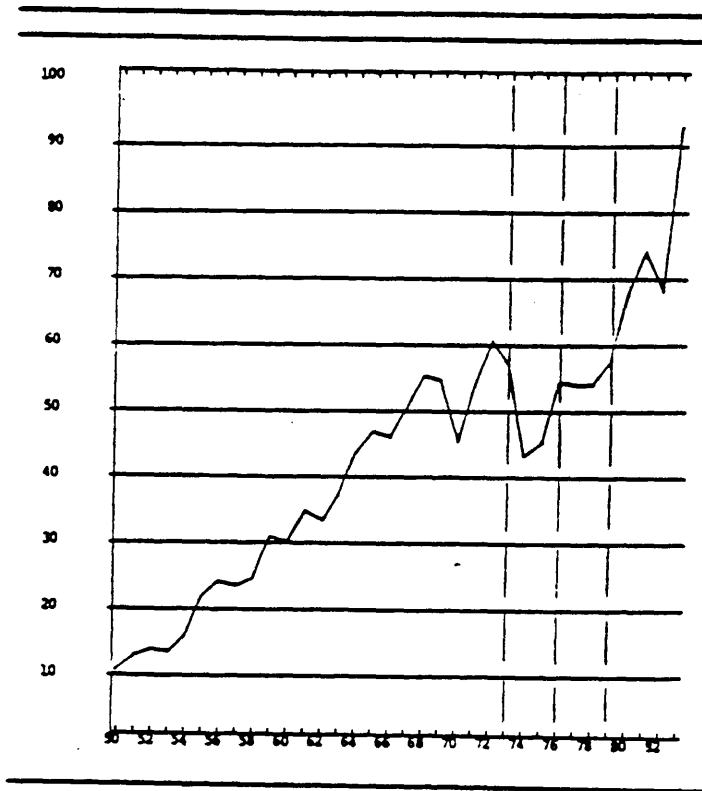
In measuring the rate of return and risk of an issue, the ideal is to observe the performance in enough diverse circumstances to capture its typical performance. The objective is to ensure that the measure is not dominated by one-time events or idiosyncracies. If only a single short period of observation is used, it becomes essential to consider general market conditions and events peculiar to the market cycle during the period of observation. Use of multiple starting dates and a variety of holding periods is the primary means of meeting the objective of capturing typical performance.

This study uses data from three different starting dates and a variety of holding periods. The starting dates were chosen to include different general market conditions and to allow a considerable holding period. Figure 1 below shows the NYSE Composite Index from 1950 to the end of the data period. The start dates chosen for this study, 1973, 1976, and 1979 are marked. 1973 was chosen because

consequences of access to one security vs. access to another. The equal weighting procedure permits an overall evaluation of risk and return for groups of issues on the basis of the equal potential of each registered issue to influence the rate of return and risk experienced by investors in a state.

⁴⁹ The standard deviation for the merit states group is the average of the state standard deviations. The standard deviation for a state is the mean of the standard deviations from each security qualified in that state. The standard deviation of the rate of return on an individual issue is the square root of the sum of the squares of the differences between each year's rate of return and the mean rate of return for the years being examined.

FIGURE 1
THE N.Y.S.E. COMPOSITE INDEX, 1950-1983



Average Annual Change
1950 - 1983 = 9.3%
1973 - 1983 = 4.4%
1976 - 1983 = 6.9%
1979 - 1983 = 9.7%

it precedes the most serious market decline in modern times. 1976 was chosen as the beginning of a period of relative market stability. 1979 was chosen as the beginning of a market rise. These dates provide a minimum of five and up to eleven years of observations.

Figure 1 also shows the average annual change in the NYSE Composite Index over different periods. Compared to the whole 1950 to 1983 period, the average annual change in the index was lower for the 1973 to 1983 period and higher for the 1976 to 1983 and 1979 to 1983 periods.

E. Empirical Results

1. Primary Results: Comparison of Returns on Qualified Issues in Merit Review States and on the Whole Sample

Statistics describing returns for the whole sample of SEC-registered opened-end investment companies and for those funds that qualified in states with extensive merit standards are shown in Table 3 and presented graphically in Figures 2-5. Returns on the whole sample are used to represent the application of disclosure requirements. As discussed above, the goal of the study is to compare investors' experiences under merit review and disclosure requirements and to examine the consistency of the effects of merit regulation over time, across stocks, and across states.

In Table 3, information on rates of return is presented for holding periods of one, two, and three years for 1973, 1976, and 1979 issues. These are the holding periods that are most likely to be relevant for most investors.⁵⁰ The whole sample "average rate of return" is the mean rate of return of the entire sample of SEC registered issues. The merit state "average rate of return" is the average of the individual state mean returns. Each state's mean return is the average return on the issues qualified in that state.

⁵⁰ See footnote 47.

TABLE 3
 RATES OF RETURN* AND "SPREAD" OF RETURNS, WHOLE
 SAMPLE** VERSUS THE AVERAGE IN THE 10 MERIT STATES

Measurement	<u>Holding Period of 3 Years</u>					
	<u>1973</u>		<u>1976</u>		<u>1979</u>	
	Whole Sample	Merit States	Whole Sample	Merit States	Whole Sample	Merit States
Average Mean Return	.8068	.8109	1.3804	13751-	1.5678	1.5515-
Average Standard Deviation	.1134	.1151-	.0950	.0904+	.2137	.2066+
<hr/>						
% of the 10 Merit States with:						
Mean Returns > Whole Sample		70		10-		0-
Mean Standard Deviation < Whole Sample		0-		90+		90+
<hr/>						
Measurement	<u>Holding Period of 2 Years</u>					
	<u>1973</u>		<u>1976</u>		<u>1979</u>	
	Whole Sample	Merit States	Whole Sample	Merit States	Whole Sample	Merit States
Average Mean Return	.6319	.6335	1.2609	1.2563-	1.5786	1.5596-
Average Standard Deviation	.1241	.1263-	.0543	.0520+	.2522	.2420+
<hr/>						
% of the 10 Merit States with:						
Mean Returns > Whole Sample		60		10-		0-
Mean Standard Deviation < Whole Sample		0-		80+		100+
<hr/>						

TABLE 3 (continued)

Measurement	<u>Holding Period of 1 Year</u>					
	<u>1973</u>		<u>1976</u>		<u>1979</u>	
	Whole Sample	Merit States	Whole Sample	Merit States	Whole Sample	Merit States
Average Mean Return	.8063	.8097+	1.2360	1.2356	1.2309	1.2232-
% of the 10 Merit States with:						
Mean Returns > Whole Sample		70		10-		0-

Average Differences (Whole Sample - Merit States)
Across Issue Years and Holding Periods

Mean Returns	.0048
Standard Deviations	.0034

+ (following an entry) Significantly better (lower risk or higher return) than the whole sample of SEC qualified issues at the 10% level, two-tailed.

- (following an entry) Significantly worse (higher risk or lower return) than the whole sample of SEC qualified issues at the 10% level, two-tailed.

* A rate of return less than 1.00 indicates that the value at the end of the period was less than the value of the initial investment. Conversely, a return greater than 1.00 indicates a gain. For example, a return of 1.10 indicates that the value at the end of the period was 10% greater than that at the beginning of the period.

** The number of issues in the total sample was 335 in 1973, 337 in 1976, and 344 in 1979. Since there is only one yearly rate of return observation for each issue for the holding period of one year, no standard deviations can be calculated.

The whole sample "average standard deviation" is the mean of the standard deviations of the rates of return taken over all of the issues in the sample. The merit state "average standard deviation" is the average of the individual state standard deviations, where each state's standard deviation is the mean of the standard deviations of issues that qualified in that particular state.

Following the average return and standard deviation measures is the percent of merit states in which qualified issues had a higher mean rate of return than the whole sample. This statistic gives the probability that a citizen living in a merit state finds that his state's securities screening process increases the mean return of his investment options compared to a situation in which the investor could select any SEC registered issue. The final measure is the percentage of merit states in which qualified issues had a lower mean standard deviation than the whole sample.

Although issues in merit states were less risky in some periods, when the results gathered in Table 3 are averaged across issue years and holding periods, they indicate that there is no statistically significant average benefit in investment performance from merit regulation. Average standard deviations for merit states averaged slightly less than those of the whole sample, but this was accompanied by lower mean returns on average, and neither difference was statistically significant at the 10% level.

In addition, there is little consistency in the effects of merit regulation. In some cases, the performance measures of issues available under merit review in Table 3 are not significantly different from the results available from the whole sample of SEC registered issues. Among the differences that are statistically significant, relationships switch back and forth across holding periods and across issue years.⁵¹

⁵¹ The states are often inconsistent in their judgments about individual issues as well.

With no statistically significant differences between the merit state performance averages and the averages for the whole SEC registered sample, and with considerable variations in the effects of merit review for different issue years, holding periods, and states, it is not possible to support the hypothesis that merit review improved the performance experienced by nondiversified mutual fund investors.

Although average effects of merit screening were not large enough to be statistically significant across the whole sample, merit review did significantly reduce the average number of issues that qualified, as discussed in Appendix A. What is more, a review of the issues that were actually excluded by merit review (listed in Appendix C) casts considerable doubt on the validity of merit review criteria with respect to both investor ignorance and poor performance.

Most of the issues that were excluded by states with extensive merit review, but not by other states, were members of major groups of funds. Frequently a single mutual fund management firm will offer a variety of funds with different objectives and different investment restrictions. Managers apparently believe that different funds will appeal to different investors or to different aspects of investors' strategies. Fund managers often advertise the differences in investment strategies used in different funds. Consequently one would expect that investors recognize that they are assuming additional risk in investing in funds that are labeled as aggressive growth or maximum capital gains funds by fund managers. As discussed in Appendix A, the funds that are excluded by merit review are predominantly the funds that seek maximum capital gains, utilize leverage in making investments, and/or specialize in small or new firms. These funds generally have involved higher risk than other funds, but their returns, both risk-adjusted and unadjusted have been higher on average.

Given the reputational stakes involved for sponsors of families of funds, the historical performance record of these types of funds, and the widespread availability of published rankings of such funds, there is little reason to suspect that these issues represent an unfair, unjust, or inequitable investment trap for investors. Rather, merit review appears to have been applied to exclude funds that offered higher potential risk and returns without any real prospects that the fund involved investment fraud. This interpretation of the effects of merit review is reinforced by the fact that several of the funds excluded by merit review are among the funds widely recognized for long term superior performance with or without adjusting for risk.

The screening effects of merit regulations on the returns available to investors in states with extensive merit standards are shown graphically in Figures 2 through 5.

Figure 2 shows the proportion of merit states in which qualified issues had higher returns than the sample as a whole. It extends the results displayed in Table 3 to include additional years.

If merit screening were consistently effective in eliminating low return issues from the distribution, we would expect to see all of the bar graphs at 100%. The 50% level is consistent with no effect, e.g., a random selection process.

The bar graphs in Figure 2, present a bleak picture of the effect of merit screening on rates of return. With the exception of 1973 to 1978 for 1973 issues, there is no instance where more than 30 percent of the merit states improved the selection of issues available to investors based on the average return criterion. Interestingly, even in 1976, 1977, and 1978, years in which merit screening on 1973 issues markedly improved the average of returns available to investors, the same was not true for 1976 issues. For 1980, no state improved the available mean of returns for 1973 and 1979 issues through merit review.

FIGURE 2
 OPENED-END INVESTMENT COMPANIES
 PERCENT OF MERIT STATES IN WHICH QUALIFIED ISSUES HAD
 HIGHER RETURNS THAN THE ENTIRE SAMPLE (BY YEAR)

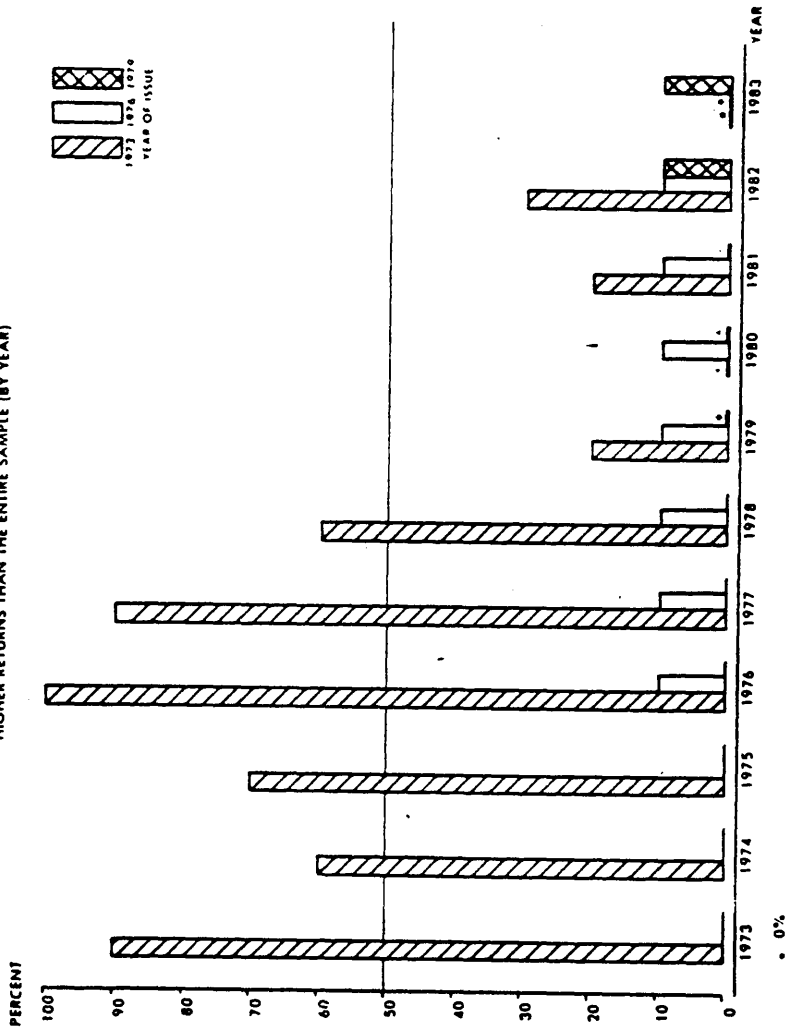


Figure 3 utilizes the same basic format as Figure 2 except that the horizontal axis denotes the holding period, the number of years since the issue date. Again, the fully effective merit review result would be bar graphs all at 100% and random results would be bar graphs at the 50% level.

As in Figure 2, the bar graphs in Figure 3 show that merit regulations generally lowered the average returns available to investors in the merit states. The one exception is again the first six years of seasoning for 1973 issues.

Figure 4 displays the average percentage of all SEC registered issues that were not qualified for sales in merit states. For each issue year, 1973, 1976 and 1979, the issues are divided into three groups depending on their rate of return over the entire observation period. The average percentage of issues that were not qualified in the merit states is shown on the vertical axis. The issue years and the three groupings of issues based on returns are shown on the horizontal axis. On the left for each issue year are rates of nonqualification of the 50 lowest return funds. On the right above each issue year are the rates of nonqualification among the 50 funds with the highest rates of return. Nonqualification rates for the remaining issues are shown between the two extremes.

Ideally, merit review should eliminate issues with the worst performance but not issues with the best performance. The bar graphs to the left above each issue year should be close to 100% while the bar graphs at the right above each issue year should be close to 0%. A random screening process would produce equal bar graphs for all parts of the returns distribution.

FIGURE 3
 OPEN-ENDED INVESTMENT COMPANIES
 PERCENT OF MERIT STATES IN WHICH QUALIFIED ISSUES HAD
 HIGHER RETURNS THAN THE WHOLE SAMPLE
 (BY HOLDING PERIOD)

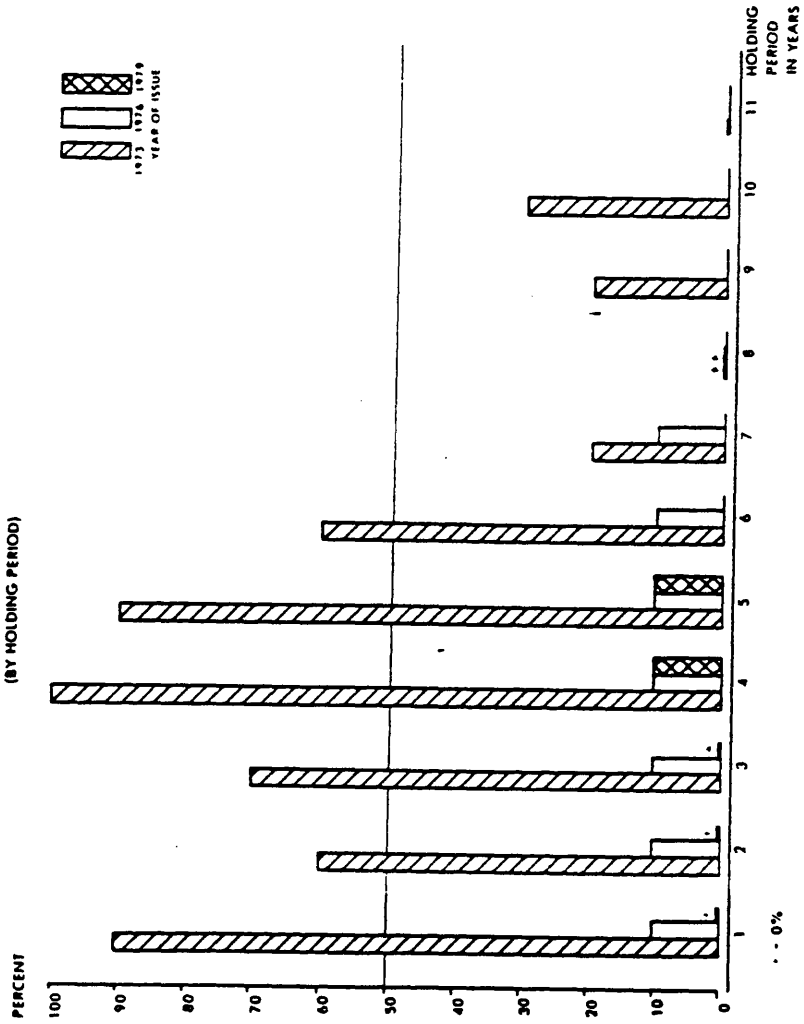
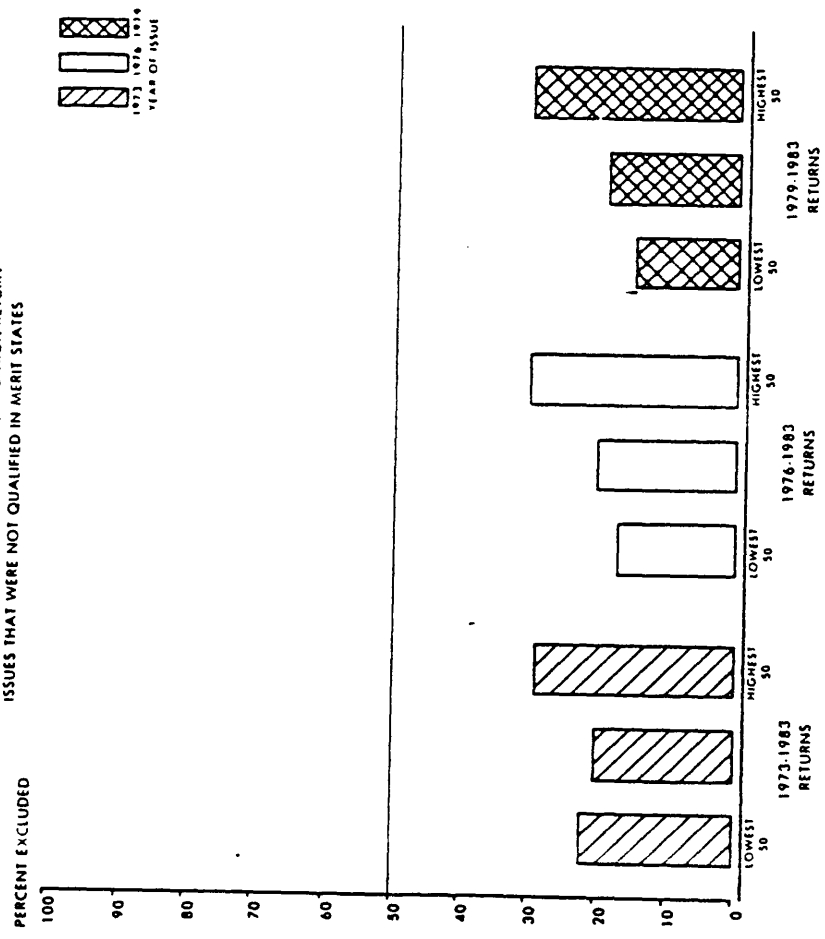


FIGURE 4
 OPENED END INVESTMENT COMPANIES
 AVERAGE PERCENTAGE OF LOW, MIDDLE, AND HIGH RETURN
 ISSUES THAT WERE NOT QUALIFIED IN MERIT STATES



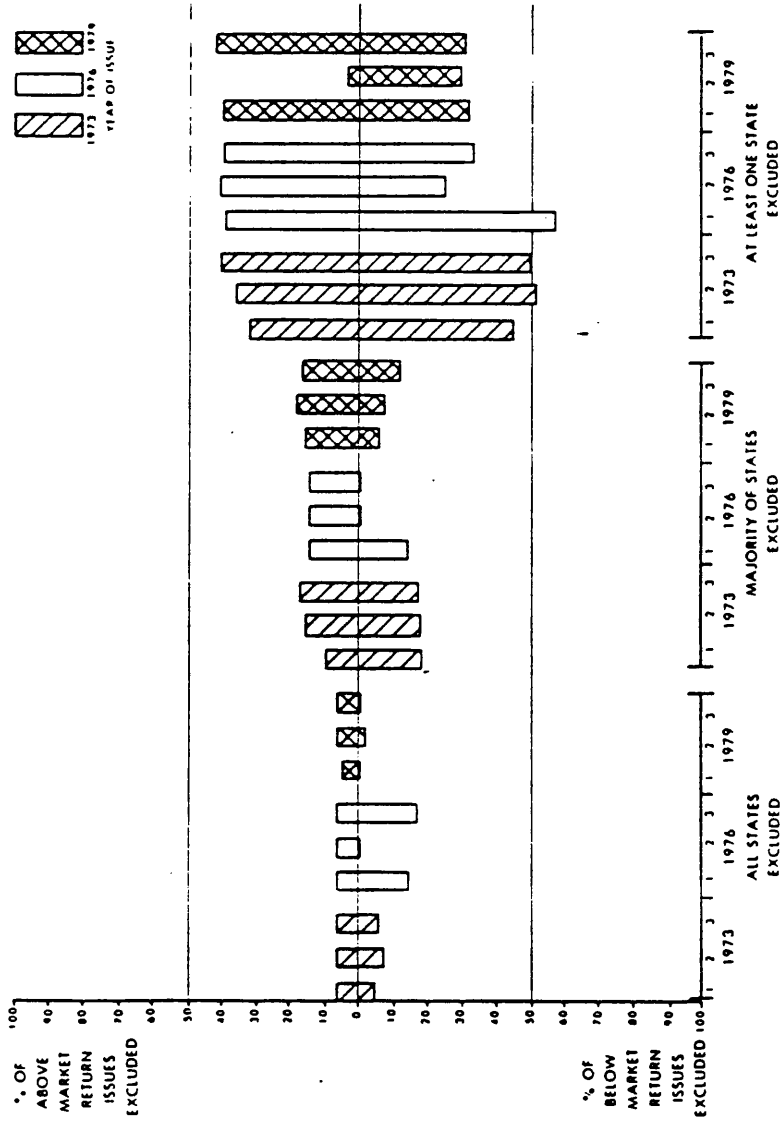
The bar graphs in Figure 4 show two important aspects about the operation of merit review. First, the screening effects of merit review are not restricted to low return issues.⁵² State minimum quality standards exclude issues from all sections of the distribution of rates of return. Second, in a number of instances, higher return issues were more likely to be excluded than either middle or low return issues. For 1976 and 1979 issues, low return issues were the least likely to be excluded. Overall, the selection process appears to be close to random.⁵³

Figure 5 presents information on the consistency of nonqualifications across the merit states. The vertical axis shows the percentages of issues with above or below market rates of return that were not qualified. The bar graphs that extend above the zero line on the vertical axis pertain to issues with above market rates of return. The bar graphs that extend below the zero line pertain to issues with below market rates of return.

⁵² Similar distributions appear using 5-year risk-adjusted returns for all issue years. For example, for 1973 issues, the 5-year risk-adjusted percentages are 17.8, 22.8, and 18.6.

⁵³ The same conclusion can be reached on the basis of Appendix E. Appendix E graphs the rate of return on the vertical axis and the 5-year beta estimate on the horizontal axis. A plus indicates issues excluded by three or more of the states with extensive merit review. A zero is used to plot other issues. Note that the plus and zero plots are scattered throughout the distribution. The inserts in Appendix E use letters to note where more than one issue has a particular set of coordinates. A indicates one, B two, and C three excluded issue. Under the risk-reduction hypothesis, exclusion rates should always be higher at the two ends of the returns distribution corresponding to high-risk investments that "paid off" and those that failed. This pattern appeared only for 1973 issues.

FIGURE 5
 OPENED-END INVESTMENT COMPANIES
 PERCENT OF ABOVE AND BELOW MARKET RETURN ISSUES THAT WERE
 EXCLUDED BY ALL, A MAJORITY, OR AT LEAST ONE MERIT STATES
 BY YEAR OF SEASONING (FIRST TO THIRD)



The horizontal axis in Figure 5 is divided into three major sections. In the first of the three from the left, the bar graphs indicate the proportions of issues that were excluded by all merit states with subdivisions for each issue year and within each issue year for one, two, and three years of holding. The middle group of bar graphs shows the proportion of issues that were not qualified in a majority of the merit states. Finally, on the right, are shown the percentages of issues that were not qualified in at least one merit state.

If there were ideal merit screening, the bars would not extend above the 0% line because that would mean excluding high return issues. The bars would extend below the 0% line indicating exclusion of low return issues.

The bar graphs in Figure 5 indicate that there is a considerable degree of discrepancy in the screening carried out in the merit states. Comparing the right to the left sides of the chart, there are very few issues that all merit states agreed to exclude, but at the same time, up to fifty percent of the issues were excluded by at least one merit state.

Overall, Figures 2 through 5 indicate that although merit review did not significantly improve investment quality on average, distribution of many funds was restricted by merit review. Further, the treatment of individual issues under merit restrictions in different states was not very consistent.

2. Risk-Adjusted Returns

Although comparably detailed observations using the risk-adjusted rates of return that are relevant for investors with extensively diversified portfolios are not available, the statistics of this type that could be calculated suggest that merit review reduces risk-adjusted returns. However, the effect is not statistically significant when averaged across issue years. In addition, the effects of merit regulation vary considerably for these measures as well. Mean risk-adjusted rates of return for the full sample and for the

group of merit states, evaluated five years from the offer date, are shown in Table 4.⁵⁴ Table 4 also shows the systematic risk estimates, or betas, from the regressions that were used to find the excess rates of return.⁵⁵

Like the previous unadjusted results, Table 4 displays a variety of relationships between merit standards and mean performance of opened-end investment companies. For 1973 issues, merit review is associated with better, although not significantly better, risk-adjusted excess returns. For 1976 and 1979 issues, returns adjusted for risk were significantly lower in the merit states. Apparently, while merit review reduced the variation of returns over time available in merit review states, as predicted by previous studies of securities regulations, this reduction in risk was insufficient to compensate for the reduction in returns in these two issue years. Turning to the systematic risk measures or betas, merit review reduced average betas in all three issue years, but the reduction was statistically significant only for 1979 issues.

F. Conclusion

The purpose of this chapter has been to review the evidence that merit review consistently excluded issues that performed poorly, did not exclude issues that performed very well, and increased the average performance of issues available to investors. What have we found?

First, merit review of opened-end investment companies issues has resulted in excluding some issues that had low rates of return or highly variable returns. The vast majority of low return or high variance issues were, however, qualified in most merit states.

⁵⁴ Excess rates of return are used. See footnote 38.

⁵⁵ In the regressions used to calculate risk-adjusted returns, return on each issue is explained by return on the market (the NYSE Composite Index is used as the proxy here) and an intercept term. The coefficient on the market variable in such a regression is the beta or systematic risk measure for that issue.

TABLE 4
MEAN RISK-ADJUSTED EXCESS RETURNS AND SYSTEMATIC
RISK ESTIMATES

Year Group	% of Merit States with Better Mean Risk-Adjusted Excess Returns	Mean Risk- Adjusted Excess Returns	Mean Systematic *Risk(Beta)**
1973 Whole Sample		-.0092	.8661
1973 Merit States	50	-.0087	.8654
1976 Whole Sample		.0517	.7240
1976 Merit States	10	.0483-	.7234
1979 Whole Sample		.0291	.7977
1979 Merit States	20	.0269-	.7795+
Average Difference (Wh. Smpl. - M. St.)		.0023	

+ (following an entry) Significantly better than the whole sample at the 10% level two-tailed.

- (following an entry) Significantly worse than the whole sample at the 10% level two-tailed.

* The excess rate of return is the average annual excess rate of return: .02 equals 2%. The corresponding rates of return taken over the maximum holding periods were similar to those shown above for 1976 issues, but for 1973 issues the whole sample return was .0291 and for the extensive merit state the return was .0269.

** The systematic risk is the coefficient on the market return variable in the regression explaining returns for individual issues. A coefficient less than one indicates that the issue(s) changes by less than the market average. A coefficient greater than one indicates that the issue(s) accentuates the movements of the market.

Second, merit review has resulted in qualifying most high return and most low variance issues, but most merit states failed to qualify a sizeable proportion of high return and low variance issues. Merit review also excluded a substantial proportion of middle performance issues.

Third, although merit review slightly reduced risk in some time periods, it also reduced average returns in those periods. More important, merit review had no statistically significant effects on either risk or return measures averaged across the holding periods and issue years studied.

A disturbing attribute of merit review was the common exclusion of funds sponsored by major fund groups and funds with long track records on the basis that they represent a threat to investors. The fund groups explicitly alert investors about the different investment criteria employed for different funds and have a great deal at stake in protecting their reputations.

Another disturbing characteristic of the effects of merit review found in this study was inconsistency or idiosyncrasy. Effects changed greatly from issue year to issue year and from state to state. Favorable effects found in one issue period did not assure that merit review would provide similar benefits in other issue periods. Different merit states made drastically different assessments of the same investment companies.

Given the insignificant results, the null hypothesis, that merit review had no systematic effect on investment performance, cannot be rejected. The evidence in this study does not support the hypothesis that investors on average benefited from being restricted in their selection of interstate investment company offers by state merit standards, even apart from costs of such regulations that were not studied here.⁵⁶

⁵⁶ For example, merit review could impose a cost on investors by limiting their ability to reduce risk through portfolio diversification if the returns on excluded and qualified issues were not perfectly correlated.

IV. COMMON STOCK ISSUES

A. Introduction

This is the second of two studies of the effects of minimum quality standards and disclosure requirements in the area of securities regulation. The first of these studies examined the case of investment company offers. The present study examines the effects of these regulatory alternatives in the case of common stocks. Although the mechanics of the regulations of these two types of securities differ somewhat, the basic context and therefore the basic path of analysis is the same.

The study begins with a description of the characteristics of typical minimum quality standards for common stock offers. The regulations in place in each state are then used to group the states according to the general regulatory approach each has used. The discussion of the theory of minimum quality and disclosure regulations, which follows the description of state regulations, is abbreviated because it parallels the one in the investment companies study.

The principal difference between conditions in the sale of investment company shares and common stocks is that state review of common stock offers is often limited to initial public offerings or to offerings that represent substantial increases in the publicly held equity in the firm. This contrasts with the annual qualification process for investment companies in which many registrants have long established records of share price and financial reports available to the public. Consequently, in the case of common stocks, there is a greater initial plausibility to the hypothesis that state securities administrators obtain information that is not effectively disclosed to investors. The conclusion of the theoretical discussion of common stock regulation, however, is the same as the conclusion for

investment companies: whether or not minimum quality regulations have been successful is an empirical question.

If state minimum quality standards are effective in protecting investors, common stocks that performed poorly ex post should be less likely to have qualified under the ex ante criteria established in the securities screening process in these states. Further, success in excluding the worst performing issues should not be substantially offset by exclusion of issues that performed very well. Overall the quality (performance) of the issues that qualified in the states utilizing minimum quality or merit standards should be higher than the quality of the whole sample of potential applicants cleared by the SEC.

B. Institutional Background

As in the case of investment company issues, a number of states have elected to augment the SEC disclosure regulations for common stock issues. In some states the additional regulations principally involve fees for registering the issue, but a number of states have adopted minimum quality standards. More states have chosen to utilize minimum quality standards in qualifying common stocks than in qualifying investment companies. In part this may stem from the SEC's more limited role in supervising common stock offerings.

Along with the greater extent of state regulation of common stock offers comes a greater variety of provisions. There are hundreds of individual provisions, but many of these can be grouped into a few categories. The most prominent categories are: 1) maximum limits on underwriting compensation, 2) limits on the sale of stock to insiders prior to a public offering, 3) limits on options and warrants, 4) restrictions on the maximum offering price based on past earnings and assets, 5) requirements for equality in shareholder voting rights, and 6) minimum promoters' stakes in public offerings. Several states have additional provisions outside of these categories, but most of these are limited to one or only a few states. Most states with specific standards such as these also have a general

provision requiring that the offer be fair, just, and equitable. State administrators thus have discretion in selecting how to carry out the screening function.

As in the case of investment company regulation, an issuer may be able to sell to some investors in the state even if it does not meet the state's standards. This is because some states explicitly differentiate between "sophisticated" and "unsophisticated" investors. Sophistication is generally measured by total assets and/or income. Given the exemptions to merit regulations accorded to sophisticated investors, it is apparent that the focus of merit review of common stock offers, as well as investment company offers, is on unsophisticated investors.

Given the complex pattern of regulatory provisions and the potentially substantial discretion available to state administrators, it is more complete to combine consideration of both statutes and administration in classifying state regulatory regimes. Table 5 below does just that.

In Table 5, the first column is a summary of the statutory provisions of each state.⁵⁷ An H indicates that the state has merit and registration language in its statutes that extends beyond that in the Uniform State Code.⁵⁸ These are states in which the potential for intensive merit review of new issues is the greatest, based on the statutes. In contrast, an L appears for a state whose language provides the least basis for merit screening. Other states with a blank have language permitting merit review, but do not reach beyond the Uniform Code.

⁵⁷ Taken from Baysinger (1981).

⁵⁸ The Uniform State Code has optional provisions for merit review. States with merit review provisions outside the Uniform State Code provisions create compliance costs unique to seeking qualification in that state. A revised code was issued in 1985, but is not used here.

TABLE 5
REGULATORY CLASSIFICATION OF STATES ACCORDING TO
STATUTES AND ADMINISTRATIVE PRACTICES

State	Merit Statutes	Under- writer Views*	Securities Law Firms Views**	Overall
AL				
AK				
AZ	H	H	H	HH
AR		H		H
CA	H	H	H	HH
CO	L	L	L	LL
CT	L	L		LL
DE		L	L	L
FL	H	L		
GA	L	L		LL
HI		L	L	L
ID				
IL	H	H	H	HH
IN			H	H
IA	H	H	H	HH
KS		H		H
KY		L		L
LA	H			
ME	H	L	L	
MD		L		
MA			H	H
MI		H	H	H
MN			H	H
MS	H		L	
MO	H	H	H	HH
MT		H	L	
NE	L			
NV	L	L	L	LL
NH	H	L	L	

TABLE 5 - Continued

State	Merit Statutes	Underwriter Views*	Securities Law Firms Views**	Overall
NJ	L	L		LL
NM		H		H
NY	L	L		LL
NC	H			
ND	H			
OH		H	H	H
OK		H	H	H
OR	H			
PA				
RI	H	L	L	
SC	H			
SD	H			
TN	H			
TX		H	H	H
UT		L		L
VT	H		L	
VA				
WA		L	H	
WV	H		L	
WI		H	H	H
WY		L		L

* Survey of underwriters conducted by the F.T.C. On a five point scale with low values indicating intensive merit scrutiny and a mean observation of 3.03. Scores of 2.3 or less are shown as H for high levels of merit regulation and scores of 3.6 or more are shown as L for low levels of merit regulations. Mean There were 6 responding firms.

** Survey of securities law practitioners from Brandt (1985). The same scoring system is used. There were 14 respondents. The mean score was 2.87.

The next two columns in Table 5 report the assessments of the intensity of merit review provided by two groups actively involved in the process of issuing new common stock shares -- underwriters and securities law firms. In separate surveys, two groups of firms active in the day to day process of qualifying new issues and negotiating with state securities administrators were asked to assess the intensiveness of merit review in each state.⁵⁹ As in the first column, an H is used when highly intensive merit review characterized the state. An L appears when the state was found to have very limited merit review, if any. A blank indicates a level of merit review falling between these two tails of the distribution.

The final column provides a summary of the prior three columns and is used to create the regulatory groupings of states used in the later analyses. An HH is used to indicate the highest and surest level of merit review. States received this designation when both the statutory and administrative assessments indicated a high level of merit review. A single H appears when either one (or both) of the practitioner groups indicated a high level of merit review but the statutes do not exceed the Uniform Code's language. Conversely LL is used for states where practitioners observed that little or no merit review takes place and the statutory language was similarly restrained. Single L means that one group at least rated the state as a low merit review state although the statutes contain model code language. States with neither H nor L designations were judged to be about average in the level of merit review that they apply. In two instances, Montana and Washington state, the practitioners' judgments of a state contrasted. The administration in these two states has been treated as average.

⁵⁹ The survey of securities law firms is reported in Brandt (1985). The survey of underwriters was conducted by the F.T.C.

Table 6 collects the results from Table 5 into a listing of states by regulatory group. These regulatory groups will be used to define subsamples of states for the analyses later in the report.⁶⁰

C. The Theory of Consumer Protection through Minimum Quality Standards and Disclosure Requirements

The theoretical underpinnings of the evaluation of the regulation of common stock issues in this study are essentially the same as those used in the evaluation of investment company regulations. The basic issue is the nature of information that is obtained by state securities administrators in the course of considering an issue's application to sell in the state. If the information is widely available and understood by investors, then it is unlikely that minimum quality regulations provide significant advantages, especially considering the theoretical advantages of disclosure requirements with respect to the diversity of investor preferences and flexibility to adjust to changing circumstances. Only if the information obtained by securities administrators is difficult to distribute effectively or investors' preferences are nearly identical is there a reasonable likelihood that state minimum quality standards would improve the choices facing investors by excluding some issues.

⁶⁰ Interestingly, there is a considerable, but not complete, overlap between the levels of merit review for common stocks and opened-end investment companies. States that have extensive merit review of both types of securities include Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Texas, and Wisconsin.

TABLE 6

REGULATORY GROUPINGS OF STATES FOR COMMON STOCK ISSUES

Strong Application of Minimum Quality Standards (N=16)

Arizona	Iowa	Missouri*
Arkansas**	Kansas	New Mexico**
California**	Massachusetts	Ohio*
Illinois	Michigan	Oklahoma*
Indiana	Minnesota	Texas
		Wisconsin**

Average Application of Minimum Quality Standards (N=22)

Alabama	Montana	Rhode Island
Alaska	Nebraska	South Carolina+
Florida+	New Hampshire	South Dakota
Idaho	North Carolina	Tennessee -
Louisiana+	North Dakota+	Vermont
Maine	Oregon+	Virginia+
Mississippi	Pennsylvania+	Washington+
		West Virginia

Less than Average Application of Minimum Quality Standards (N=12)

Colorado	Hawaii	New Jersey+
Connecticut	Kentucky	New York+
Delaware	Maryland	Utah
Georgia	Nevada	Wyoming+

* Survey respondents indicated increased application of merit review by 1976. See Table 18.

** Survey respondents indicated increased application of merit review by 1979. See Table 18.

+ Indicates considerable diversity among practitioners in their assessments. "+" is used when extreme readings at both ends of the scale each received at least 15 percent of the observations.

Although there are several arguments to suggest that states either do or do not obtain access to information sufficient to improve the protection of investors, none of these arguments is decisive. Relative to the situation of investment companies, however, the theoretical case for minimum quality regulations is stronger for common stocks. Among investment companies, many of the firms have been in operation for many years and the only reason that they must go through the qualification process time after time is that they sell directly to consumers on an ongoing basis either by issuing additional shares or by reselling shares redeemed by former investors. Since many of the investment companies have long public records of performance, there is a relatively low chance that information obtained in the qualification process will reveal anything previously unknown about the issuer. The same may not be true for common stock issuers subject to the qualification process.

Unlike investment companies, common stock issues go through the qualification process only when additional shares are being sold. Once the firm has received these initial proceeds, all trades take place in secondary markets (NYSE, OTC, etc.) where the issuer usually does not take part directly. As a result, the universe of common stocks going through the state qualification process during any year is quite different than the universe of investment companies going through qualification. This sample difference is reenforced by the fact that once a firm has been listed on a major exchange, it is almost universally exempt from further state qualification procedures. Thus, the common stock issues going through qualification are much more likely to be from firms that are issuing securities for the first time or that are substantially altering the public's stake in the firm. To the extent that new firms or firms going through major changes dominate the common stock screening done by the states, there is a greater probability that previously unknown information about the issuer might be obtained by state securities administrators. This focus on new or substantially changed issuers, which have been less subject to intensive investor scrutiny, is likely to increase the possibility that minimum

quality regulations will provide an effective substitute for the investment decisions of fully informed investors.⁶¹

In summary, a theoretical argument that merit review effectively protects consumers can be based on beliefs that: 1) states, using their police powers, can identify impending frauds better than the market; 2) states can identify and exclude issues that investors would unanimously reject if they had the better information obtained by the state; and 3) disclosure regulations can not accomplish these two objectives. An argument that merit review does not provide substantive protection for consumers can be based on beliefs that: 1) states are unable to obtain information not already known to the market; 2) incentives of securities marketers to preserve their reputations are sufficient constraints on issuer behavior; 3) investors' preferences are too diverse to be efficiently matched by merit standards; and 4) regulations are not flexible enough to accommodate innovation and changing economic circumstances.

Thus, it is possible but not obvious that state minimum quality standards make effective substitutes for the judgments that investors would make themselves if fully informed. To determine whether this possibility has been a

⁶¹ Within the context of common stock screening, there might be differences over time in the contribution that might be expected from the states. For instance, when securities analysts are faced with only a few offers, their analysis can be painstaking and thorough. Consequently, when there are few new issues, investors are likely to have more complete information themselves and have little need for the help of state securities regulations. Conversely, when the schedule of new issues is full, analysts are less likely to be able to find and disclose as much about any given firm. During such new issue boom periods, state securities administrators' "calls" on what is unfair, unjust or inequitable offers might be more useful and the market context of the screening process should be kept in mind.

The author wishes to thank Commissioner Latham of Texas for this suggestion. It must be pointed out, however, that state review resources will also be stretched in such periods.

For a discussion of how such quality screening might be less important in "hot issue" markets, see Haltiwanger and Waldman (1985).

reality, it is necessary to examine the actual results of merit review.

D. Study Design

1. Restatement of Hypotheses

Three hypotheses about the effects of merit review will be tested: (1) merit review excluded issues that performed very poorly; (2) merit review did not exclude many of the best performing issues; and (3) the average performance of issues qualified in merit review states was higher than the average performance of the whole sample. Consistency across states on each of these tests will also be examined.

2. Measurement Issues

Before the tests described above can be carried out, it is necessary to discuss the means of measuring quality as well as the data.

a. The Quality of an Investment

Just as in the analysis of mutual fund performance, the simplest measure of average quality for a group of assets is their average rate of return.⁶² This indicates what an investor receives on average from allowing a groups of firms to make use of his or her funds. Returns are averaged across different issues and across jurisdictions. To avoid relying on a single time period that might not be typical, rate of return data covering several possible investment periods are used.

⁶² The rate of return on an issue in a year is calculated as the net change in the value of investment over the year, including dividends and capital gains, divided by the value of the investment at the beginning of the year.

Also in parallel with the mutual funds analysis, common stock investors may also be interested in variations in returns or risk. Again, the appropriate risk measure for an investor depends on the number of issues the investor owns.

For small investors holding only one or a few issues, the relevant measure of risk is the average standard deviation of the rate of return on the issue(s) being held, and investors unambiguously prefer an issue with a higher average return and a lower standard deviation.⁶³

For diversified investors holding many issues, the standard deviation of an issue is not a good measure of risk. The relevant risk measure is the nondiversifiable risk of holding the issue, the degree to which the issue's return fluctuates with changes in the return on the market. In comparing individual investments, diversified investors compare the rates of return and nondiversifiable risks of the two issues. Conveniently, a measure has been developed that combines these two considerations into a single observation, the Jensen index or the risk-adjusted rate of return. This index measures the return that would have been received on the issue if the portion of return that compensates for bearing nondiversifiable risk had been removed.⁶⁴

Given that specific merit regulations, such as those discussed in Section B of this chapter, generally appear to restrict new, novel, or otherwise risky securities, and that investments are generally thought to involve a tradeoff

⁶³ Each investor may have a different rate at which he or she is willing to exchange risk and return or each investor may have a rate of exchange between risk and return that varies with the risk and return of the portfolio held. It is possible for a state to dictate an "acceptable" tradeoff rate, but this will leave some investors worse off than they were before because they will not be able to satisfy their investment preferences. Rather than assuming that a specific rate of trading risk for return is appropriate, the criterion used here is limited to assessing whether investors are unambiguously better or worse off.

⁶⁴ See footnote 38.

between return and risk, it would be reasonable to expect that merit regulations would reduce risk but at the cost of lower returns.⁶⁵

b. Data

There are two main components to the data. The first is rate of return information (price, dividends, and splits). The second element is the qualification or registration data.

The creation of the common stock data set required reference to several sources as well as original data gathering activities. As in the investment company data set, issues from 1973, 1976 and 1979 are included.

The initial random list of new offers was taken from the Investment Dealer's Digest. For 1973, the initial random sample included approximately half of the listings. For 1976, virtually all of the listings were included. For 1979, approximately one third of the listings in the second half of the year were included.⁶⁶ These differences in the sampling intensity reflect the large differences in the number of new issues that were floated in different years. The sample includes only common stock offers from firms in non-regulated industries that were not listed on either the

⁶⁵ Findings of this type are reported by Jarrell (1981).

⁶⁶ The second half of 1979 was used because it was the beginning of a major wave of new issues. The first half of 1979 had relatively few new issues and resembled the thin new issues listings of the mid 1970s.

The final samples are smaller than the random initial samples. Deletions from the initial samples were due exclusively to lack of registration information. Hence, there should be no selection bias based on performance characteristics. The final samples are limited to interstate common stock issues that applied to Maryland, Delaware, and/or Pennsylvania as well as to states outside of the mid-Atlantic region. Local issues are therefore not included. Two-issues were excluded by the latter procedure.

NYSE or the American Stock Exchange at the time of the offer.⁶⁷

Where names were changed or where the firms merged with a public company, it was assumed that the investor continued to follow the same set of assets. Where a firm merged with a private firm (no further data would be available) or where the firm was liquidated with a liquidating dividend, it was assumed that the investor earned the three-month Treasury bill rate of interest over the remaining period.

Returns

Rates of return were calculated in the same manner as in the previous chapter. Since several firms in the sample did not have regularly quoted prices, some year-end prices had to be proxied by interpolation between the temporally closest quotes. The convention of stating the price as the mean between the want and offered prices on the "pink sheets" was followed for these issues. Information on year-end prices for most issues was gathered from various editions of the National Stock Summary, CCH's Stock Values and Dividends for Tax Purposes, and The Daily OTC, ASE, and NYSE Quotations. Capital changes were found or checked through CCH's Capital Changes Reporter. Because initial sales dates for issues in the common stock sample differed, an adjustment is needed to bring issues to the same basis in terms of conditions in the overall market. Returns were transformed into market relative returns for the risk-unadjusted rates of return analysis.⁶⁸

⁶⁷ The approach of studying only initial offers was not adopted because there were many instances in which noninitial offers were rejected for qualification in one or more states. Hence it is not the case that state qualification requirements are binding only on initial offers.

⁶⁸ The market relative return is the simple rate of return minus the market rate of return over the same period. This adjustment avoids the possibility that the simple rate of return for one issue will be higher than that for another

Risk

Risk for small investors and diversified investors is measured in the same way in this chapter as in the mutual funds chapter.

Qualification

Although the process of collecting performance data was time consuming, collecting registration information proved even more difficult, and some design changes had to be made to accommodate these difficulties. Ideally, registration information from all 50 states would be used for all three time periods. It proved impossible, however, to obtain data on all states for the 1973 period. Consequently, for 1973, performance for only six of the states with extensive merit requirements is contrasted to the performance of all SEC registered issues.

The final collection of qualification or registration data involved several avenues of inquiry. These included review of the monthly bulletins announcing registrations for the states that have such bulletins, two FTC staff surveys,⁶⁹ and several visits to the files of nearby states to examine

simply because its issue date was earlier.

⁶⁹ The first survey went to states which did not have bulletins listing qualification applications and approvals. Several states provided the requested information about qualification, but several others did not respond or refused to provide the information. The second survey was sent to underwriters of the sample common stock offerings. The survey requested information about the qualification status of specific issues and about the firms' general experiences with seeking qualification in each state. Despite opposition from some concerned parties, several firms provided full information. See Tables 5 and 6.

U-1 forms, which list qualification efforts and contain telegraphic updates on withdrawals from other states.⁷⁰

E. Empirical Results

1. Primary Results: Returns on Qualified Issues in Merit Review States

Statistics describing returns for the whole sample of SEC registered issues and for issues qualified in the states with extensive merit standards are shown in Table 7 and presented graphically in Figures 6-9. In Table 7, return on the whole sample of SEC registered issues is used as the baseline representing screening on the basis of disclosure requirements.

The merit state return is the average of the individual state mean returns. Each state's mean return is the average return on the issues qualified in that state. The whole sample standard deviation is the average standard deviation of the rates of return for all the sample issues. The merit state standard deviation is the average of the individual state mean standard deviations, where each state's mean includes only issues that qualified in that particular state. For each issue, the standard deviation is computed by taking the square root of the sum of the squared deviations from the mean return of the sample years.⁷¹

⁷⁰ As in the investment company study, it was found that some issuers did not consider themselves qualified even though they were. In particular, in 1976, Connecticut, New York, New Jersey, and Nevada had no qualification requirements for interstate issues. Despite the open policy in these states, several firms did not indicate that they were qualified for sale in these states.

⁷¹ The average standard deviation of the rate of return computed over a period of years is the square root of the sum of the squares of the differences between each year's rate of return and the mean rate of return for the period of years.

TABLE 7
 MARKET RELATIVE RATES OF RETURN* AND "SPREAD" OF RETURNS,
 WHOLE SAMPLE** VERSUS THE AVERAGE
 IN THE 16 MERIT STATES

Measurement	<u>Holding Period of 3 Years</u>					
	<u>1973</u>		<u>1976</u>		<u>1979</u>	
	Whole Sample	Merit States	Whole Sample	Merit States	Whole Sample	Merit States
Average Mean Return	.72	.62-	2.04	2.10+	1.71	1.79+
Average Standard Deviation	.26	.19+	.68	.66	1.27	1.08+
% of the 10 Merit States with:						
Mean Returns > Whole Sample		0-		53		81+
Mean Standard Deviation < Whole Sample		100+		81+		63
Measurement	<u>Holding Period of 2 Years</u>					
	<u>1973</u>		<u>1976</u>		<u>1979</u>	
	Whole Sample	Merit States	Whole Sample	Merit States	Whole Sample	Merit States
Average Mean Return	.83	.73	1.51	1.49-	2.64	2.35-
Average Standard Deviation	.24	.22+	.37	.36+	1.27	1.10
% of the 10 Merit States with:						
Mean Returns > Whole Sample		17		31		44
Mean Standard Deviation < Whole Sample		83		63		69

TABLE 7 (Continued)

Measurement	<u>Holding Period of 1 Year</u>					
	<u>1973</u>		<u>1976</u>		<u>1979</u>	
	Whole Sample	Merit States	Whole Sample	Merit States	Whole Sample	Merit States
Average Mean Return	.93	.86-	1.12	1.13+	1.71	1.53-
% of the 10 Merit States with:						
Mean Returns > Whole Sample		33		87+	-	38
<u>Average Differences (Whole Sample - Merit States Average)</u> <u>Across Issue Years and Holding Periods</u>						
Returns		.07				
Standard Deviations		.08+				

+ (following an entry) Significantly better (lower risk or higher return) than the whole sample of SEC qualified issues at the 5% level, one-tailed (10% level, two-tailed).

- (following an entry) Significantly worse (higher risk or lower return) than the whole sample of SEC qualified issues at the 5% level, one-tailed (10% level, two-tailed).

* The market relative rate of return is the return on a particular issue divided by the rate of return on the market. For example, if the return on an issue were 1.10 while the return on the market was 1.20, the market relative return on the issue would be .92, indicating that the investments' return had not kept pace with the market, although it had gained relative to the value of the initial investment. Dividing by the return on the market is necessary to normalize the rates of return for issues that were floated on different dates under potentially different general market conditions.

** The number of issues in the total sample was 335 in 1973, 337 in 1976, and 344 in 1979. Since there is only one yearly rate of return observation for each issue for the holding period of one year, no standard deviations can be calculated.

Following the mean return and mean standard deviation measures is the percent of merit states in which qualified issues had a higher mean rate of return than the whole sample. The final measure is the percentage of merit states in which qualified issue had a lower mean standard deviation than the whole sample.

The results in Table 7 indicate that merit review resulted in slightly reduced standard deviations averaged across the issue years and holding periods studied. The reduction in unadjusted returns falls short of being significant at the 10% level, although it is close. The reduction in standard deviations averaged 11.8% while the reduction in returns for the same periods averaged 3.9%.⁷² Therefore, ignoring the other costs of merit review, strongly risk averse consumers with nondiversified portfolios might have benefitted from the restrictions of merit review. Less risk averse consumers would have found themselves denied investment options that they preferred.

As in the mutual funds analysis, the effects of merit review were not consistent, except that in the case of common stocks, average standard deviations were regularly lower in the merit states.⁷³

⁷² When data for the one year holding period is added to the calculation of mean returns, the merit group's average return was 4.6% less.

⁷³ In some cases, the results of applying merit review are not significantly different from the results available from the whole sample of SEC registered issues.

Among the differences that are statistically significant, there is little consistency in rates of return across issue years within holding periods or across holding periods within issue years.

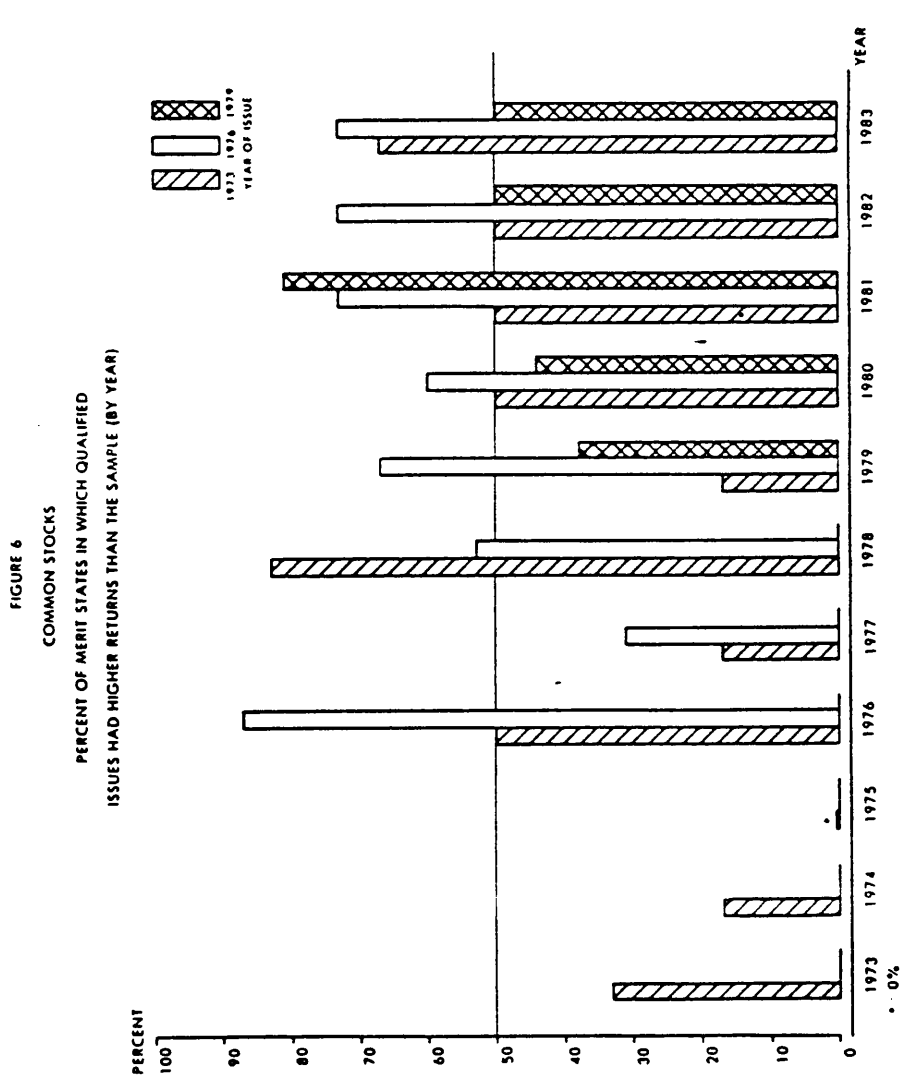
Individual states differed widely in the issues that they qualified for sales. See the discussion of Figure 9.

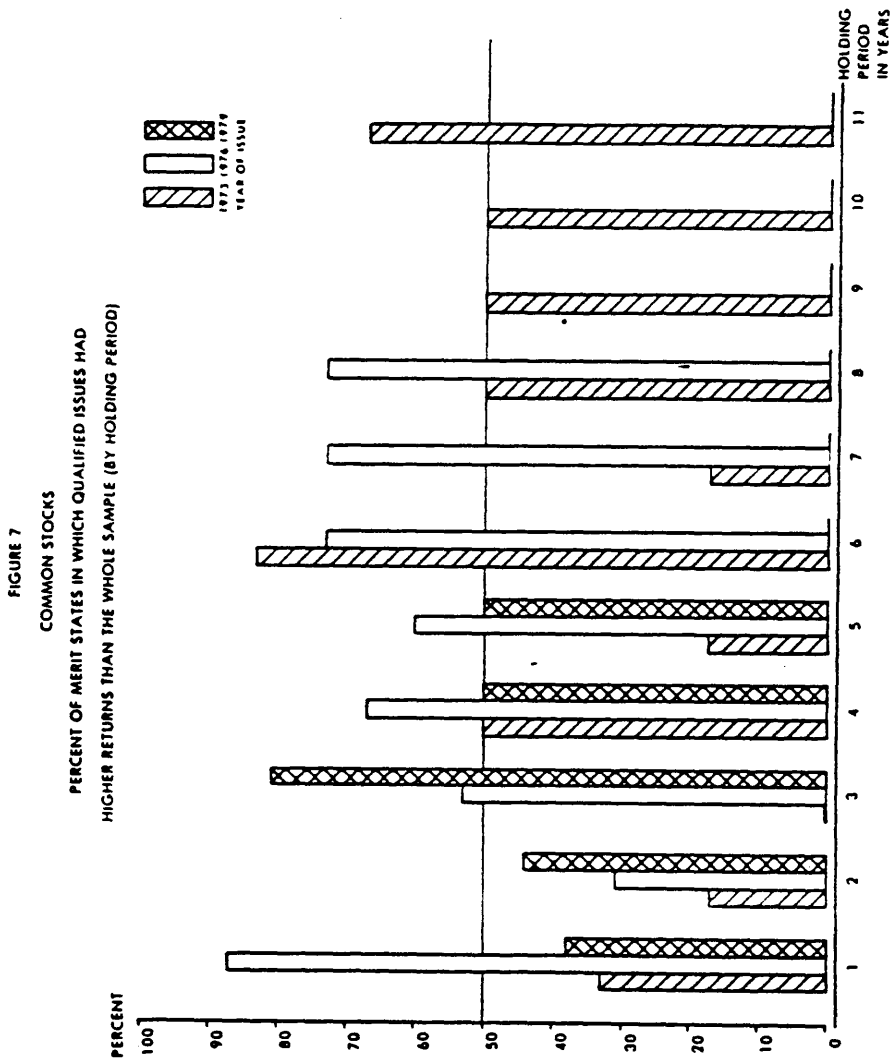
Turning from tabular to graphic presentations, Figure 6 graphs the proportion of merit states in which qualified issues had higher returns than the sample as a whole and extends the observation period to 1983 for all three issue periods.⁷⁴ Ideally, if merit screening were consistently effective in eliminating low return issues from the distribution, we would see all of the bar graphs at 100%. A completely random selection on the part of states would be expected to produce bar graphs at the 50% mark.

The bar graphs in Figure 6 present a mixed picture. In some years the qualification process in merit states produced returns higher than the whole sample and in other years the returns are not as high as returns for the whole sample in most of the merit states. The best year for which there is data for all three issue years is 1981 while the worst year is 1979. There does not seem to have been a consistent relationship between returns on qualified issues across issue periods. For example, in 1979, the proportion of states in which returns on qualified issues exceeded returns on the whole sample was 17 percent for 1973 issues, 67 percent for 1976 issues, and 38 percent for 1979 issues. Overall, Figure 6 resembles a random selection process much more than the ideal selection process.

Figure 7 utilizes the same basic format as Figure 6 except that the horizontal axis denotes the holding period, the number of years since the issue date. Essentially, Figure 7 shifts all of the bar graphs in Figure 6 so that they start at the right side of the figure.

⁷⁴ For this comparison, average returns on an equally weighted portfolio of qualified issues in each state are each compared with returns from the whole sample of SEC registered issues and each state in the extensive merit group is considered an independent example of the application of merit review. Nonparametric analysis (sign tests) can then be used to examine the effects of merit review across the independent applications of merit review.

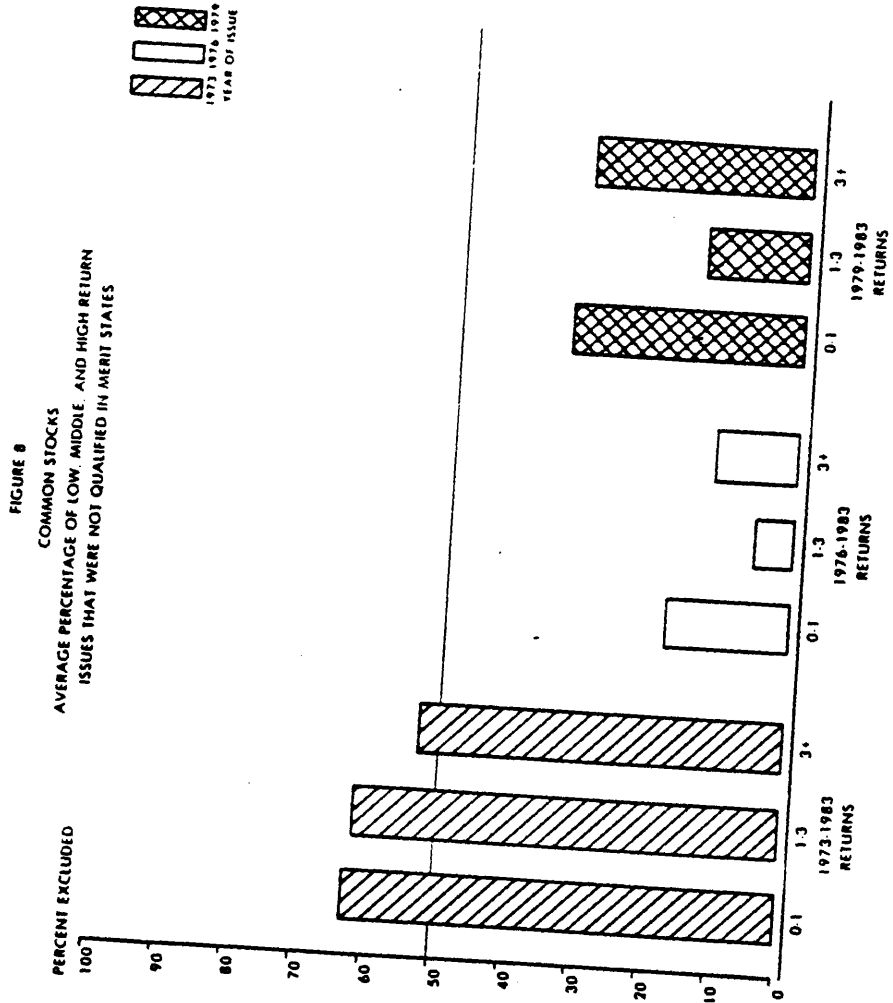




The rearrangement in Figure 7 allows an examination of the results that focuses on how long the issue has been held rather than on the individual year. Again the ideal screening process would feature bar graphs that all reached 100% while a random screening process would produce bar graphs at the 50% level.

Unlike Figure 6, which did not provide any readily apparent pattern, Figure 7 suggests that the effects of merit review over the first few years of holding was to reduce returns. Whether any compensating reduction in the spread of these returns was sufficient to offset these lower returns is a question of investor's risk preferences. Among the first five years of holding, the period for which all three issue years provide data, there are five bar graphs that exceed 50 percent and ten that fall at or below that level. The second year of holding presents the bleakest picture since none of the issue years rise to the 50 percent level. The available information suggests strongly that these early years were the most pertinent for a substantial majority of investors.

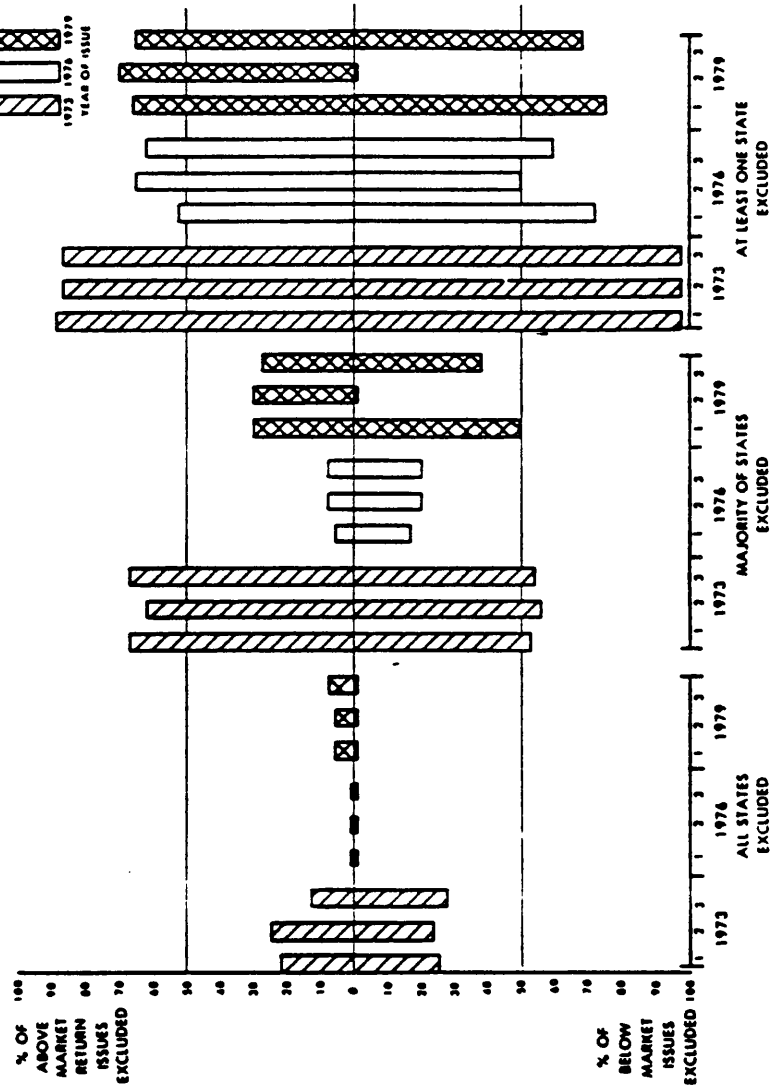
Figure 8 displays the average percent of high, middle, and low return issues that were not-qualified for sales in the merit states. For each of the first three holding periods after each issue year, the common stocks were divided into three groups based on each issue's market relative rate of return. The bar graphs show the average percent of issues in each of these thirds of the distribution that did not qualify in the merit states. Ideally, all of the effect of merit review should be in eliminating low return issues. This would mean that the three left most columns for each issues period would approach 100% while the three right most columns approach 0%. The middle column should be 0% or some intermediate value. A random screening process would result in equal rates of exclusion across all issues.



The results in Figure 8 give added confirmation to three important aspects of the operation of merit review during the observation period. First, screening effects of merit review were not limited to low return issues. State minimum quality standards, as applied to common stocks, excluded issues from all sections of the distribution of returns. Often, exclusions in the middle or high end of the distribution of returns were just as common as exclusions from the low end of the distribution. Second, many low return issues were qualified in merit states. With the exception of 1973, most of the issues from the bottom third of the distribution of returns were qualified on average. Third, although in some years higher proportions of issues were excluded from the tails of the distribution than from the middle, this pattern of screening, which might be associated with efforts to reduce the spread of returns by excluding issues with uncertain returns, did not dominate. Overall, the graphs are close to a random looking result.

Figure 9 presents additional information on the consistency of nonqualifications across the merit states. The vertical axis shows the percentages of issues with above or below market rates of return that were not qualified. The bar graphs that extend above the zero line pertain to issues with above market rates of return. The bar graphs that extend below the zero line pertain to issues with below market rates of return. Ideally, merit state should all agree what issues should be excluded and these issues should be issues with below market performance. In this figure, such screening would results in equal graphs all of which would be below the 0% line in Figure 9. A random selection process would produce bar graphs both below and above the 0% line and progressively larger bar graphs in going from the "all states" to the "at least one state" category.

FIGURE 9
COMMON STOCKS
PERCENT OF ABOVE AND BELOW MARKET RETURN ISSUES THAT WERE EXCLUDED
BY ALL, A MAJORITY, OR AT LEAST ONE MERIT STATES BY YEAR OF
SEASONING (FIRST TO THIRD)



The horizontal axis in Figure 9 is divided into three sections, each of which has data for the first three years of holding for each of the three issue years. The left hand sections of bar graphs indicate the proportions of issues that were excluded by all merit states. There are subdivisions within this section for each issue year and within each issue year for one, two, and three years of holding. The merit states agreed on the appropriate status for the relatively few issues portrayed in this section. The middle group of bar graphs show the proportion of issues that were not qualified in a majority of the merit states. Finally, on the right, are shown the percent of issues that were not qualified in at least one merit state.

The bar graphs in Figure 9 indicate that there was a considerable degree of discrepancy in the screening carried out in the merit states. First, from the left portion on the figure, it is evident that there was rarely unanimous agreement about whether to qualify an issue. Turning to the middle portion of the chart, majority nonqualification of issues was more common than unanimity, but for 1976 and 1979, most issues, whether high return or low return, were qualified by most merit states. In the 1973 issue group, the majority of all issues were not qualified in a majority of merit states. There was slightly more agreement in nonqualifying high performance issues. The graphs on the right side of the figure, which show the percent of issues not qualified in at least one merit state, show that a large majority of all issues were not qualified in at least one merit state.

Figure 9 also illustrates that the screening effects of merit review were not restricted to low return issues. Nearly the same proportion of high return issues were excluded as low return issues. Second, many low quality, that is low return, issues are qualified in merit states. With the exception of the 1973 issues, most of which were nonqualified in all three return groups, about 70 percent of the below market issues were qualified in the merit states on average.

To capsulize Figure 9, qualification status was not very consistent across merit states. Only a very small proportion of issues were or were not qualified by all merit states. The graphs in Figure 9 strongly resemble the expected effects of a random selection process.

2. Risk-Adjusted Returns

Although comparably detailed observations using risk adjusted rates of return that are relevant for investors with extensively diversified portfolios are not available, the statistics of this type that could be calculated show that on average, merit review resulted in slightly lower risk-adjusted rates of return. Mean risk-adjusted rates of return for the full sample and for the group of merit states are shown in Table 8.⁷⁵ Table 8 also shows the systematic risk estimates, or betas, from the regressions that were used to find the excess rates of return.

Table 8 displays a variety of relationships between merit standards and mean performance of common stock issues for different issue years. For 1979 issues, merit review is associated with significantly better mean risk-adjusted excess returns, but for 1973 issues just the opposite is the case. Turning to the systematic risk estimates (or betas), for 1973 and 1979 issues, merit review resulted in slightly lower mean risk estimates. For 1976

⁷⁵ The returns used in this analysis are excess rates of return. Excess rather than simple rates of return must be used in the common stock analysis because the sale dates of the common stocks are each different. By subtracting out market rates of return, the excess rate of return adjusts for the differences in offering dates.

The returns reported in Table 8 are, in several cases, substantially greater than zero, which is the expected value of the Jensen index. Abnormal returns of this type for small firms such as these have been commonly found. They constitute "small firm anomaly" that has been the subject of substantial debate in the financial economics literature. Papers on the small firm effect include Basu (1977, 1983), Banz (1981), Reinganum (1981), and Stoll and Whaley (1982).

TABLE 8
 MEAN RISK ADJUSTED EXCESS RETURNS AND SYSTEMATIC
 RISK ESTIMATES

Issue Year	Group	% of Merit States with Better Mean Risk Adjusted Return	Mean Risk- Adjusted Excess Returns	Mean Risk (Beta)
1973	Whole Sample		.1334	1.108
1973	Merit States	0-	.0615-	1.082
1976	Whole Sample		.2511	.122
1976	Merit States	69	.2572	.283-
1979	Whole Sample		.0521	2.327
1979	Merit States	75+	.0734+	2.309

Note: The excess rate of return is the average annual excess rate of return: .07 equals 7%. The systematic risk is the coefficient on the market return variable in the regression explaining returns for individual issues. A coefficient less than one indicates that the issue(s) dampens the movements of the market. A coefficient greater than one indicates that the issue(s) amplifies the movements of the market.

issues, however, the issues qualified under merit review turned out to have considerably higher mean risk estimates than the sample as a whole, which actually moved counter to the market.

F. Conclusion

The purpose of this section has been to review the evidence that merit review consistently excluded issues that performed poorly, did not exclude issues that performed very well, and increased the average performance of issues available to investors. What have we found?

First, merit review of common stock issues has resulted in excluding some issues that had very low rates of return or highly variable returns. Most low return or high variance issues were, however, qualified in several merit states.

Second, merit review resulted in qualifying most high return and most low variance issues, but most merit states failed to qualify a sizeable proportion of high return and low variance issues. Merit review also seems to have excluded a substantial proportion of middle performance issues.

Third, merit review resulted in slightly lower standard deviations than the whole sample of SEC-registered issues when averaged across the issue years and holding periods used in the study. The differences in average returns and risk-adjusted returns were not statistically significant.

Whether particular investors benefited from the reduced standard deviations depends on investors' degree of risk aversion and the diversification of investors' holdings. Strongly risk averse small investors may have benefited, absent consideration of the costs of regulations that were

not studied here.⁷⁶ Investors with diversified portfolios or small investors with less aversion to risk would have preferred to have access to the issues that the merit states excluded and so were harmed by the regulations.

⁷⁶ These costs might include administrative costs of complying with the many different regulations in different states and reduced economic growth and competition from restricting efforts of small and new firms to obtain capital. Such costs would not be evident in averages, but would be real costs to society nonetheless.

APPENDIX A

ADDITIONAL RESULTS FOR MUTUAL FUNDS: COMPARISON OF RETURNS ON QUALIFIED ISSUES IN MERIT REVIEW STATES TO RETURNS ON QUALIFIED ISSUES IN OTHER STATES

Chapter III gave the primary results of the study of merit regulation of investment company issues. In that chapter, the screening of investment company issues in merit states was compared to a regime in which no screening took place above and beyond the disclosure and other requirements of the SEC. In this appendix, the analysis is extended to include other groups of states with little or less intensive reported merit review. The primary purposes of this section are to look at performance across groups of states and to identify and explore the characteristics of issues that were excluded by merit states but not by other states.

a. Factors Affecting the Number of Qualifications of Investment Company Issues in Individual States

As a preliminary step before comparing performance of qualified issues across merit and "disclosure" states, it is appropriate to make sure that merit regulations have some independent effect on the amount of screening that takes place.⁷⁶ It is reasonable to expect that a number of factors influence the number or type of qualifications in a state. For instance, if qualifications could be explained largely by the levels of fees that states impose on issuers and if the level of merit regulations explained little of the variation in qualifications, it would be difficult to ascribe performance differences between states to merit standards.

⁷⁶ Because disclosure states utilize fees as well as other non-merit regulations, it is possible that they restrict registration as much as or more than merit states. Hence one cannot test for the effects of merit regulation simply by looking at the number of registrations in merit versus disclosure states.

To do this analysis, a regression model is used in which the number of nonqualified issues in a state is the dependent variable and variables expected to influence the number of nonqualified issues in the state are the independent variables.⁷⁷

Starting on the demand side, there should be more interest in qualifying in a state when the pool of investable funds in the state is large. Fund managers are compensated through management fees and the marginal cost of an additional dollar of sales in a state is low once the fund is qualified in that state. Fund managers should be able to spread the costs of qualifying over more sales in states with higher total personal assets. In the regression models, we would expect to find that the wealth in the state is negatively related to nonqualifications. -

Merit provisions, on the other hand, might be expected to discourage or exclude some issues that would have qualified in a disclosure setting. The regression coefficients on merit variables should, therefore, be positive if these regulations are an important influence on the pattern of qualifications.

Two other factors that might be influencing the pattern of nonqualifications are fees and other regulations. Most states require that fees be paid in order for a security to qualify for sales in the state. Although these fees are quite modest in many states, they are a fixed proportion of sales with no maximum amount in others.⁷⁸ When fees are potentially large we might expect that some funds would opt not to qualify. In the regression, the level of fees should

⁷⁷ Appendixes B and C show the number of qualified and nonqualified issues in each state for each issue year.

⁷⁸ This can result in substantial differences between fees collected by the state and costs borne by the state. Annual fees of several hundred thousand dollars have been paid to individual states with such provisions. A substantial price-cost margin of this sort may create distortions in capital markets.

be positively associated with the number of nonqualifications if fees are generally an important consideration.

Several states also have qualification regulations in addition to merit or disclosure standards.⁷⁹ Such regulations would be expected to increase the costs of qualifying or actually to exclude some funds. In either case, the number of nonqualifications should be positively associated with the regulations if they are important aspects of the qualification process.

Results for the model appear in Table A.1. The principal finding is that merit provisions are significantly and positively associated with nonqualifications. Of the other variables, the wealth of the state's citizens is the most important. Neither fees nor other regulations are significantly associated with qualifications.

These results suggest that merit regulations had a substantial independent influence on qualifications. Therefore, the process of comparing qualified issues in merit states and other jurisdictions may be informative.

b. Performance

Statistics describing rates of return for qualified issues in each of the regulation groups and for the whole sample of SEC registered issues are shown in Table A.2. Table A.2 is an expansion of Table 3 that incorporates the additional results applicable to disclosure states and to the combination of states with extensive merit regulations and with a middle range of merit regulations.

⁷⁹ These include broker/dealer or agent registration requirements for no-load funds and pre-publication filing requirements for advertisement copy.

TABLE A.1
REGRESSION RESULTS FOR THE MODEL EXPLAINING
THE NUMBER OF NONQUALIFICATIONS BY STATE

Variables	OLS Coefficients (t-statistics)
Intercept	61.5271
Wealth+	-.0046 (-5.90)***
Merit 1	14.8141 (2.53)**
Merit 2	10.4013 (1.79)*
Fees	-.0002 (-.19)
Other Regs.	-2.6030 (-.49)
R ²	.4691

+ Wealth is defined as the state total of dividends, interest, and estate trust income. The data are from the 1979 Statistics of Income.

Merit 1 is a dummy variable with the value of one for states with extensive merit standards. Classifications are based on Table 2.

Merit 2 is a dummy variable with the value of one for states with some but less extensive merit standards. Classifications are again based on Table 2.

Fees are defined as the fee required to qualify \$10 million in sales.

Other Regulations is a dummy variable indicating that the state required broker/dealer registration, agent registration and/or filing of proposed advertisements.

*** Significant at 1%, two-tailed.

** Significant at 5%, two-tailed.

* Significant at 10%, two-tailed.

TABLE A.2
 RATES OF RETURN AND "SPREAD" OF RETURNS,
 WHOLE SAMPLE VERSUS THE AVERAGES
 IN THE THREE REGULATION GROUPS

Year Group	Average Holding Mean Period	Return	Average Standard Deviation
1973 whole sample	3	.8068	.1134
extensive			
merit (N=10)	3	.8109	.1151-
all mt. (N=19)	3	.8094+	.1152-
dscl. (N=31)	3	.8052-	.1150-
1976 whole sample	3	1.3804	.0950
extensive			
merit	3	1.3751-	.0904+
all merit	3	1.3792	.0921+
disclosure	3	1.3812+	.0952
1979 whole sample	3	1.5678	.2137
extensive			
merit	3	1.5515-	.2066+
all merit	3	1.5596-	.2102+
disclosure	3	1.5728+	.2159-
1973 whole sample	2	.6313	.1241
extensive			
merit (N=10)	2	.6335	.1263-
all mt. (N=19)	2	.6329	.1263-
dSCL. (N=31)	2	.6303-	.1258-
1976 whole sample	2	1.2609	.0543
extensive			
merit	2	1.2563-	.0520+
all merit	2	1.2585-	.0532+
disclosure	2	1.2623+	.0549-
1979 whole sample	2	1.5786	.2522
extensive			
merit	2	1.5596-	.2520+
all merit	2	1.5691-	.2468+
disclosure	2	1.5844+	.2543-

TABLE A.2 -- Continued

Year Group	Holding Period	Average Mean Return
1973 whole sample	1	.8063
extensive merit (N=10)	1	.8089
all mt. (N=19)	1	.8087+
dsc. (N=31)	1	.8049-
1976 whole sample	1	1.2360
extensive merit	1	1.2356
all merit	1	1.2358
disclosure	1	1.2362
1979 whole sample	1	1.2309
extensive merit	1	1.2232-
all merit	1	1.2272-
disclosure	1	1.2331+

Average Differences (Regulation Group Average - Whole Sample)
Across Issue Years and Holding Periods

Extensive Merit Average	
Returns	-.0049
Standard Deviations	-.0016
All Merit Average	
Returns	-.0020
Standard Deviations	-.0014
Disclosure Average	
Returns	+.0013
Standard Deviations	+.0014

+ (following an entry) Significantly better (lower risk or higher return) than the whole sample of SEC qualified issues at the 5% level, one-tailed (10% level, two-tailed).

- (following an entry) Significantly worse (higher risk or lower return) than the whole sample of SEC qualified issues at the 5% level, one-tailed (10% level, two-tailed).

* A rate of return less than 1.00 indicates that the value at the end of the period was less than the value of the initial investment. Conversely, a return greater than 1.00 indicates a gain. For example, a return of 1.10 indicates that the value at the end of the period was 10% greater than that at the beginning of the period.

** The number of issues in the total sample was 335 in 1973, 337 in 1976, and 344 in 1979. Since there is only one yearly rate of return observation for each issue for the holding period of one year, no standard deviations can be calculated.

In Table A.2, average mean returns and average standard deviations are given for one, two, and three years of holding for issues originating in 1973, 1976, and 1979. Each of these measures is shown for the whole data sample and for the qualified issues in each of the regulation groups of states. Significant differences from the whole sample values are designated with a plus or a minus sign after the value. A plus designates significantly better performance than the sample while a minus designates significantly worse performance than the sample.

In the discussion of Table 3, we have already noted that for the extensive merit review states the averages of the differences between the whole sample and the extensive merit group taken across issue years and holding periods are not statistically significant. Results for individual issue years and holding periods are often inconsistent across time and jurisdictions. Consequently, the discussion here will focus on the other two regulation groups.

Two primary observations can be made about the results in Table A.2. First, although the disclosure states did not apply merit standards in general, the qualification processes that they established did lead to screening of some kind as evidenced by the occasional significant differences between the whole sample and the disclosure state figures. Second, there was often an inverse relationship between performance of issues qualified in extensive merit states and issues qualified in disclosure states. Often when returns are significantly lower in merit states, they are significantly higher in disclosure states. The same was true for the average standard deviation measures. States using disclosure regulations sometimes had larger average standard deviations than the whole sample of SEC registered issues.

Table A.2 was restricted to statistics pertinent to investors with single-issue or limited portfolios. Investors with more widely diversified portfolios have somewhat different concerns. The relevant measure of risk for these investors is the systematic risk, rather than total risk.

Table A.3 gives the mean risk-adjusted excess returns and the mean systematic risk estimates for states in each regulation group and in the whole sample of SEC registered issues for each issue year. These risk-adjusted measures are based on five years of holding. The results in Table A.3 indicate that although disclosure states qualified issues that had slightly greater systematic risk, the return on these issues was still higher on these issues once risk is accounted in the case of 1976 and 1979 issues.⁸⁰ Results for 1973 issues were the reverse; systematic risk was slightly higher for issues qualified in the disclosure states, and the returns did not as compensate for this higher risk. On average across years, the disclosure group's risk-adjusted return was higher than the extensive merit group's, but neither was significantly different from the whole sample results.

On the basis of the results shown in Tables A.2 and A.3, it appears that the qualification process used by merit states had effects on average performance that differed somewhat from the effects of applying disclosure regulations and the array of other provisions adopted in the disclosure states. However, these differences were not statistically significant on average. At the same time, the qualification process even in so-called disclosure states discouraged some issuers from making their issues available nation-wide. This separate screen had effects that usually significantly diverged from those of merit review.

⁸⁰ The results in Table A.3 are means taken across the individual Jensen and beta estimates for each fund. Because relatively few annual data points are used, these individual estimates are subject to estimation errors. These errors should average out across the sample.

Similar results are obtained if the alternative technique of pooling all of the sample yearly observations across all funds is used. This yields the Jensen Index and beta estimates under the assumption that these measures are all equal for all funds in the sample.

TABLE A.3
 MEAN RISK-ADJUSTED EXCESS RETURNS AND
 SYSTEMATIC RISK ESTIMATES BY REGULATION GROUP

Issue Year	Group	% of States with Better Mean Risk-Adjusted Returns	Mean Risk-Adjusted Excess Returns	Mean Systematic Risk
1973	Whole Sample		-.0092	.8661
1973	Extensive Merit	50	-.0087	.8654
1973	Extensive and Less Extensive Merit	42	-.0094	.8652
1973	Disclosure	55	-.0094	.8667
1976	Whole Sample		.0518	.7240
1976	Extensive Merit	10-	.0483-	.7234
1976	Extensive and Less Extensive Merit	37	.0501-	.7240
1976	Disclosure	77+	.0528+	.7240

TABLE A.3 -- Continued

Issue Year	Group	% of States with Better Mean Risk-Adjusted Returns	Mean Risk-Adjusted Excess Returns	Mean Systematic Risk
1979	Whole Sample		.0300	.7978
1979	Extensive Merit	10-	.0280-	.7795
1979	Extensive and Less Extensive Merit	42	.0290-	.7884
1979	Disclosure	81+	.0307	.8034-

+ Significantly better than the whole sample of SEC registered issues at the 10% level, two-tailed.

- Significantly worse than the whole sample of SEC registered issues at the 10% level, two-tailed.

c. Which Issues Were Screened Out by Merit Review?

The first method of examining what types of issues were screened out is to look at qualifications of the worst performing issues.

Table A.4 reports the number of issues qualified in each state among the 50 worst performing funds based on risk-adjusted excess rates of return over the maximum possible holding period.⁸¹ The average number of qualifications for the ten states with extensive merit provisions was 41.2 in 1973, 41.7 in 1976, and 40.9 in 1979. The average number of qualifications for the disclosure states was 42.4 in 1973, 42.3 in 1976, and 39.8 in 1979.

Two main observations can be made about these results. First, every state qualified most of these issues. The minimum number of qualifications was 33 issues or 66 percent. Second, the differences between the number of qualifications in merit states and in disclosure states was small. None of them are statistically significant, and in 1979 the number of qualified issues was actually lower among the disclosure states. Similar observations apply as well to Table A.5, which considers unadjusted rates of return.⁸²

⁸¹ Separate regression were also run using a uniform 5-year holding period. Results were similar to the maximum holding period results reported here and listed in Appendix B.

⁸² Unadjusted returns for each state are also shown in Appendix B.

TABLE A.4

NUMBER OF QUALIFICATIONS OF THE 50 WORST
PERFORMING ISSUES BY STATE AND REGULATION
GROUP (RISK ADJUSTED EXCESS RATES OF RETURN)

State	73-83	76-83	79-83	State	73-83	76-83	79-83
AL+	40	39	38	MT	38	39	37
AK	36	36	33	NE	41	42	37
AZ	45	45	44	NV	43	43	43
AR+	39	37	36	NH*	36	39	36
CA+	48	48	47	NJ	47	44	45
CO	45	45	44	NM	41	41	38
CT	47	46	42	NY	48	49	47
DE	45	43	39	NC	40	42	39
FL	48	46	43	ND+	37	35	36
GA	44	42	41	OH*	39	41	42
HI	41	39	36	OK	42	42	39
ID	39	36	36	OR+	44	44	40
IL+	43	44	41	PA	47	47	43
IN*	46	42	43	RI	40	40	37
IA*	44	40	41	SC+	39	40	37
KS	43	43	38	SD	38	38	36
KY+	39	39	40	TN	43	43	41
LA	38	40	37	TX*	41	42	41
ME*	36	38	37	UT	40	41	38
MD	45	44	44	VT	39	42	36
MA	48	47	46	VA	43	42	42
MI*	46	45	44	WA	44	44	40
MN*	43	45	45	WV+	39	39	38
MS	38	39	35	WI*	38	42	40
MO*	43	43	40	WY	39	42	37
Mean for Extensive Merit Group(*) (N=10)					41.2	41.7	40.9
Mean for Extensive and Less Extensive Merit Groups(* or +) (N=39)					41.2	41.2	40.1
Mean for Disclosure Group(blank) (N=31)					42.4	42.3	39.8

TABLE A.5

NUMBER OF QUALIFICATIONS OF THE 50 WORST PERFORMING
ISSUES BY STATE AND REGULATION GROUP (UNADJUSTED RETURNS)

State	73-83	76-83	79-83	State	73-83	76-83	79-83
AL+	38	39	41	MT	37	40	40
AK	35	35	34	NE	39	43	39
AZ	44	46	45	NV	41	44	45
AR+	37	37	38	NH*	33	39	38
CA+	45	49	49	NJ	46	44	46
CO	43	46	45	NM	39	42	41
CT	46	46	46	NY	47	49	49
DE	44	44	42	NC	38	43	42
FL	48	47	47	ND+	34	35	37
GA	43	43	44	OH*	37	41	43
HI	40	39	38	OK	40	42	42
ID	37	37	38	OR+	43	45	43
IL+	41	45	44	PA	46	47	46
IN*	46	43	46	RI	38	41	41
LA*	41	41	42	SC+	36	41	40
KS	40	44	41	SD	36	39	39
KY+	40	39	42	TN	42	43	42
LA	38	40	39	TX*	37	43	44
ME*	35	37	37	UT	39	42	40
MD	44	45	47	VT	36	42	36
MA	47	47	48	VA	42	42	38
MI*	44	46	46	WA	42	45	44
MN*	41	45	48	WV+	37	39	39
MS	38	40	38	WI*	35	43	42
MO*	39	43	43	WY	37	43	40
Mean for Extensive Merit Group(*) (N=10)					38.8	42.1	42.9
Mean for Extensive and Less Extensive Merit Groups(* or +) (N=19)					38.9	41.6	42.2
Mean for Disclosure Group(blank) (N=31)					41.0	42.9	42.3

On the basis of the results in Tables A.4 and A.5, it is not possible to conclude that merit states did a better job of protecting investors from these worst performing funds than did disclosure states.

The second method of addressing the relative effects of merit and disclosure laws is to compare the number of qualifications of the best performing issues. Excluding the best performing issues is a cost of whatever screening process is in place.

Table A.6 shows the number of qualifications, by state, of the 50 best performing funds based on risk-adjusted excess returns. The results in Table A.6 indicate that merit review was associated with fewer qualifications of issues that performed very well. The average number of nonqualifications among the best performing issues for the extensive merit states was 15.4 in 1973, 14.4 in 1976, and 11.3 in 1979. In one of these states, nonqualifications reached 48 percent. The corresponding figures for the disclosure states were 6.3 in 1973, 8 in 1976, and 6.4 in 1979. The chance that the differences in the proportions of qualified issues between the two groups of states is random, is approximately 1 percent for 1973, 2 percent for 1976, and 3 percent for 1979. Table A.7 presents the same comparison using unadjusted rates of return. The results are similar. This set of results suggest that merit review was associated with higher rejection rates for the best performing issues. This issue will be pursued further in the following examination of mean performance data.⁸³

⁸³ When 5-year risk-adjusted returns are used, the 1973 issues group shows higher qualification rates for the merit states than does the maximum holding period data. The mean for the merit states is 40.9 using the 5-year data. No shift of this sort is evident for the 1976 issues.

TABLE A.6

NUMBER OF QUALIFICATIONS OF THE 50 BEST PERFORMING
ISSUES BY STATE AND REGULATION GROUP
(RISK ADJUSTED EXCESS RATES OF RETURN)

State	73-83	76-83	79-83	State	73-83	76-83	79-83
AL+	40	37	41	MT	37	37	39
AK	42	36	39	NE	42	42	42
AZ	44	43	47	NV	48	45	47
AR+	38	36	42	NH*	26	27	32
CA+	45	47	48	NJ	49	49	49
CO	45	46	47	NM	41	40	44
CT	46	47	46	NY	50	50	50
DE	54	40	41	NC	42	43	42
FL	47	44	47	ND+	36	34	38
GA	48	46	45	OH*	33	32	37
HI	44	41	41	OK	44	39	41
ID	38	35	39	OR+	43	46	44
IL+	38	41	39	PA	50	49	49
IN*	44	40	41	RI	46	43	43
LA*	36	38	39	SC+	38	37	40
KS	38	38	41	SD	36	35	41
KY+	35	34	40	TN	41	37	42
LA	42	39	38	TX*	37	44	43
ME*	27	27	28	UT	43	41	45
MD	48	47	48	VT	44	39	40
MA	48	48	48	VA	45	42	46
MI*	36	38	42	WA	44	46	46
MN*	40	39	44	WV+	38	37	41
MS	38	37	37	WI*	32	33	39
MO*	35	38	42	WY	40	38	42
Mean for Extensive Merit Group (*)				(N=10)	34.6	35.6	38.7
Mean for Extensive and Less							
Extensive Merit Groups (* or +)				(N=19)	36.6	37.1	40.0
Mean for Disclosure Group (blank)				(N=31)	43.7	42.0	43.6

TABLE A.7

NUMBER OF QUALIFICATIONS OF THE 50 BEST PERFORMING
ISSUES BY STATE AND REGULATION GROUP
(UNADJUSTED RATES OF RETURN)

State	73-83	76-83	79-83	State	73-83	76-83	79-83
AL+	45	37	39	MT	39	37	37
AK	44	36	39	NE	44	42	42
AZ	44	43	46	NV	48	45	47
AR+	39	36	40	NH*	29	27	27
CA+	44	47	47	NJ	49	49	49
CO	45	46	47	NM	42	40	42
CT	46	47	46	NY	50	50	50
DE	44	40	39	NC	42	43	41
FL	47	44	46	ND+	37	34	35
GA	48	46	43	OH*	35	32	33
HI	46	41	42	OK	45	39	39
ID	40	35	37	OR+	45	46	44
IL+	39	41	38	PA	50	49	49
IN*	46	40	39	RI	45	43	44
LA*	37	38	36	SC+	38	37	38
KS	39	38	41	SD	39	35	36
KY+	37	34	36	TN	41	37	40
LA	42	39	36	TX*	36	44	41
ME*	32	27	26	UT	44	41	42
MD	49	47	48	VT	45	39	40
MA	48	48	47	VA	46	42	46
MI*	37	38	39	WA	45	46	46
MN*	40	39	40	WV+	39	37	40
MS	39	37	33	WI*	32	33	35
MO*	36	38	40	WY	43	38	39
Mean for Extension Merit Group (*)				(N=10)	36.0	35.6	35.6
Mean for Extensive & Less							
Extensive Merit Groups (* or +)				(N=19)	37.8	37.1	37.5
Mean for Disclosure Group (blank)				(N=31)	44.5	42.0	42.5

Summarizing Tables A.4 through A.7, both merit states and disclosure states qualified most of the worst performing issues. Both groups also qualified most of the best performing issues, but merit states qualified fewer of the investment companies with relatively high rates of return.

An additional factor that might be influencing the pattern of nonqualifications is local issues, funds that are intentionally marketed in only a limited area of the country. Fund managers may decide, for reasons entirely independent of state actions or state wealth, that an issue should be sold in a restricted geographic area. For instance, a fund might specialize in stocks of firms that do business in one area of the country. The fund manager might conclude that potential buyers of the fund will be similarly concentrated in that area of the country. Local people may have more information about local firms and be in a better position to monitor their activities. If such local issues have different characteristics than widely qualified issues and if these local issues were not randomly distributed among the states, the pattern of nonqualifications of localized issues could influence the results.

To control for this possible effect, a second analysis of the quality of qualified and nonqualified issues was carried out with a restricted sample. The restriction was that issues be qualified for sale in at least 80 percent of the states. This criteria eliminates the issues most likely to be local or regional. The remaining issues that were not qualified in all states are the ones most likely to have been influenced by merit standards or other screening criteria. If the results for the full sample and the widely qualified sample are similar, it is reasonable to conclude that the observed results in merit and disclosure states are independent of the localized issue phenomenon.

Table A.8 shows the percent of total nonqualifications accounted for by each regulatory group. It shows that the ten states with extensive merit provisions accounted for approximately 40 percent of nonqualifications of widely qualified issues. The universe of widely qualified issues that were not qualified in all states was 86 in 1973; 71 in 1976; and 69 in 1979. The proportion of nonqualifications accounted for by the states with extensive merit standards is significantly greater than their numerical proportion ($p < 1$ percent using the classical normal approximation to the binomial). The same is true for the combined extensive and less extensive merit groups.

At the same time, the nonqualifications among "all issues" (the lower half of Table A.8) show little elevation for either merit grouping of states. Indeed, if the disproportionate nonqualification of widely qualified issues is removed, the nonqualification rate among merit states would be nearly proportional to their number.

These results are quite striking. Issues most likely to be regional in nature are found to be nonqualified at about the same rate in merit and disclosure states. In contrast, merit states account for a significantly larger proportion of non-qualifications of widely qualified issues. The implication is that merit states looked unfavorably on this group of issues that other states generally qualified.

Appendix C lists the widely qualified issues that were nonqualified in at least three states with extensive merit regulations.

The lists in Appendix C show a clear pattern. The widely qualified funds that did not qualify in merit states were predominantly aggressive growth funds that employed leverage, concentrated their holdings, and pursued investments in new high technology firms or extractive industries. When new technologies were expanding rapidly, the price of gold was increasing by a factor of ten and the price of oil was similarly increasing, the merit states were

TABLE A.8
NONQUALIFICATIONS*

Nonqualifications of Widely Qualified Issues				
Regulation Group	% of States in Group	% of Total Nonqualifications Due to Group		
		1973	1976	1979
Extensive Merit	20	43.1	34.5	42.3
Extensive and Less Extensive Merit	38	56.9	50.6	54.2
Disclosure	62	43.1	49.4	45.8

Nonqualifications of All Issues				
Regulation Group	% of States in Group	% of Total Nonqualifications Due to Group		
		1973	1976	1979
Extensive Merit	20	24.0	21.5	21.5
Extensive and Less Extensive Merit	38	44.6	40.8	40.1
Disclosure	62	55.4	59.2	59.9

* A nonqualification occurs whenever a particular issue is not qualified in a particular state. For example, if there were 3 states in a group and 10 issues in question, there would be a potential for 30 nonqualifications. This would occur if all 3 states qualified none of the issues.

excluding funds that invested in high technology start-ups, gold mining, and oil exploration. Yet, the excluded funds performed relatively well even on a risk-adjusted basis. On a risk-adjusted basis, the widely qualified issues commonly excluded by merit states did significantly better than the market. A number of the widely qualified issues have outstanding and widely recognized long-term performance records. For example, Mutual Shares, Nicholas, American Capital Comstock, and Shearson Appreciation funds appeared on the list of the 25 best "All-Weather Funds that just won't quit." The rankings were based on 10 years of risk-adjusted returns.⁸⁴ Most of the funds were and are managed as members of large groups of funds such as Fidelity, American General, Value Line, and Shearson.

⁸⁴ Money (1987).

APPENDIX B-1

MEAN RISK-ADJUSTED EXCESS RETURNS FOR PORTFOLIOS OF
EQUALLY WEIGHTED ISSUES BY STATE (1973-1983)

St.	Qualified		Non-qualified		St.	Qualified		Non-qualified	
	N	Mean	N	Mean		N	Mean	N	Mean
AL	(270)	.0298	(65)	.0233	MT	(254)	.0305	(81)	.0221
AK	(250)	.0322	(85)	.0176	NE	(271)	.0297	(64)	.0234
AZ	(298)	.0286	(37)	.0283	NV	(302)	.0304	(33)	.0114
AR	(261)	.0299	(74)	.0238	NH	(221)	.0245	(114)	.0363
CA	(319)	.0281	(16)	.0374	NJ	(310)	.0300	(25)	.0101
CO	(299)	.0292	(36)	.0225	NM	(275)	.0298	(60)	.0229
CT	(298)	.0287	(37)	.0270	NY	(317)	.0299	(18)	.0051
DE	(288)	.0294	(47)	.0231	NC	(279)	.0299	(56)	.0219
FL	(312)	.0289	(23)	.0238	ND	(246)	.0299	(89)	.0246
GA	(301)	.0311	(34)	.0055	OH	(256)	.0271	(79)	.0331
HI	(281)	.0302	(54)	.0198	OK	(280)	.0296	(55)	.0228
ID	(258)	.0297	(77)	.0247	OR	(290)	.0287	(45)	.0272
IL	(280)	.0280	(55)	.0311	PA	(314)	.0302	(21)	.0031
IN	(296)	.0286	(39)	.0276	RI	(284)	.0312	(51)	.0137
IA	(269)	.0273	(66)	.0335	SC	(267)	.0295	(68)	.0249
KS	(276)	.0279	(59)	.0316	SD	(253)	.0297	(82)	.0249
KY	(262)	.0277	(73)	.0314	TN	(281)	.0297	(54)	.0225
LA	(278)	.0309	(57)	.0168	TX	(279)	.0287	(56)	.0277
ME	(227)	.0258	(108)	.0342	UT	(278)	.0310	(57)	.0164
MD	(302)	.0302	(33)	.0133	VT	(266)	.0308	(69)	.0197
MA	(311)	.0294	(24)	.0170	VA	(298)	.0297	(37)	.0191
MI	(283)	.0263	(52)	.0405	WA	(292)	.0293	(43)	.0234
MN	(282)	.0285	(53)	.0286	WV	(264)	.0299	(71)	.0233
MS	(260)	.0298	(75)	.0240	WI	(231)	.0255	(104)	.0353
MO	(268)	.0269	(67)	.0352	WY	(257)	.0305	(78)	.0221

APPENDIX B-2

MEAN RISK-ADJUSTED EXCESS RETURNS FOR PORTFOLIOS OF
EQUALLY WEIGHTED ISSUES BY STATE, (1976-1983)

St.	<u>Qualified</u>		<u>Non-qualified</u>		St.	<u>Qualified</u>		<u>Non-qualified</u>	
	N	Mean	N	Mean		N	Mean	N	Mean
AL	(267)	.0388	(70)	.0348	MT	(252)	.0388	(85)	.0356
AK	(250)	.0398	(87)	.0329	NE	(276)	.0390	(61)	.0322
AZ	(298)	.0378	(38)	.0397	NV	(301)	.0385	(36)	.0338
AR	(261)	.0399	(83)	.0322	NH	(240)	.0335	(97)	.0492
CA	(321)	.0381	(16)	.0372	NJ	(307)	.0405	(30)	.0129
CO	(306)	.0386	(31)	.0318	NM	(275)	.0385	(62)	.0359
CT	(303)	.0394	(34)	.0255	NY	(318)	.0396	(19)	.0120
DE	(281)	.0392	(56)	.0319	NC	(286)	.0393	(51)	.0309
FL	(304)	.0382	(33)	.0361	ND	(243)	.0397	(94)	.0336
GA	(295)	.0408	(42)	.0185	OH	(269)	.0352	(68)	.0490
HI	(270)	.0391	(67)	.0336	OK	(272)	.0382	(65)	.0371
ID	(248)	.0389	(89)	.0355	OR	(298)	.0392	(39)	.0290
IL	(293)	.0375	(44)	.0411	PA	(318)	.0393	(19)	.0169
IN	(295)	.0380	(42)	.0383	RI	(288)	.0399	(49)	.0266
IA	(274)	.0380	(63)	.0381	SC	(270)	.0385	(67)	.0361
KS	(283)	.0368	(54)	.0442	SD	(255)	.0374	(82)	.0400
KY	(262)	.0377	(75)	.0391	TN	(276)	.0373	(61)	.0412
LA	(265)	.0393	(72)	.0331	TX	(286)	.0398	(51)	.0278
ME	(244)	.0338	(93)	.0490	UT	(279)	.0388	(60)	.0341
MD	(302)	.0396	(35)	.0245	VT	(271)	.0376	(66)	.0395
MA	(311)	.0394	(26)	.0214	VA	(296)	.0388	(41)	.0324
MI	(290)	.0366	(47)	.0467	WA	(297)	.0393	(90)	.0285
MN	(292)	.0373	(45)	.0424	WV	(271)	.0392	(66)	.0331
MS	(251)	.0393	(86)	.0342	WI	(258)	.0353	(79)	.0470
MO	(282)	.0370	(55)	.0433	WY	(261)	.0382	(76)	.0373

APPENDIX B-3

MEAN RISK-ADJUSTED EXCESS RETURNS FOR PORTFOLIOS OF
EQUALLY WEIGHTED ISSUES BY STATE (1979-1983)

St.	<u>Qualified</u>		<u>Non-qualified</u>		St.	<u>Qualified</u>		<u>Non-qualified</u>	
	N	Mean	N	Mean		N	Mean	N	Mean
AL	(280)	.0302	(64)	.0287	MT	(271)	.0305	(73)	.0278
AK	(260)	.0319	(84)	.0239	NE	(282)	.0322	(62)	.0196
AZ	(310)	.0310	(34)	.0217	NV	(314)	.0308	(30)	.0210
AR	(270)	.0270	(74)	.0212	NH	(246)	.0250	(98)	.0423
CA	(328)	.0328	(16)	.0268	NJ	(314)	.0314	(30)	.0143
CO	(316)	.0316	(78)	.0194	NM	(288)	.0307	(56)	.0258
CT	(306)	.0306	(38)	.0219	NY	(325)	.0312	(19)	.0081
DE	(284)	.0284	(60)	.0308	NC	(292)	.0306	(52)	.0261
FL	(315)	.0315	(29)	.0219	ND	(265)	.0306	(79)	.0279
GA	(300)	.0300	(44)	.0210	OH	(279)	.0265	(65)	.0447
HI	(275)	.0275	(69)	.0235	OK	(287)	.0306	(57)	.0265
ID	(268)	.0308	(76)	.0269	OR	(301)	.0313	(43)	.0203
IL	(296)	.0285	(48)	.0387	PA	(301)	.0314	(24)	.0111
IN	(300)	.0284	(44)	.0406	RI	(293)	.0311	(51)	.0235
LA	(283)	.0290	(61)	.0345	SC	(280)	.0301	(64)	.0294
KS	(290)	.0305	(54)	.0269	SD	(276)	.0306	(68)	.0272
KY	(280)	.0297	(64)	.0311	TN	(282)	.0306	(62)	.0269
LA	(276)	.0301	(68)	.0294	TX	(294)	.0306	(50)	.0261
ME	(245)	.0242	(99)	.0441	UT	(285)	.0314	(59)	.0228
MD	(314)	.0309	(30)	.0200	VT	(274)	.0304	(70)	.0280
MA	(313)	.0306	(31)	.0237	VA	(305)	.0303	(39)	.0270
MI	(299)	.0285	(45)	.0394	WA	(302)	.0318	(42)	.0167
MN	(305)	.0288	(39)	.0390	WV	(284)	.0309	(60)	.0257
MS	(254)	.0293	(90)	.0317	WI	(275)	.0287	(69)	.0349
MO	(293)	.0298	(51)	.0306	WY	(275)	.0314	(69)	.0242

APPENDIX B-4

MEAN UNADJUSTED RETURNS FOR PORTFOLIOS OF EQUALLY
WEIGHTED ISSUES BY STATE (1973-1983)*

State	Qual.	Nonql.	State	Qual.	Nonql.
AL	2.803	2.670	MT	2.809	2.676
AK	2.873	2.494	NE	2.816	2.611
AZ	2.778	2.770	NV	2.824	2.348
AR	2.803	2.684	NH	2.679	2.966
CA	2.752	3.271	NJ	2.814	2.312
CO	2.786	2.702	NM	2.792	2.706
CT	2.788	2.683	NY	2.812	2.157
DE	2.880	2.636	NC	2.782	2.749
FL	2.782	2.712	ND	2.809	2.687
GA	2.830	2.308	OH	2.757	2.839
HI	2.807	2.622	OK	2.814	2.586
ID	2.776	2.780	OR	2.786	2.714
IL	2.754	2.895	PA	2.817	2.173
IN	2.775	2.789	RI	2.838	2.435
IA	2.738	2.935	SC	2.792	2.718
KS	2.760	2.856	SD	2.800	2.705
KY	2.727	2.956	TN	2.788	2.716
LA	2.811	2.610	TX	2.752	2.901
ME	2.742	2.850	UT	2.836	2.489
MD	2.825	2.339	VT	2.851	2.490
MA	2.800	2.479	VA	2.806	2.538
MI	2.704	3.173	WA	2.795	2.655
MN	2.756	2.889	WV	2.800	2.692
MS	2.780	2.765	WI	2.679	2.994
MO	2.734	2.946	WY	2.836	2.583

* Ns are the same for this table as for Appendix B-1.

APPENDIX B-5

MEAN UNADJUSTED RETURNS FOR PORTFOLIOS OF EQUALLY
WEIGHTED ISSUES BY STATE, (1976-1983)*

State	Qual.	Nonql.	State	Qual.	Nonql.
AL	3.332	3.308	MT	3.335	3.302
AK	3.773	3.196	NE	3.357	3.192
AZ	3.311	3.456	NV	3.336	3.252
AR	3.350	3.258	NH	3.194	3.655
CA	3.323	3.416	NJ	3.388	2.704
CO	3.338	3.222	NM	3.334	3.295
CT	3.361	3.027	NY	3.368	2.636
DE	3.348	3.223	NC	3.335	3.283
FL	3.328	3.322	ND	3.345	3.279
GA	3.383	2.936	OH	3.244	3.656
HI	3.340	3.276	OK	3.319	3.362
ID	3.327	3.326	OR	3.356	3.108
IL	3.310	3.438	PA	3.358	2.807
IN	3.308	3.459	RI	3.360	3.130
IA	3.307	3.415	SC	3.319	3.361
KS	3.289	3.526	SD	3.302	3.406
KY	3.284	3.477	TN	3.297	3.462
LA	3.339	3.284	TX	3.359	3.146
ME	3.209	3.636	UT	3.341	3.263
MD	3.366	2.989	VT	3.314	3.379
MA	3.361	2.915	VA	3.343	3.212
MI	3.273	3.662	WA	3.356	3.109
MN	3.292	3.551	WV	3.339	3.278
MS	3.341	3.286	WI	3.228	3.649
MO	3.291	3.510	WY	3.326	3.329

* Ns are the same for this table as for Appendix B-2.

APPENDIX B-6

MEAN UNADJUSTED RETURNS FOR PORTFOLIOS OF EQUALLY
WEIGHTED ISSUES BY STATE (1979-1983)*

State	Qual.	Nonql.	State	Qual.	Nonql.
AL	2.329	2.327	MT	2.325	2.344
AK	2.356	2.245	NE	2.350	2.233
AZ	2.335	2.278	NV	2.339	2.224
AR	2.350	2.253	NH	2.261	2.500
CA	2.326	2.388	NJ	2.346	2.149
CO	2.336	2.244	NM	2.335	2.299
CT	2.338	2.258	NY	2.343	2.088
DE	2.319	2.375	NC	2.330	2.322
FL	2.333	2.282	ND	2.329	2.338
GA	2.336	2.280	OH	2.282	2.531
HI	2.346	2.259	OK	2.331	2.319
ID	2.331	2.321	OR	2.340	2.249
IL	2.306	2.470	PA	2.344	2.129
IN	2.301	2.518	RI	2.340	2.265
IA	2.425	2.308	SC	2.322	2.359
KS	2.332	2.310	SD	2.330	2.326
KY	2.318	2.375	TN	2.334	2.306
LA	2.321	2.359	TX	2.328	2.333
ME	2.253	2.517	UT	2.344	2.258
MD	2.339	2.223	VT	2.332	2.317
MA	2.334	2.278	VA	2.336	2.274
MI	2.309	2.460	WA	2.346	2.207
MN	2.309	2.482	WV	2.337	2.291
MS	2.307	2.390	WI	2.308	2.413
MO	2.325	2.349	WY	2.339	2.291

* Ns are the same for this table or Appendix B-3.

APPENDIX C-1

WIDELY QUALIFIED ISSUES NOT QUALIFIED FOR SALES
IN AT LEAST THREE EXTENSIVE MERIT STATES DURING 1973

No.	Fund Name	Aspects of Fund Operations*			
		Short Sales	Borrow- ing (Max % of Net Assets)	Largest Single Firm Holding	Restricted Securities+
1.	Alpha			5.3	
2.	Chase Frontier Capital		50%	7.2	
3.	Comstock			4.6	
4.	Enterprise			3.7	
5.	Fairfield		Y	7.2	-
6.	Financial Dynamics		Y	5.3	
7.	Founders Special	Y	50%	7.2	<10%
8.	Income F. of Am.			4.9	
9.	Industries Trend			5.2	
10.	International Inv.			3.9	Y
11.	Inv. Tr. of Boston		50%	5.7	
12.	Legal List Inv.			7.3	
13.	Manhattan			3.4	
14.	Oppenheimer		Y		<10%
15.	Side			3.3	
16.	Security Ultra	Y	Y	8.9	
17.	Union Capital		Y	6.3	
18.	Channing Venture	Y	Y	11.3	
19.	Chase Sp. F. of Boston		Y	6.4	
20.	General Securities			6.0	
21.	One Hundred			3.0	
22.	Research Capital		33%	6.2	
23.	Shearson Appreciation		50%	10.0	
24.	Competitive Capital			5.5	
25.	Bayrock			6.7	
26.	Bayrock Growth			7.0	
27.	Crown Western Inv. Dvrs.	Y		5.1	
28.	Crown Western Inv. Dallas			8.2	
29.	Equity Progress	Y		5.0	
30.	Financial Venture	Y		5.3	
31.	Mutual Share			6.4	
32.	Selected Opportunity	Y	Y	7.5	
33.	TMR Appreciation		50%	4.6	

+ Securities that must be registered with the SEC before the fund can sell them publicly. Sales can be made privately, however, without such registration. (Investment Companies, 1977, pp. 21-22.) Because published prices for such issues do not exist, establishing an accurate net asset value for the purchasing investment company may become more difficult.

APPENDIX C-1 -- Continued

No.	Aspects of Fund Operations*			Inv. Obj.***	All States Where Not Qualified
	Extractive Industries	High Tech.	Other Instr.**		
1.	Y	Y		MCG	AK,HI,ME,MO,MT,NH,RI,VT
2.	Y	Y		MCG	ME,NH,OH
3.	Y	Y		MCG	ME,NH,OH
4.	Y	Y		MCG	MI,MN,MO,WI
5.	Y	Y	Y	MCG	ME,OH,WI
6.	Y	Y		MCG	ME,NH,OH
7.	Y	Y		MCG	ME,NH,OH,TX
8.	Y			G-I	ME,NH,OH,WI
9.	Y	Y		G	DE,ID,ME,MT,NH,ND,RI,VT,WI
10.	Y(Gold)			G-I	IN,MI,ME,MS,NH,WI
11.	Y	Y		G-I	AK,ME,NH,OH,WI
12.				G-I	MI,MN,MO,WI
13.				G	MI,MN,MO,WI
14.	Y	Y		MCG	MI,MN,MO,NH,OH,WI
15.	Y(Gold)			MCG	CA,MN,MO,WI
16.	Y	Y		MCG	AR,ME,NH,OH,RI,WA
17.		Y	Y	MCG	ME,NH,OH
18.	Y	Y	Y	MCG	IL,ME,MI,MO,NH,OH,TX,WI
19.	Y	Y		MCG	ME,NH,OH
20.	Y			G-S	MO,ID,TX,WI
21.	Y			G	AR,ME,NH,OH,TX,WI
22.	Y(Gold)	Y		MCG	IL,ME,NH,OH
23.	Y	Y		G	AK,ME,NO,NH,OH,VA,WI
24.				MCG	DE,MS,MO,NH,OH,W
25.	Y	Y		G-I	ME,NH,WI
26.	Y	Y		G	ME,NH,WI
27.				G-I	IL,ME,MA,NH,OH,RI,SD,VT
28.	Y	Y		MCG	IL,ME,MA,NH,OH,RI,SD,VT
29.	Y	Y		MCG	KY,ME,MI,MN,MO,NH,ND,OH,WI
30.	Y	Y		MCG	CT,ME,NH,OH
31.	Y			MCG	CA,CO,IL,IO,MN,OH,TX
32.	Y	Y	Y	MCG	AR,ME,NH,OH,RI,WA
33.		Y		MCG	ME,NH,OH

* These are characteristics of funds explicitly mentioned in the Wiesenberger descriptions, 1974.

** Warrants, options, rights etc.

*** MCG = maximum capital gains; G-I = growth and income; G = growth; G-S = growth and stability; I = income.

APPENDIX C-2

WIDELY QUALIFIED ISSUES NOT QUALIFIED FOR SALES
IN AT LEAST THREE EXTENSIVE MERIT STATES DURING 1976

No.	Fund Name	Aspects of Fund Operations*			Restricted Securities+
		Short Sales	Borrow- ing (Max % of Net Assets)	Largest Single Firm Holding	
1.	Chase Shares			6.0%	
2.	Chase Frontier Capital		50%	6.1	
3.	Comstock Fund			4.7	
3.	Enterprise Fund			5.2	
5.	Financial Dynamics		Y	3.8	
6.	Founders Special	Y	50%	4.8	10%
7.	Inv. Tr. of Boston		50%	6.4	
8.	Istel			13.2	
9.	Manhattan			4.3	
10.	Nicholas			7.2	
11.	Oppenheimer			7.7	
12.	Security Ultra		Y	8.1	Y
13.	Am. General Venture	Y	Y	7.3	
14.	Chase Sp. F of Boston		Y	6.5	
15.	General Securities			8.0	
16.	Research Capital			6.3	
17.	Shearson Appreciation		50%	6.4	
18.	Value Line Lev. Gr.		Y	8.2	

+ See footnote to Appendix C-1.

APPENDIX C-2 -- Continued

Aspects of Fund Operations*					
No.	Extractive Industries	High Tech.	Other Instr.**	Inv. Obj.***	All States Where Not Qualified
1.	Y	Y		G	ID,IA,ME,MT,ND,RI,UT,WI
2.	Y	Y		G	DE,ME,MS,NH,OH
3.				MCG	MN,MI,WI
4.	Y	Y	Y	MCG	MD,MI,MN,WI
5.	Y			MCG	IA,ME,NH,OH
6.			Y	MCG	ME,NH,OH,TX
7.	Y			G-1	AK,ME,NH,OH,WI
8.	Y			G-S-I	AR,IN,IA,MT,NE,NH,NC,RI,WI
9.	Y	Y		G	MI,MN,MO,WI
10.				MCG	AL,ID,IA,KS,KY,ME,NH,ND,OK,VT
11.	Y	Y		MCG	MI,MN,MO,NH,OH,WI
12.			Y	MCG	ME,NH,OH
13.		Y	Y	MCG	IL,ME,MI,MO,NH,OH,WI
14.	Y	Y	Y	G-I	DE,ME,MS,NH,OH
15.				G-S	KY,MO,ND,TX,WI
16.	Y(Gold)			G-I	IL,ME,NH,OH
17.	Y	Y	Y	G	AK,ME,MO,NH,OH,VA,WI
18.		Y		MCG	AK,OH,MO,NH

* These are fund characteristics explicitly mentioned in Wiesenberger's Investment Companies.

** Warrants, options rights etc.

*** MCG = maximum capital gains; GI = growth and income; GSI = growth, stability, income; G-S = growth, stability; I = income.

APPENDIX C-3

WIDELY QUALIFIED ISSUES, NOT QUALIFIED FOR SALES
IN AT LEAST THREE EXTENSIVE MERIT STATES DURING 1979

No.	Fund Name	Aspects of Fund Operations*			
		Short Sales	Borrow- ing (up to % of Net Value)	Largest Single Firm Holding	Restricted Securities+
1.	Chase Frontier Capital		50%	3.9%	
2.	Financial Dynamics		Y	1.9	
3.	Founders Special	Y	50%	3.2	5%
4.	Inv. Tr. of Boston		50%	5.2	
5.	Istel			28.1	
6.	Nicholas			3.0	
7.	Oppenheimer			5.0	
8.	Scudder Development			5.2	Y
9.	Security Ultra		Y	5.1	Y
10.	Am. General Venture	Y	Y	8.4	
11.	Chase Special of Boston		Y	4.5	
12.	Oppenheimer Special	Y	Y	3.3	Y
13.	Shearson Appreciation		50%	7.7	
14.	Value Line Lev. Gr.		Y	5.0	

+ See footnote to Appendix C-1.

APPENDIX C-3 -- Continued

<u>Aspects of Fund Operations</u>					
No.	Extractive Industries	High Tech.	Other Instr.**	Inv. Obj.***	All States Where Not Qualified
1.	Y	Y		MCG	DE,ME,MS,NH,OH
2.	Y	Y		MCG	IA,ME,NH,OH
3.	Y	Y	Y	MCG	ME,NH,OH
4.	Y	Y		G-I	AK,ME,NY,OH,WT
5.	Y	Y		G-I	AR,IN,IA,MT,NE,NH,NC,RI
6.	Y	Y		MCG	AL,ID,IA,KS,KY,ME,NH,ND,OK,VT
7.	Y	Y		MCG	MI,MO,NH,OH,WI
8.	Y	Y		MCG	IN,MO,WI
9.	Y		Y	MCG	ME,NH,OH
10.	Y	Y	Y	MCG	IL,ME,MI,MO,NY,OH,WI
11.				MCG	DE,ME,MS,NH,OH
12.	Y	Y		MCG	ME,MI,MN,MO,MS,NH,OH,WI
13.	Y		Y	G	AK,ME,MO,NH,OH,VA,WI
14.	Y		Y	MCG	AK,OH,ME,NH

* These are fund characteristics explicitly mentioned in Wiesenberger's Investment Companies.

** Warrants, options; rights etc.

*** MCG = maximum capital gains; G-I = growth and income; G = growth.

APPENDIX D

AFTER-TAX RETURNS

The pre-tax results presented in the body of the report apply most directly to investors with low tax rates. Investors in higher tax brackets, particularly mutual funds investors,⁸⁵ might find that their after tax results differ in some systematic way from the results presented here. Although some state and federal rules specifically label such investors as sophisticated market actors and exempt them from the qualification regulations, it is still interesting to look at the sensitivity of the results to tax effects.

To do this sensitivity analysis, we start with an examination of the tables of widely qualified issues that are not qualified under merit screening (Appendix C). Most of these issues are classified as maximum capital gains (MCG) funds in the Wiesenberger terminology. Consequently, the sensitivity of the results to tax effects can be explored by contrasting the effects of taxes on the returns from MCG funds to those of other funds.

There are two major ways in which taxes might differentially affect returns. These are taxation of dividends and taxation of short term capital gains realized by the fund. As an illustration, Table G.1 below shows the after tax capital gains and dividends received on average for MCG and for other funds on a five year investment of \$10,000 started January 1, 1976. These figures do not include the effects of compounding these payments. It is assumed that the dividend and short term

⁸⁵ The major difference post-tax returns and pre-tax returns would be the different tax treatments afforded to capital gains versus dividends. Since most new common stock offers do not provide large dividends this is unlikely to be a substantial problem in interpreting the common stock results. Since mutual funds do specialize more in capital gains or dividends, the tax difference might cause the pre- and post-tax results to differ.

TABLE D.1

EFFECTS OF TAXES ON CAPITAL GAINS AND DIVIDEND PAYMENTS
 BY MAXIMUM CAPITAL GAINS FUNDS AND OTHER FUNDS
 ASSUMING A 50% TAX RATE FOR DIVIDENDS AND SHORT TERM
 CAPITAL GAINS AND A 20% TAX RATE FOR LONG TERM CAPITAL GAINS

	Average Realized Capital Gains on 10,000 dollars invested from 1/1/76 to 12/31/80 with no reinvestment	Average Dividends Paid on 10,000 dollars invested from 1/1/76 to 12/31/80 with no reinvestment
MCG Funds pre-tax	2586	1401
Other Funds pre-tax	1111	2196
MCG Funds after tax with all capital gains long term (tax)	2069 (517)	701 (700) total tax = 1217
Other Funds after tax with all capital gains long term (tax)	889 (222)	1098 (1098) total tax = 1320
MCG Funds after tax with 25% of capital gains short term (tax)	1875 (711)	701 (700) total tax = 1411

TABLE D-1--Continued

	Average Realized Capital Gains on 10,000 dollars invested from 1/1/76 to 12/31/80 with no reinvestment	Average Dividends Paid on 10,000 dollars invested from 1/1/76 to 12/31/80 with no reinvestment
Other Funds after tax with 25% of capital gains short term (tax)	805 (306)	1098 (1098) total tax = 1404
MCG Funds after tax with 50% of capital gains short term (tax)	1681 (905)	- 701 (700) total tax = 1605
Other Funds after tax with 50% of capital gains short term (tax)	639 (472)	1098 (1098) total tax = 1487
MCG Funds after tax with 100% of capital gains short term (tax)	1293 (1293)	701 (700) total tax = 1994
Other Funds after tax with 100% of capital gains short term (tax)	556 (505)	1098 (1098) total tax = 1653

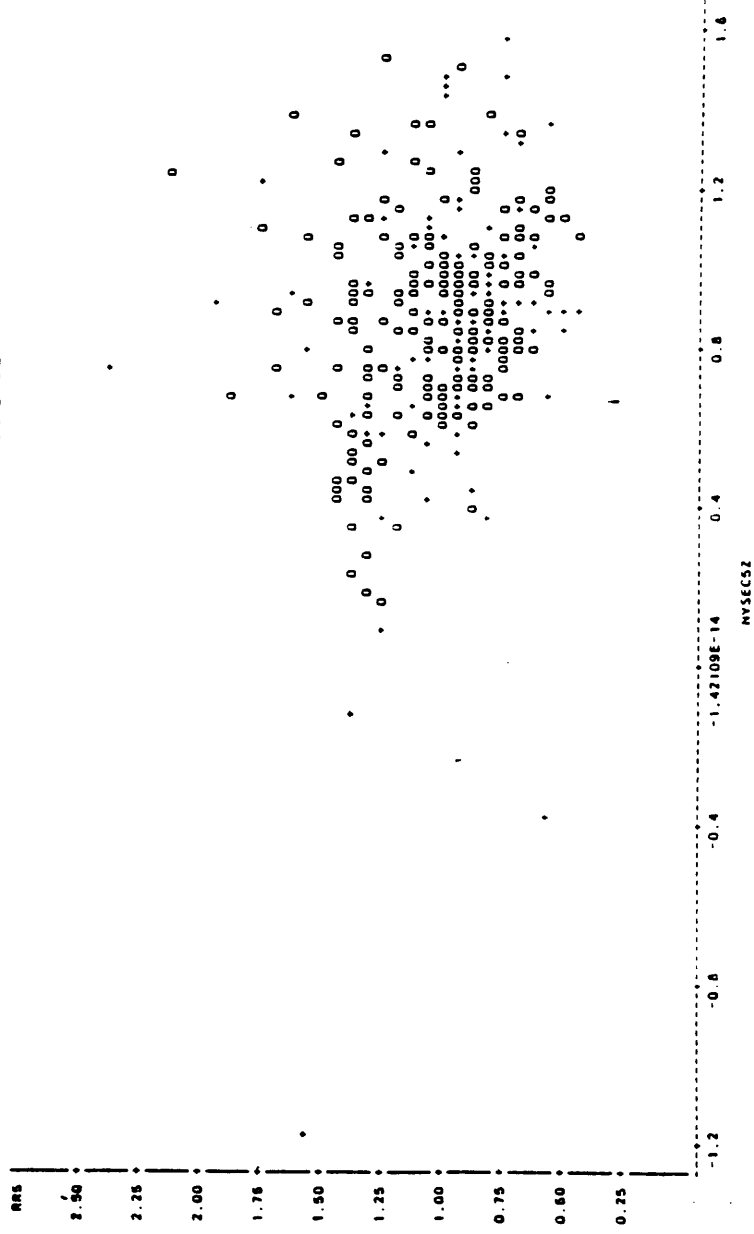
capital gains payments parallel each other and that the investor is in the 50 percent marginal tax bracket.

Notice that MCG funds provide a larger proportion of payments in realized capital gains. This is consistent with the Wiesenberger labels. Conversely, other funds provide higher dividends. Since dividends are taxed at a rate of 50 percent for this example, the effect of dividend taxes on the relative performance of MCG and other funds is to overstate the return on other funds by more than the overstatement of returns on MCG funds. Hence, on the basis of dividend taxation effects, nonqualified issues in the merit states performed even better relative to other funds, on an after tax basis.

The table shows that unless short term gains are a major portion of total gains (more than 25 percent) the effect of taxes was to understate the relative performance of the MCG funds. The actual figure for the 10 MCG funds with the greatest capital gains was 11.7 percent, less than half of the break even level.⁸⁶

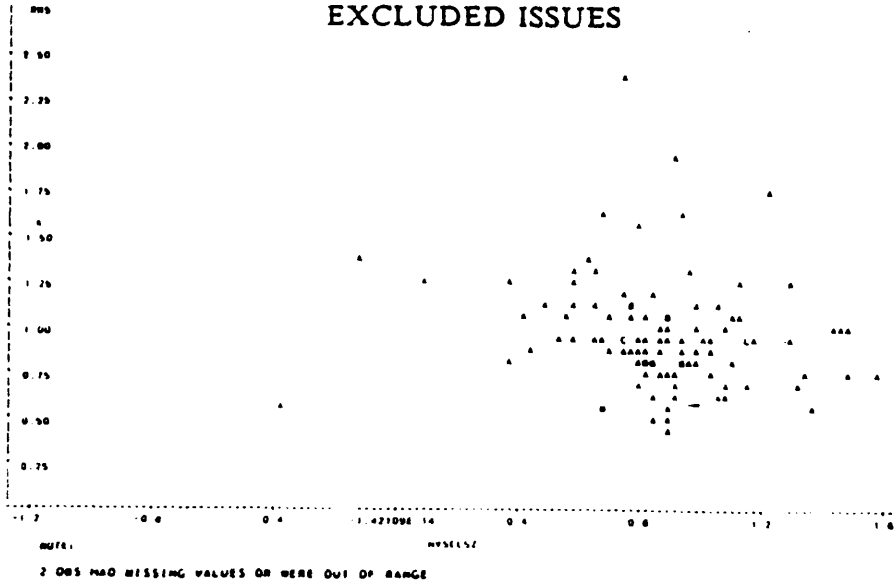
⁸⁶ Even in the extreme case of 100 percent short term capital gains, the tax effect would not change the conclusion that the qualification of widely qualified issues would improve performance for investors. The appreciation in the value of shares originally purchased was approximately \$10,000 higher for MCG funds than for other funds, making the tax effects relatively minor.

APPENDIX E-1
EXCLUDED AND OTHER ISSUES

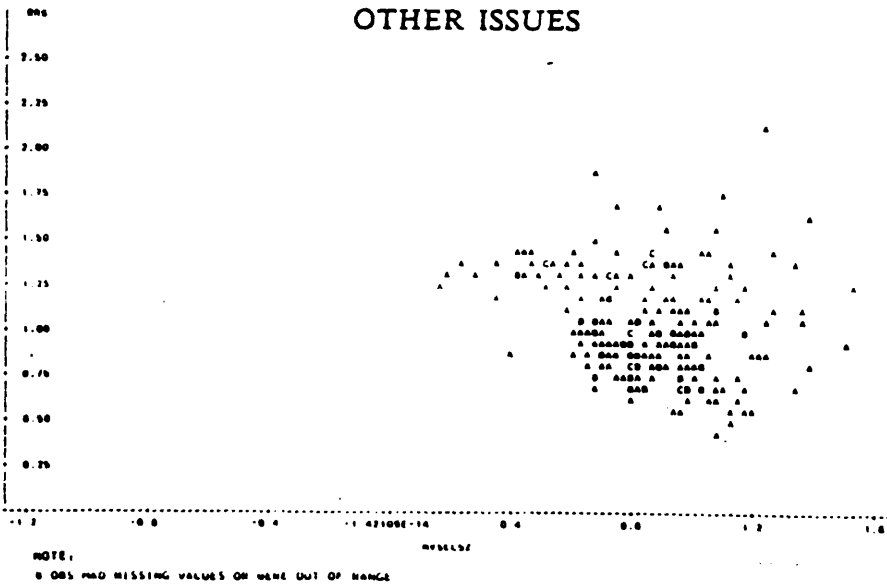


APPENDIX E-2

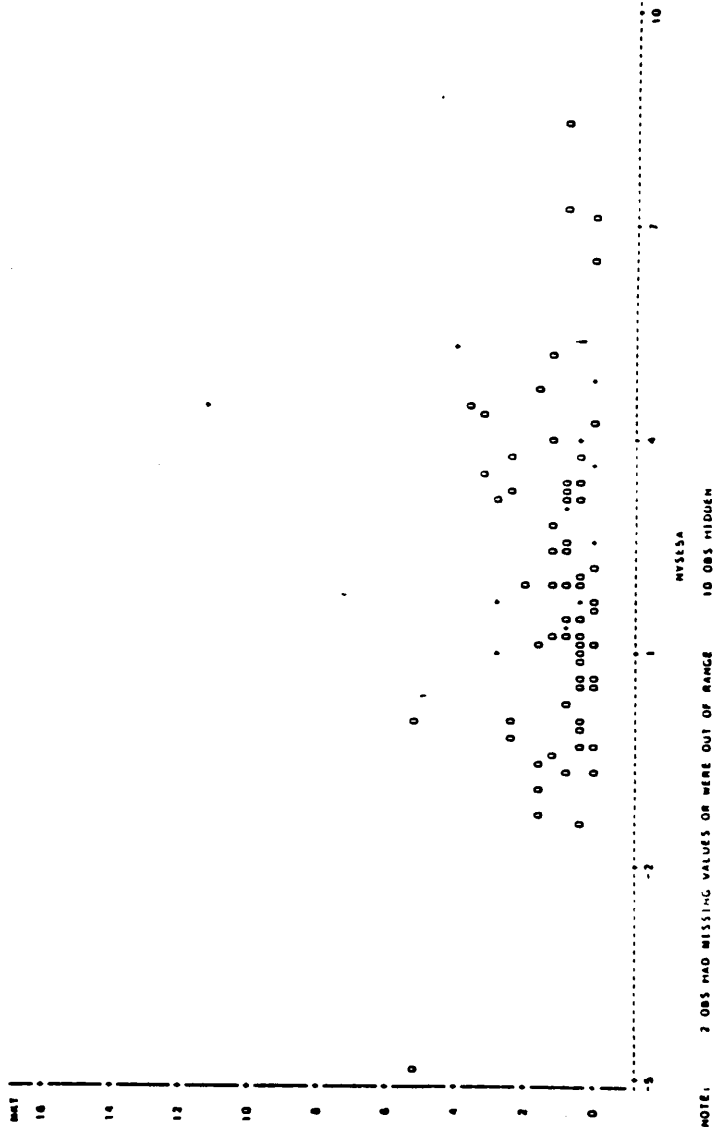
EXCLUDED ISSUES



OTHER ISSUES

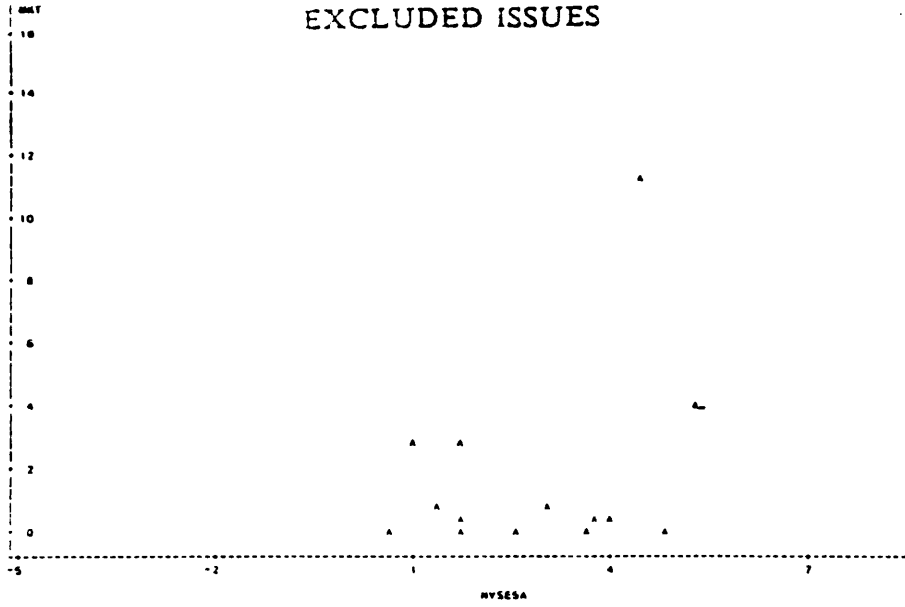


APPENDIX F-1
EXCLUDED AND OTHER ISSUES

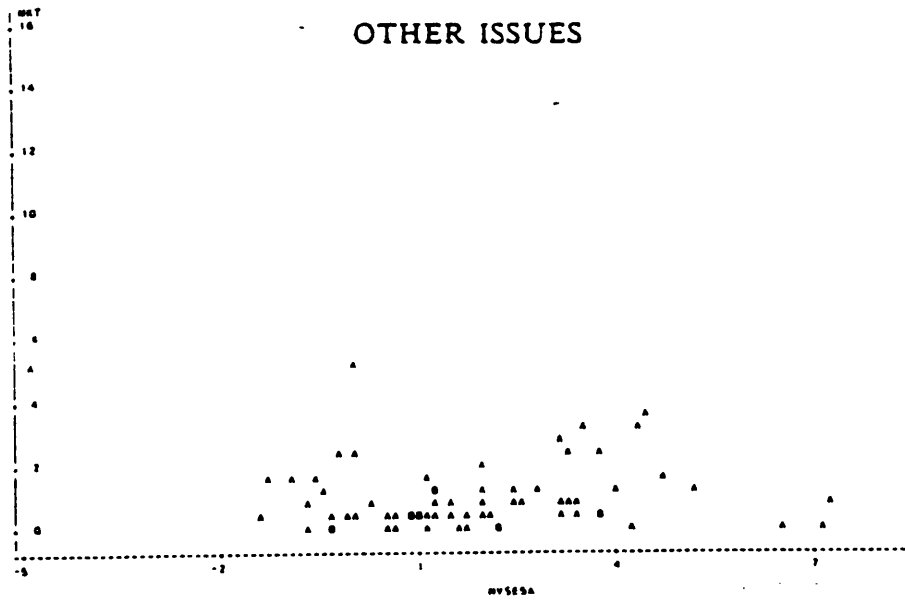


APPENDIX F-2

EXCLUDED ISSUES



OTHER ISSUES



7 OBS HAD MISSING VALUES OR WERE OUT OF RANGE

APPENDIX G

ADDITIONAL RESULTS FOR COMMON STOCKS: COMPARISON OF RETURNS ON QUALIFIED ISSUES IN MERIT REVIEW STATES TO RETURNS ON QUALIFIED ISSUES IN OTHER STATES

Chapter IV gave the primary results of the study of merit regulation of common stock issues. In that chapter, the screening of common stock issue in merit states was compared to a regime in which no screening took place above and beyond the disclosure and other requirements of the SEC. In this appendix, the analysis is extended to include other groups of states with little or less intensive reported merit review.

a. Factors Affecting the Number of Qualifications in Individual States

As a preliminary step before comparing performance of qualified issues across merit and "disclosure" states, it is appropriate to make sure that there is some independent effect of merit regulations on the amount of screening that took place.

To do this analysis, a regression model is used in which the number of nonqualified issues in a state is the dependent variable and variables expected to influence the number of nonqualified issues in the states are the independent variables.

Starting on the demand side, there should be more interest in qualifying in a state when the pool of investable funds in the state is large. The marginal cost of an additional dollar of sales is low once an issue has qualified in a state, so the issuer should be able to spread the costs of qualifying over more sales in states with higher total personal assets. Consequently, qualification should be especially attractive in these states. In the regression models, we would expect to find that the wealth in the state is negatively related to nonqualifications.

Merit provisions, on the other hand, might be expected to discourage or exclude some issues that would have qualified in a disclosure setting. The regression coefficients on merit variables should, therefore, be positive if these regulations are an important influence on the pattern of qualifications.

If the coefficients associated with any of these variables are insignificant, then the factor is unlikely to explain nonqualifications. Results for the model appear in Table G.1.

In Table G.1, merit regulation is positively related to the number of nonqualifications for both 1976 and 1979.⁸⁷ For 1979, the relationship is significant at slightly more than the 1 percent level. For 1976, the relationship is not significant at traditional levels. Further the association between nonqualifications and merit regulation is clearer for the middle level merit review states than for the extensive merit review group. In both years the wealth variable's coefficient is strongly negative as expected. Although the overall fit of the regression is moderately good, there is still a great deal of unexplained variance. This suggests that although merit considerations discouraged qualification as hypothesized, other elements in the qualification process and securities marketing considerations played a major role.

b. Performance

Statistics describing rates of return for qualified issues in each of the regulation groups and for the whole sample of SEC registered issues are shown in Table G.2. Table G.2 is an expansion of Table XX that simply incorporates the additional results applicable to disclosure states and to the combination of states with extensive merit regulations and states with a middle range of merit regulation.

⁸⁷ Since data for only six states was available for 1973, all of which were extensive merit states, a regression for 1973 issues could not be performed.

TABLE G.1
REGRESSION RESULTS EXPLAINING
NONQUALIFICATIONS

Variable	1976	1979
Intercept	8.2605	12.5194
Wealth+	-.0008*** (-2.748)	-.0013*** (-4.787)
Merit 1	12.5288 (1.173)	5.0462** (2.636)
Merit 2	3.3656 (1.669)	3.4959* (1.952)
R ²	.2085	.3931

+ Wealth is defined as the state total of dividends, interest, and estate trust income. The data are from the 1979 Statistics of Income.

Merit 1 is a dummy variable with the value of one for states with extensive merit standards. Classifications are based on Table 2.

Merit 2 is a dummy variable with the value of one for states with some but less extensive merit standards. Classifications are again based on Table 2.

Fees are defined as the fee required to qualify \$10 million in sales.

Other Regulations is a dummy variable indicating that the state required broker/dealer registration, agent registration and/or filing of proposed advertisements.

*** Significant at 1%, two-tailed. T-statistics are in parentheses.

** Significant at 5%, two-tailed.

* Significant at 10%, two-tailed.

TABLE G.2
 MARKET RELATIVE RATES OF RETURN AND "SPREAD"
 OF RETURNS WHOLE SAMPLE VERSUS THE AVERAGES
 IN THE THREE REGULATION GROUPS:
 COMMON STOCKS

Year Group	Holding Period	Mean Return	Average Standard Deviation
1973 whole sample	3	.72	.26
extensive merit	3	.62-	.19±
1976 whole sample	3	2.04	.68
extensive merit	3	2.10+	.66
all merit	3	2.11+	.67
disclosure	3	2.12+	.69
1979 whole sample	3	1.71	1.27
extensive merit	3	1.79+	1.08+
all merit	3	1.72	1.00+
disclosure	3	1.64-	1.11+
1973 whole sample	2	.83	.24
extensive merit	2	.73	.22+
1976 whole sample	2	1.51	.37
extensive merit	2	1.49-	.36+
all merit	2	1.52	.36+
disclosure	2	1.51	.37
1979 whole sample	2	2.64	1.27
extensive merit	2	2.35-	1.10+
all merit	2	2.21-	1.01+
disclosure	2	2.41-	1.13+

TABLE G.2 -- Continued

Year Group	Holding Period	Mean Return
1973 whole sample	1	.93
extensive merit	1	.86-
1976 whole sample	1	1.12
extensive merit	1	1.13+
all merit	1	1.12
disclosure	1	1.11
1979 whole sample	1	1.71
extensive merit	1	1.53-
all merit	1	1.48-
disclosure	1	1.58-

Average Differences
(Regulation Group - Whole Sample Average)
Across Issue Years and Holding Periods (1976 & 1979)

Extensive Merit Average	
Returns	-.056
Standard Deviations	-.098
All Merit Average	
Returns	-.095
Standard Deviations	-.138
Disclosure Average	
Returns	-.060
Standard Deviations	-.073

+ (following an entry) Significantly better (lower risk or higher return) than the whole sample of SEC qualified issues at the 5% level, one-tailed (10% level, two-tailed).

- (following an entry) Significantly worse (higher risk or lower return) than the whole sample of SEC qualified issues at the 5% level, one-tailed (10% level, two-tailed).

* The market relative rate of return is the return on a particular issue divided by the rate of return on the market. For example, if the return on an issue were 1.10 versus 1.20 for the market, the market relative return on the issue would be .92. Dividing by the return on the market is necessary to normalize the rates of return for issues that were floated on different dates under potentially different general market conditions.

** The number of issues in the total sample was 335 in 1973, 337 in 1976, and 344 in 1979. Since there is only one yearly rate of return observation for each issue for the holding period of one year, no standard deviations can be calculated.

In Table G.2, average mean returns and average standard deviations are given for one, two, and three years of holdings for issues originating in 1973, 1976, and 1979. Each of these measures is shown for the whole data sample and for the qualified issues in each of the regulation groups of states. Significant differences from the whole sample values are designated with a plus or a minus sign after the value. A plus designates significantly better performance than the sample while a minus designates significantly worse performance than the sample.

As discussed earlier, if a regulation group's screening processes are consistently associated with significantly better performance than the whole sample, then the hypotheses that the states' screening process was protecting consumers could not be rejected. If the results for a regulation group were consistently worse than the whole sample values, we could not reject the hypothesis that the group was harming investors. Other results would not allow us to reject the null hypothesis that there was no effect.

In the discussion of Table 7, we have already noted that the results for the extensive merit states are on average lower returns, lower risk-adjusted returns, and lower standard deviations with only the latter being significant. Consequently, the discussion here will focus on the other two regulation groups.

Three primary observations can be made about the additional results in Table G.2. First, although the disclosure states do not apply merit standards in general, the qualification processes that they have established do lead to screening of some kind as evidenced by the occasional significant differences between the whole sample and the disclosure state figures. Second, the results for the combined group of all merit states do not always lie on a continuum from extensive merit to disclosure. Sometimes the combined merit group has values outside the range of the extensive merit and disclosure groups, implying that the operation of merit review in the middle groups of states was not necessarily a simple lesser version of merit review in

the intensive merit review states. For instance, for the 2 year holding period, both the return and standard deviations values for the combined merit group are less than the corresponding extensive merit and disclosure figures for 1979 issues. Third, the relationship between performance of issues qualified in extensive merit states to issues qualified in disclosure states is not systematic. Sometimes the results in the two groups of states differ in the same direction from the whole sample. The second year of holding for 1979 issues is a good example. In other cases, however, the two groups move in opposite directions from the sample. The third year of holding for 1979 issues is a good example of this relationship.

While the statistics reported above were applicable to investors who did not hold widely diversified portfolios of investments, the effects of merit regulation on investors with random diversified holdings are also of interest and might diverge from the effects on investors with less diversified holdings. Table G.3 gives the mean risk-adjusted excess returns and the mean systematic risk estimate for states in each regulation group and in the whole sample of SEC registered issues for each issue year. These risk-adjusted measures are based on five years of holding. All regulation groups had lower risk-adjusted returns on average than the whole sample, although the difference was not as great for the extensive merit group as it was for the other groups.

TABLE G.3
MEAN RISK-ADJUSTED EXCESS RETURNS AND
SYSTEMATIC RISK ESTIMATES BY REGULATION GROUP

Issue Year	Group	Mean Risk Adjusted Excess Return (alpha)*	Mean Systematic Risk (beta)
1973	Whole Sample	.1334	1.108
1973 (N=6)	Extensive Merit	.0615-	1.082
1976	Whole Sample	.2511	.122
1976 (N=16)	Extensive Merit	.2572+	.2827-
1976 (N=38)	Extensive & Middle	.2512	.1672-
1976 (N=12)	Disclosure	.2507	-.0218+
1979	Whole Sample	.0521	2.3274
1979 (N=16)	Extensive Merit	.0734+	2.3093
1979 (N=38)	Extensive & Middle	.0564	2.3043
1979 (N=12)	Disclosure	.0430	2.4008

+ (following the coefficient) Significantly better at the 5% level of confidence, one tailed (10%, two-tailed).

- (following the coefficient) Significantly worse.

* Mean risk-adjusted returns in excess of the riskless rate of return are commonly found in association with small firms. The literature on small-firm effects is extensive. See, for example, the recent articles by Rock (1986); Beatty and Ritter (1986), and Booth and Smith (1986).

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