

Economic and Equity Aspects  
of Securities Regulation

by

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# Economic and Equity Aspects of Securities Regulation<sup>1</sup>

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In recent years there have been a number of publications purporting to show that disclosure provisions and other requirements mandated by securities regulation have not had any discernible favorable effect on capital markets and therefore have been economically undesirable in view of the costs involved. This paper will indicate that much of the empirical evidence and studies adduced to substantiate the ineffectiveness of securities regulation is seriously flawed and that the interpretation of this evidence as unfavorable to regulation seems highly questionable. Moreover, it will question the major emphasis placed on time-series evidence for the pre-SEC and post-SEC periods given the major other economic and financial developments over this period and the availability of other more directly relevant information which is generally disregarded.

A striking characteristic of much of this recent literature has been the gross inadequacy of references to studies with relatively favorable conclusions about securities regulation and the complete absence of reference to strong criticism of studies cited as justifying unfavorable conclusions. A good example of this type of scholarship is provided by Schwert [1981].<sup>2</sup> Thus, in citing studies which examined the implications of mandated disclosure of corporate information prior and subsequent to the issuance of new securities, he refers to the Stigler [1964] and Benston [1973] studies (both of which concluded that regulation had no favorable impact on stockholder welfare)

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<sup>1</sup>This paper is a slightly revised and updated version of an earlier paper by the same title which was published in Management Under Government Intervention: The View from Mt. Scopus, Lanzillotti & Peles (eds.), JAI Press Inc., Greenwich, CT.

<sup>2</sup>G. William Schwert, "Using Financial Data to Measure Effects of Regulation," The Journal of Law and Economics, April 1981.

without even mentioning the refutations by (among others) Friend and Herman [1964 and 1965] and Friend and Westerfield [1975].<sup>1</sup> Similarly, in citing studies on the effect of margin regulation on stock prices, Schwert relies heavily on a time-series analysis in Largay and West [1973] "concluding that there is no indication that margin changes have any impact on stock price behavior" without mentioning that (as discussed later) more meaningful cross-sectional analysis in Largay [1973] and Eckardt and Rogoff [1976] can be interpreted as pointing to the opposite conclusion.<sup>2</sup>

The subsequent analysis in this paper will attempt to redress this unbalance in the recent literature on the effects of securities regulation by examining once again a number of relevant earlier studies, including those by Stigler, Benston, Largay and Eckardt and Rogoff, and by analyzing some of the more relevant and interesting recent studies, with special attention paid to Jarrell (1981).<sup>3</sup> The examination of the earlier studies

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<sup>1</sup>George J. Stigler, "Regulation of the Securities Markets," Journal of Business (117)(1964); George J. Benston, "Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934, 63, American Economic Review, 132 (1973); Irwin Friend and Edward Herman, "The SEC Through a Glass Darkly," Journal of Business, October 1964 (incl. Stigler rejoinder) and Professor Stigler on Securities Regulation: A Further Comment," January 1965; and Irwin Friend and Randolph Westerfield, "Required Disclosure at the Stock Market: Comment," The American Economic Review, June 1975. It should be pointed out that Schwert does raise some questions about the Stigler analysis, especially the implicit assumption that all firms have the same risk as the market portfolio. However, as will be indicated subsequently, this assumption is not one of the more serious problems affecting Stigler's conclusions.

<sup>2</sup>James Largay and Richard West, "Margin Changes and Stock Price Behavior," 81, Journal of Political Economy, 328 (March/April 1973); James Largay, Journal of Finance, September 1973; and W.L. Eckardt and D.L. Rogoff, "100% Margins Revisited," Journal of Finance, June 1976.

<sup>3</sup>Gregg Jarrell, "The Economic Effects of Federal Regulation of the Market for New Security Issues," Journal of Law and Economics, December 1981.

will rely heavily on previous publications by myself and several colleagues.<sup>1</sup> Because of time constraints, this paper will stress the mandated disclosure aspects of securities regulation and the economic rather than equity effects. However, some attention will also be paid to other aspects of securities regulation and to equity considerations.

### Disclosure and Market Efficiency and Equity

The basic argument for disclosure in the securities markets is the belief that the prompt provision of information to actual and prospective stockholders (and to a lesser extent bondholders) is a necessary condition for efficient and equitable markets. If we lived in a world in which management could be relied on to make all relevant information available, promptly and at no cost, to all stockholders and to the market place, there would be little need for disclosure requirements, but we do not. Thus, the public enactment of disclosure rules may well help to create a more efficient and more equitable market by reducing heterogeneity of expectations based on the inaccessibility of available information to major groups of stockholders.<sup>2</sup> However, although most (but not all) people would agree that the case for disclosure requirements is quite strong on equity grounds, the economic basis for disclosure requirements must ultimately rest on empirical tests of their market effects.

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<sup>1</sup> Especially Irwin Friend, "Economic Foundations of Stock Market Regulation," in Resource Allocation and Social Institutions, M. Allingham and M.L. Burstein, eds., MacMillan Press Ltd. 1976; and Marshall E. Blume and Irwin Friend, The Changing Role of the Individual Investor, John Wiley, 1978 (Chapter 5).

<sup>2</sup> For example, see J.F. Jaffe and M. Rubenstein, "The Value of Information in Impersonal and Personal Markets", Working Paper No. 10-75, Rodney L. White Center for Financial Research, University of Pennsylvania, 1975.

Some of the most convincing evidence on the need for disclosure and related aspects of securities regulation in the markets for new and outstanding issues is provided in the Pecora hearings,<sup>1</sup> two other U.S. government pre-World War II studies,<sup>2</sup> and the postwar SEC Special Study,<sup>3</sup> all of which document the massive abuses of the earlier period and the much healthier post-SEC experience. This evidence provides substantial reason for believing that the effects of disclosure requirements and related securities regulation have been beneficial. Vast amounts of money were lost in the pre-SEC period as a result of activities that have been greatly reduced by securities legislation. These amounts would appear to exceed greatly any reasonable estimate of the costs of such legislation.

Stock-market pools, bucket shop operations, misuse of insider information, and other types of manipulation and fraud, which frequently relied on the deliberate use of misinformation and the absence of full disclosure, were widespread in the pre-SEC period, involved vast sums of money, and seem less prevalent today. In the earlier period, enormous losses were sustained by the public in new issues of public-utility holding companies, investment companies, and foreign bonds frequently sold under disclosure conditions bordering on fraud. It is true that the general economic situation bears substantial blame for such losses, but an important part is attributable

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<sup>1</sup>Stock Exchange Practices, Hearing before the Senate Committee on Banking and Currency, 72nd and 73rd Congresses, pts. 1-17(1933-34).

<sup>2</sup>Federal Trade Commission, Report on Utility Corporations, Special Document No. 92, 70th Congress, 1st Session (1935), especially pt. 22, 71A, 72A; and Report of the Securities and Exchange Commission on Investment Trusts and Investment Companies (1939-1942).

<sup>3</sup>Report of Special Study of Securities Markets of the Securities and Exchange Commission (Washington, D.C.: U.S. Government Printing Office, 1963).

to inadequate and deliberately misleading information and to widespread violations of fiduciary responsibilities by market and corporate insiders. Inadequate disclosure facilitated such violations.

#### New Issues

The post-World War II Special Study gives additional evidence of the beneficial effect the full disclosure requirements under the SEC had on new issues. For example, during the early 1960s, unseasoned Regulation A issues, which do not require full disclosure, appeared to fare better with respect to price in the short run but worse in the long run than did unseasoned issues registered with the SEC, which require full disclosure, but no test of statistical significance was provided. Similarly, a substantial portion of the public monies raised through a number of Regulation A offerings made under the auspices of a single interest group was siphoned off to persons affiliated with that group, whereas registration statements filed at about the same time by the same group never became effective. This evidence suggests that in the short run full disclosure may help prevent unwarranted price rises and in the longer run protect against dilution of the stockholders' interests and ensure a closer correspondence between initial price and intrinsic value.

The effectiveness of full disclosure is further supported by a comparison by Friend and Herman of the market experience during 1958-1963 of unregistered new industrial common stock less than \$300,000 in size issued in 1958 with otherwise comparable registered issues between \$300,000 and \$5,000,000 in size, where the returns on both groups of stocks were adjusted by movements in the market averages.<sup>1</sup> This test again covered only a limited time period,

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<sup>1</sup>Friend and Herman, op. cit.

but it also suggested a superior after-issue price performance of the registered issues. The returns for the registered small issues did not differ much from those typically found for the larger ones but were appreciably better than the returns for the very small issues not subject to registration. Similar results were obtained in a study by Stoll and Curley which finds that the long-run performance of unseasoned Regulation A issues was inferior to that of outstanding issues for stocks issued during the period 1957-63.<sup>1</sup>

A series of tests of the relative performance of new and outstanding common stock issues from the early 1920s to the early 1970s may also be viewed as consistent with greater efficiency of the new issues market (compared to the market for outstanding issues) in the post-SEC than in the pre-SEC period. Mandatory disclosure was in force only in the post-SEC years, and effective disclosure was much greater in that period, especially for new issues. The disclosure requirements, which are more rigorous for new issues, would be expected to affect the new issues more than outstanding issues even for seasoned companies, and obviously much more for unseasoned companies. These tests cover a much longer period than the direct comparisons for registered and unregistered issues in the post-SEC period but provide only indirect evidence on the effect of disclosure, in view of the other institutional changes from the pre- to post-SEC period.

Such a test of the effect of full disclosure which Edward Herman and I carried out in connection with our criticism of a similar earlier test by George Stigler (Stigler 1964) compares the price performance relatives of comparable large new stock issues in the pre-SEC 1923-28 and post-SEC 1949-55 periods over a five-year period subsequent to their offering (Friend and Herman 1964/1965 ). These price performance relatives were obtained

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<sup>1</sup>H.R. Stoll and A.J. Curley, "Small Business and the New Issues Market for Equities," Journal of Financial and Quantitative Analysis, September 1970.

by adjusting the price trends of new issues for the price trends of outstanding issues (as measured by the Standard and Poor's Industrial Index) in an attempt to eliminate the effects of general market conditions. This type of test assumes that any differences in the relation of the markets for new and outstanding issues in the two periods were mainly a reflection of the SEC, with the disclosure provisions for new issues likely to be particularly important. The deficiencies in this assumption are obvious, in view of the major other changes in the market environment including the changing role of the institutional investor.

In this comparison of the 1923-28 and 1949-55 periods, we found that the price performance of new issues was inferior to that of outstanding issues, but was closer to outstanding issues in the post-SEC than in the pre-SEC period suggesting an increase in allocational efficiency. The price performance of new issues relative to outstanding issues was, as a result, superior in the post-SEC period. This superiority was least marked in the first year or so after the issue date, but this finding can be explained by two facts; (1) the extensive price pegging and numerous manipulative pools in the 1920s which might be expected to be particularly active in the first year after the public sale of a new issue; and (2) the extreme difficulty of securities valuation in the absence of full disclosure until there is some record of operating experience. In connection with the first of these two points, it might be noted that a sample of new issues which according to the Pecora hearings were subject to pool operations in the 1920s had an above-average price performance in the first year after the issue date and below average thereafter (Friend and Herman 1964/1965).

We extended the pre-SEC and post-SEC comparisons, in which we had covered the same time period and size categories of issues used by Stigler, to include



1958 and the first half of 1959 and also to include small issues for 1923, the first half of 1928 and the first half of 1958. Again we obtained the same qualitative results when comparing the pre-SEC and post-SEC periods.

Another significant result of this comparison of pre-SEC and post-SEC price performance of new common stock issues relative to outstanding issues is that the variances of the price ratios for each of the five years after issue date were much larger in the pre-SEC period. In other words, there was much less dispersion in relative price performance of new issues in the post-SEC period, which is another result consistent with the theoretical expectations of the effects of improved information and a reduction of manipulative activity. This again could be construed as evidence that securities legislation has improved the structure of stock prices.

In a subsequent analysis, we pointed out that another measure of performance advanced by Stigler suggested statistically significant improvement in the structure of new issue prices from the pre-SEC to post-SEC periods (Friend and Herman 1964/1965 and Stigler rejoinder). Thus, the correlation in the pre-SEC period between new issue prices and prices one year later (with all new issue prices deflated by the price index for outstanding issues) seems to have been significantly lower than the average correlation for adjacent pairs of years after issue, whereas these correlations are identical (and higher) in the post-SEC period.

A comprehensive update of the comparative performance of new and outstanding issues appears in a Ph.D. dissertation by Roger Ibbotson (1973)<sup>1</sup>. That study, which covers the price performance of SEC registered

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<sup>1</sup>R.G. Ibbotson, Price Performance of Common Stock New Issues, Ph.D. dissertation University of Chicago, 1973. See also Journal of Financial Economics 2(1975) 215-272.

underwritten unseasoned common stock issued during each month of the period 1960-69 over a post-issuance five-year period through 1971, finds that after a short-lived initial premium these new issues are indistinguishable from other outstanding stock. If these results are taken at face value, they would seem to suggest the virtual disappearance in the post-SEC period of the inferior performance of new issues. Thus, to the extent such data are relevant, they point to an improvement in the efficiency of the new-issue market in the post-SEC period. However, it is not clear how much bias in favor of new-issue performance is introduced into the Ibbotson analysis as a result of his inadequate treatment of missing quotes. Moreover, the Ibbotson finding seems inconsistent with a study covering more recent postwar data in this area by Simmons [1974] which finds that the performance of new unseasoned issues registered with the SEC in 1971 was, in spite of prices initially rising above offering price, inferior to that of outstanding registered issues for the 1971-October 1973 period covered.<sup>1</sup> While beta coefficients were not held constant in this last study, such adjustments would be expected to increase the disparity between unseasoned and outstanding issues since beta coefficients of unseasoned issues are on average probably well in excess of one<sup>2</sup> and October 1973 stock prices were appreciably higher than 1971 prices (with stock returns on the average in excess of the risk-free rate).

In the light of these findings, it should not be surprising that Randolph Westerfield and I stated in June 1975 that "We interpret the evidence on the 1933 Act as clearly favorable to disclosure" (Friend and Westerfield (1975)). It may be useful, therefore, to consider a different evaluation by George Benston which appeared in that same issue (Benston (1975)) and

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<sup>1</sup>C.A. Simmons, "Immediate, Short-and Long-Run Performance of New Stock Issues," Rodney L. White Center for Financial Research, University of Pennsylvania, 1974. An earlier version of this paper was released by the SEC.

The Ibbotson finding is also inconsistent with the results in Canada for 1956-63 and 1968-69 (as well as 1926-28) obtained in D.C. Shaw, "The Performance of Primary Common Stock Offerings: A Canadian Comparison," Journal of Finance, December 1971, which finds lower returns on unseasoned new issues than for outstanding stock, again in spite of their greater risk.

which together with Stigler's findings receives special mention in Schwert's recent state of the arts paper. Benston in referring to the papers by Stigler, Herman and myself, which cover the results summarized above, states that

The data presented in these papers indicate an insignificant difference in the mean rate of return (relative to the market) on stocks floated in the years 1923-27 compared to flotations in the period 1949-55. However, the standard deviations of the returns are higher in the pre-Securities and Exchange Commission (SEC) period, which F-W assume is favorable.

He then proceeds to attack the relevance of the standard deviations and concludes that from such evidence "one should not interpret the evidence as clearly favorable to disclosure."

Benston clearly states (1) that the 1923-27 and 1949-55 comparisons provide insignificant differences in mean rates of return and strongly implies (2) that these are the only relevant results available and (3) that our conclusion is exclusively or primarily based on the respective standard deviations, which do not constitute terribly relevant evidence. The first point is grossly misleading, the second and third incorrect.

Turning to the first point, both Stigler and Friend and Herman make two different comparisons of the pre-SEC and post-SEC performance of new issues. The first covered 1923-28 for the pre-SEC period and included Class A stock as common, following Stigler's original procedures. The second covered 1923-27 and excluded Class A stock from common, following Stigler's revision of his original procedures when we pointed out that the original results appropriately corrected suggested a favorable SEC effect on the new issue market.

What Benston does not point out - and this would seem to be a glaring omission - is that for the first set of comparisons the post-SEC period was superior in the performance of new issues for each of the five years tested subsequent to their offering and was significantly superior (at the 5 percent level) for four of the five years. When the pre-SEC period is terminated at 1927, which had the best relative price experience of the pre-SEC years included, instead of 1928 which had the worst, and when Class A stock is excluded, it is true that the differences between the pre-SEC and post-SEC results for the five years subsequent to the offering are not statistically significant in any year, but Benston neglects to point out that the post-SEC performance is superior in four of the five years. While the differences in two of the five years are quite small, they range from 6 to 17 percent in the other three, with the post-SEC results superior in these years. If 1928 is retained in the earlier period, but Class A stock still omitted, the post-SEC performance of new issues in all of the five years rose by from 9 to 37 percent a year. Moreover, even for the pre-SEC comparison which is least unfavorable to Benston's position, a serial correlation measure of performance commented on earlier in this paper seems to show a statistically significant superiority of the post-SEC period.

Turning to the second point implied by Benston, that the 1923-27 and 1949-55 comparisons to which he refers are the only evidence in the papers cited on mean relative rates of return on new issues, I have already indicated that this view is without any foundation. Totally apart from the several other 1923-27 and 1923-28 comparisons to which I have just referred, and the comparison of standard deviations of returns to which Benston does refer,

it may be recalled that I previously discussed a number of other reasonably independent statistical tests and a substantial amount of qualitative information all favorable to the efficacy of the 1933 Act disclosure requirements and all cited in the literature referred to by Benston.

The last point implied by Benston, that our favorable conclusion on 1933 Act disclosure depended basically on the comparison of standard deviations of returns in the pre-SEC and post-SEC periods, is thus completely incorrect. As for the relevance of such a comparison, the reduction in the variance of the new issue price ratios from the pre-SEC to the post-SEC periods, since it was clearly not associated with a reduction in relative return, can be regarded from the investor's viewpoint as a positive achievement of the SEC, making the usual assumption that investors are risk averse. Benston advances the strange argument that such evidence has no relevance to the effectiveness of the SEC in screening out fraudulent issues or in reducing potential risk. The evidence would seem to be directly relevant to the effectiveness of the securities regulation in screening out fraudulent issues at least until a more persuasive explanation of the variance phenomenon is advanced.

A question might be raised as to the effect of securities regulation on the costs of new issues. In other words, has the apparent increase in allocational efficiency been offset by a reduction in operational efficiency or an increase in new issue costs, including the costs of the SEC as well as private costs? To the extent of course that registration costs are already reflected in price performance, our performance relatives have already adjusted for any difference in registration costs in the pre-SEC and post-SEC periods. However, in any case the evidence suggests a decline in underwriting compensation from the pre-SEC and the early SEC to the subsequent period

(Friend et al. 1967 ),<sup>1</sup> and other information points to an inconsequential upward movement - in the aggregate a fraction of 1 percent - in other expenses associated with new issues (Friend and Herman 1964/1965 ). The cost of SEC registration activities is estimated at well under one-tenth of 1 percent of the proceeds of registered issues. There are some other social costs as well as savings associated with required disclosure but these are not readily quantified, are not clear in direction and, in my opinion, are not very large. The costs of disclosure would seem to be a small fraction of the savings suggested by the various tests referred to earlier.

Before concluding this discussion of the empirical literature dealing with the effect of required disclosure in the market for new issues, attention should be paid to two very recent analyses by Jarrell [1981] and the SEC [1982].<sup>2</sup> Jarrell compares the 1926-33 (pre-SEC) "abnormal" return of new common stock issues with the 1934-39 (post-SEC) abnormal return. Seasoned and unseasoned issues in excess of \$2 million in size, including both underwritten and rights offerings, are combined in this analysis. Abnormal returns (which are returns in excess of the levels justified by the risks incurred) are derived from a Sharpe-Lintner model incorporating a risk-free rate. They are estimated on a monthly basis for each of the first 12 months of seasoning as well as for each of the first five years subsequent to the offering date. Jarrell finds abnormal returns over the post-offering five years as a whole both for the 1926-33 and 1934-39 periods, with 1926-33 showing considerably higher abnormal returns -- findings inconsistent with the Stigler-Friend-Herman results. In the first 12 months of the pre-SEC period, abnormal returns were generally negative, not infrequently significantly so, but this was not true for the post-SEC period when the market for new stock issues (relative to outstanding issues) generally seemed

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<sup>1</sup> I. Friend, J. Longstreet, M. Mendelson, E. Miller and A. Hess, Investment Banking and the New Issues Market, World Publishing Company, 1967.

<sup>2</sup> An Analysis of the Use of Regulation A for Small Public Offerings, U.S. Securities and Exchange Commission, Directorate of Economic and Policy Analysis, April 1982.

more efficient both for the first 12 months and first five years as a whole. The latter is a point Jarrell does not make since for some reason which is not altogether clear he stresses instead the higher cumulative abnormal risk-adjusted returns in the pre-SEC than in the post-SEC period.

There is a very real puzzle connected with Jarrell's results which he does not explain, viz., the inconsistency between his and the Stigler-Friend-Herman results. One possible explanation might lie in his use of a risk-free rate of return in lieu of the zero-beta rate in the Sharpe-Lintner model. Since there is some evidence that the zero-beta rate is higher than the risk-free rate (the usual relation) in the second half of the 1930's but below the risk-free rate in the early 1930's,<sup>1</sup> this would seem to imply an upward bias in Jarrell's estimates of abnormal risk-adjusted return for risky assets such as unseasoned new issues in the early 1930's and a downward bias in the late 1930's<sup>2</sup> and therefore might explain the apparent inconsistency with earlier findings. However, since in unpublished work Jarrell obtains similar results with what he calls "Stigler residuals," which are adjusted for general market movements but not for differences in beta coefficients, the inconsistency between his and the Stigler-Friend-Herman results must be explained on other grounds,<sup>3</sup> perhaps simply reflecting differences in the samples covered.

It should be noted that one difference between Jarrell's post-SEC 1949-55 results based on the Stigler sample and those obtained by either Stigler or Friend-Herman seems to be a consequence of an upward bias resulting from Jarrell's elimination from Stigler's sample of those issues for which he could

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<sup>1</sup> See Eugene F. Fama & James D. MacBeth, "Risk, Return and Equilibrium: Empirical Tests," Journal of Political Economy 71, (May-June 1973), pp. 622-623; and Fischer Black, Michaël C. Jensen & Myron Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," Studies in the Theory of Capital Markets, (M.C. Jensen, ed.), Praeger, 1972, Table 7.

<sup>2</sup> Jarrell estimates the mean betas of his samples are 1.36 in both periods.

<sup>3</sup> Ibbotson [1973] also concludes that his qualitative results would be essentially the same if the returns he uses were not adjusted for differences in betas.

not find a sufficient number of monthly returns (30) after the original offering. This clearly introduces an upward bias in Jarrell's 1949-55 results and probably explains the much more favorable results he gets for new issues than those obtained by Stigler-Friend-Herman.

Another troublesome part of Jarrell's comparison of the pre-SEC and post-SEC performance of new issues lies in his analysis of small new issues in the 1926-33 and 1934-39 periods. As he points out, it is for such small and largely unseasoned issues that one might expect disclosure to make the most difference, but he concludes that there is very little difference in performance of such issues in the pre-SEC and post-SEC periods. Yet his data show that these small new issues declined to .71 of their offering price relative to the market average by the end of the fifth year in the 1926-33 period compared to .94 in 1934-39, with the improvement in the post-SEC 1934-39 period approaching statistical significance. This pre-SEC, post-SEC result, it may be recalled, is similar to that obtained by Friend and Herman on the basis of largely independent samples and for a different post-SEC period.

A further troublesome aspect of Jarrell's comparison of the pre-SEC and post-SEC performance relates to the conclusion he draws from the fairly substantial and statistically significant decline in standardized variance of new stock issues from 1926-33 to 1934-39 (and probably also a decline in beta coefficients from both periods to 1949-55). He tentatively concludes in essence that this reduction in risk from the pre-SEC to post-SEC period is more likely to reflect regulatory discouragement (including greater registration costs) of sound risky issues than of fraudulent or other undesirable offerings. The basic justification he provides for this interpretation of his findings on differences in risk in the two periods is that elimination of the highest variance issues in the pre-1934 sample does not reduce the average return in that period. However, he does not explain why achieving as high (his result) or a higher (Stigler-Friend-Herman result) relative return on the average in the



post-SEC than in the pre-SEC period with a significantly lower variance (and perhaps reduced beta) is not a desirable outcome, assuming that we rely at all on such time-series evidence to draw inferences on the effect of securities regulation.

My reservations about Jarrell's interpretation of the post-SEC decline in riskiness of new stock issues are reinforced by his risk analysis of new bond issues which suggest that "the effect of SEC regulation has been to lower the default risk over the entire spectrum of quality for publicly-issued bonds," but which he attributes not to disclosure effects but to other developments, notably greater registration costs of the relatively risky new issues. The evidence he tentatively cites for this conclusion seems completely unconvincing. Thus, to attribute any significant part of the shift from new equity issues to bonds in the post-SEC period to SEC registration costs seems completely fanciful to me. Given the quite different impact of higher corporate taxes on the before-tax cost of debt and equity capital, it is surprising that we have not witnessed a much greater shift towards bond financing over this period, and the substantially smaller current debt ratios in the U.S. than in Europe or Japan do not suggest much impact of SEC regulations. It seems to me much more plausible to assume that the disappearance of most of the close to fraudulent debt issues which were commonly sold in the 20's, in large part to individual investors, is at least to a considerable extent a reflection of SEC disclosure requirements.

The SEC [1982] study compares the price performance from offering date to July 1, 1981 of stocks sold in Regulation A offerings in the January 1977-June 1980 period with outstanding over-the-counter (OTC) issues and with registered small unseasoned new issues over the same period. The unseasoned registered issues had by far the best price performance and the Regulation A issues the worst though only moderately worse than the OTC issues. Since stock prices as

of July 1, 1981 were substantially higher than the average for January 1977-June 1980 (with a return on the average higher than the risk free rate), it might have been expected that Regulation A issues which are generally regarded as comparatively risky would have fared better relative to the OTC outstanding issues and the unseasoned registered new issues. However, it is possible that the Regulation A issues were regarded as less risky by investors than the unseasoned registered new issues since at least ex post the dispersion of percentage price changes was substantially greater for the unseasoned registered issues.

The sum total of this evidence on disclosure requirements for new issues seems to support the thesis that disclosure has improved market efficiency. Nor do the costs of such disclosure, to the extent they can be measured, appear to have been excessive. This does not mean that the evidence in favor of new-issue disclosure is conclusive or that the SEC disclosure requirements have been the best possible ones, but simply that the evidence that disclosure as a whole has benefitted the market for new issues seems stronger than evidence to the contrary. This conclusion will be reinforced by the analysis below of the effect of disclosure on outstanding issues. Further study is required to determine the usefulness of specific current disclosure requirements or how they could be improved.

#### Outstanding Issues

Several direct tests of the market's relative allocational efficiency in different periods have been derived from market equilibrium theory which indicates that under plausible assumptions the return on an individual stock over time should bear a simple linear relation to the return on the stock market as a whole (or on all risky assets), while the return of an individual stock in a cross section should be linearly related to its risk as measured by the covariance of its return with that on the market. The residual variation in these relationships provides one basis for assessing the efficiency implications of changes in the market structure. Thus, a study which regresses the monthly

average market return for all of them finds that the variance of the residuals for 247 issues was smaller in the post-World War II period than in the period from 1926 through the 1930's (Blume 1967 ).<sup>1</sup> The total variance of return on these 247 issues, which measures variance in the market return as well as residual variance, was also smaller in the postwar period.

A supplementary analysis which I carried out several years ago (Friend 1972 ) regresses on time the standard deviation of residuals from a series of cross-section relationships of portfolio monthly return and risk for 21 periods of 24 months each from July 1926 through July 1968.<sup>2</sup> Each of the 21 cross-section relationships regressed the average monthly return on the estimated beta of ten or so portfolios, each consisting of approximately 80 NYSE stocks stratified by beta in a preceding period. The 21 standard deviations of residuals obtained from these relationships were then regressed on time. A significant downward time trend was found in these standard deviations.

Both of these last two tests derived from market equilibrium theory suggest an improvement in market structure from the 1920s to the period after World War II. Since they abstract from factors affecting return on the market as a whole, they supply some support to the thesis that changes in securities regulation may have improved efficiency in the market for outstanding stock. However, the evidence here is not very strong.

There are moreover two later studies which question whether securities regulation in the market for outstanding stock has had any significant impact on market efficiency. The first, carried out by Officer (1973), concludes that the decline from the pre-SEC to the post-SEC periods in the one year standard deviation of monthly returns on the NYSE stock as a whole was "not attributable to

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<sup>1</sup> Blume, M.E. (1967), "The Assessment of Portfolio Performance: An Application to Portfolio Theory," Ph.D. Dissertation, University of Chicago.

<sup>2</sup> Friend, I. (1972), "The Economic Consequences of the Stock Market," The American Economic Review, May.

the SEC."<sup>1</sup> The second by Benston (1975) concludes that empirical evidence provides no support for the belief that the disclosure and related provisions of the Securities and Exchange Act of 1934 had any effect on the market for outstanding issues.

The conclusion by Officer, which as he notes differs from that reached in earlier analyses of the variability of returns of NYSE stocks as a whole, is to a substantial extent dependent on an extension back to February 1897 of the series on NYSE average returns from the reasonably satisfactory data covering all NYSE stocks starting with January 1926 back to January 1915 on the basis of a 20-stock Dow Jones index and then prior to 1915 on the basis of a 12-stock Dow Jones index. In view of the major incomparabilities between the data before and after January 1926, and presumably the much higher quality of the Dow Jones stocks as compared to the market as a whole, the evidence by Officer does not appear at all convincing, although he asserts that the biases introduced by these incomparabilities are relatively unimportant. Furthermore, it should be noted that Officer addresses himself only to variance in the market return and not at all to individual returns.

The analysis by Benston is of considerably greater interest since it is directed specifically at measuring the impact of SEC-mandated disclosure on the market for outstanding stocks on the basis of two tests of the impact of the 1934 Act disclosure. The first estimates the impact of changes in accounting data on common stock prices by deriving cross-sectional regressions in the year 1964 between changes in prices of individual stocks on the New York Stock Exchange (adjusted for movements in the market) and "unexpected" changes in each of a number of different financial variables (net sales, cash flow, net oper-

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<sup>1</sup> Officer, R.R. (1973), "The Variability of the Market Factor of the New York Stock Exchange," Journal of Business, July.

ating income and adjusted net income). Expected changes in these financial variables were obtained from several simple autoregressive models based on past data and then compared with subsequent published data to obtain estimates of unexpected changes. A similar but more limited analysis was carried out for the year 1963.

As Westerfield and I pointed out in a comment on this analysis (Friend and Westerfield 1975 ), Benston, for reasons which are obscure, does not use more than one of these unexpected changes in financial variables in the same regression, but only one at a time. Even so, his findings point to statistically significant relations between price changes and the unexpected changes in each of these financial variables. Nevertheless, in view of what he considers the small size of the regression coefficients, he concludes that "this evidence is not consistent with the underlying assumption, that the financial data made public are timely or relevant, on average." There does not seem to be justification for his willingness to dismiss out of hand the economic importance of these statistically significant results. Thus, in effect, he considers knowledge concerning changes in financial variables of little relevance to stock prices despite the fact that he finds an increase of 100 percent in the annual rate of net sales is associated with an increase in stock price of 10.4 percent in the month of the announcement, and that changes in other variables are also associated with significant though proportionally smaller changes in price.

Moreover, it seems clear that Benston's regressions considerably understate the usefulness of published financial statements. They do not allow for the joint effects of unexpected changes in the different financial variables, and they make no adjustment for the substantial understatement of the relevant regression coefficients arising from the very large random measurement errors associated with any empirical measures of unexpected change.

Finally, we pointed out that on the basis of independent analyses "...many writers have concluded that published accounting profile variables can be useful in making investment decisions and contribute to market efficiency." We cited two articles as examples, one by Martin (1971), the other by May (1971).<sup>1</sup> Benston had alleged that almost all previous empirical work relating published accounting data to stock price changes also leads to the conclusion that the data are not useful or are redundant.

In attempting to refute our comments on the first of his two tests discussed immediately above, Benston's rejoinder (Benston 1975) advances six arguments (2-7) of which three (2, 3 and 5) might be regarded as substantive and will be considered here. In reply to our above quotations on earlier analyses of the utility of published accounting profiles, Benston states categorically that "no such conclusions are drawn in the articles they cite." Let me quote directly from the Martin article we cited. Martin concludes (pp. 20-21)

We have presented empirical evidence in support of the decision relevance of accounting annual report data for investment decisions. In our view, this evidence is complementary to evidence provided by existing studies examining various aspects of accounting information utility. This study uniquely provides an explicit test of the usefulness of a series of accounting variables taken together... Finally, we consider legislation to increase the scope and amount of reported data as potentially beneficial to investors, based on the ability of current information to explain investor expectations...

Clearly Benston's categorical assertion is unwarranted. May's summarization of the two implications of his results (p. 151) again seems consistent with the above quotation to which Benston takes exception.

Interestingly enough, even Nicholas J. Gonedes, whom Benston cites in his

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<sup>1</sup> Martin, A. (1971), "An Empirical Test of the Relevance of Accounting Information for Investment Decisions," Journal of Accounting Research, Empirical Research in Accounting: Selected Studies; and May, R.G. (1971), "The Influence of Quarterly Earnings Announcements on Investor Decisions as Reflected in Common Stock Price Changes," Journal of Accounting Research, Empirical Research in Accounting: Selected Studies.

continued refutation of the above quotation, and indeed at several different points in his rebuttal, concludes in another paper (Gonedes (1974a))<sup>1</sup>

The results of our tests--which involved tests on means, variances, and covariances--are consistent with the statement that special accounting items convey information pertinent to establishing firms' equilibrium values. Also, our results are not consistent with the statement that no effect is associated with the disaggregation represented by the separate disclosure treatment accorded to special accounting items...

In reply to our criticism that "...Benston does not use more than one of these expected changes in financial variables in the same regression...", he agrees this criticism is correct but says that Gonedes, in an unpublished manuscript dated September 1973, obtained similar results when he used a number of accounting data ratios simultaneously. Surely, it is disingenuous of Benston to make such a statement without pointing out the main conclusion which Gonedes reached (Gonedes (1974b)): "Our major purpose was to determine whether the accounting numbers jointly reflect new information. The results of our multivariate tests assign a high probability to the statement that the numbers do jointly provide information pertinent to assessing equilibrium expected returns."<sup>2</sup>

From the viewpoint of statistical theory and elementary logic, perhaps the strangest point made by Benston is in response to our reference to the "...substantial understatement of the relevant regression coefficients arising from the very large random measurement errors associated with any empirical measures of unexpected change." The clear import of this reference is that under plausible and well-known statistical assumptions substantial random errors in an indepen-

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<sup>1</sup> Gonedes, N.J. (1974a), Risk Information and the Effects of Special Accounting Items in Capital Market Equilibrium, Report 7429 (Center for Mathematical Studies in Business and Economics, University of Chicago).

<sup>2</sup> Gonedes, N.J. (1974b), "Capital Market Equilibrium and Annual Accounting Numbers: Empirical Evidence," Journal of Accounting Research, Spring.

dent variable in a regression will bias substantially downward the absolute value of the coefficient of that variable. As a result, the impact of disclosure which Benston found statistically significant in spite of this problem is likely to be understated in his analysis, and probably substantially. Benston's reply, apart from referring again to the unpublished study by Gonedes which uses a grouping technique to reduce this measurement error, is that we "should question why the SEC has done so little to reduce these errors, or even to provide investors with some indication of their magnitude and effect." Nothing in Benston's analysis casts any light on the SEC's accomplishments in these areas since this would require comparable results for the pre-SEC period.

Benston's second set of tests of the impact of SEC-mandated disclosure on the market for outstanding stocks is similarly flawed. This set attempts to determine whether a large sample of individual NYSE stocks which were affected by sales disclosure provisions of the 1934 Act subsequently behaved "better" relative to the market as a whole than stocks for which such sales data were already available prior to the Act. The deficiencies in these tests were spelled out in some detail in the comment by Westerfield and myself in the June 1975 issue of The American Economic Review referred to earlier and were responded to in the rejoinder by Benston in the same Review. I shall not here repeat the arguments pro and con made in that issue except again to point out the errors in the more important relevant points made in Benston's rejoinder.

First, he objects to our statement that "we have indicated that Benston's analysis suggests that the 1934 Act did improve estimates of expected return." He goes on to state "I have been unable to detect where in their analysis F-W so indicate." I am afraid that Benston here is forgetting his first set of tests where, as I indicated earlier, he does find a statistically significant



effect of accounting disclosure of such financial items as sales and net income on stock prices. If we assume, as Benston does, that the effect of disclosure on risk evaluation is marginal, then the effect on stock prices must reflect change in expected return.

Secondly, Benston states that "F-W then somewhat overstate the reported usefulness of accounting data [in several external studies] for forecasting betas." This point is significant since his finding that the market evaluation of risk as measured by beta did not change more in the post-SEC period for pre-SEC "nondisclosure" firms than for pre-SEC "disclosure" firms is essentially the only evidence Benston has to support his position that disclosure had no effect. We pointed out that "there are several external studies showing that current accounting data can be used to make at least as good and possibly superior forecasts of future asset risk (as measured by beta) than forecasts dependent only on historically estimated asset risks..." and "the accounting data which turn out to be useful for this purpose are balance sheet and income account items other than sales." Sales, it will be recalled, is the only variable Benston used in estimating the value of disclosure in this second set of tests. Benston's rejoinder is that the analysis in the external studies we referred to is flawed and again refers to the unpublished study by Gonedes which asserts that some of the results we relied on may reflect "spurious correlation,"

Nothing Benston says or that I have seen in the literature is inconsistent with our assertion that the available external studies<sup>1</sup> can be used to make "as

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<sup>1</sup> The most comprehensive listing (and summary) of such studies at the time appeared in Myers, S.C. (1975), "The Relation Between Real and Financial Measures of Risk and Return," in I. Friend and J. Bicksler (eds.), Risk and Return in Finance (Ballinger Publishing, Cambridge).

good and possibly superior forecasts of future asset risk" as can be obtained from past market derived betas. Our view was and is that there is some weak evidence to support the position that disclosure can and does help in the assessment of risk of outstanding stock as measured by betas, and stronger evidence that disclosure affects stock price in the theoretically expected and desired direction. Such a price effect, even in the absence of a beta effect, would be sufficient to justify 1934 Act disclosure unless associated costs were excessive.

The last consequential point in Benston's rejoinder takes issue with our statement (quoted here more fully): "Contrary to Benston's assertions, none of the assumptions that the portfolio approach depends upon appears strictly correct and empirical evidence on the validity of the beta coefficient is not conclusive. Therefore, it might have been illuminating to have included total variability estimates to supplement the analysis." Benston objects both to our criticism of the assumptions and to our evaluation of the empirical evidence. Both the simple capital asset pricing theory on which he relies and the portfolio approach he uses to justify almost exclusive reliance on beta assume that investors will attempt to minimize risk of their portfolio for given expected rates of return. The relevant measure of risk is total variability of return on the portfolio they hold. If investors hold a perfectly diversified portfolio of risky assets as is implied by the capital asset theory, each will hold a microcosm of all stock and other risky assets in the same proportion to the total of their risky assets. Under these circumstances, the total variability in the portfolio would be mainly determined by the betas of the individual assets held, but this is no longer true for portfolios which are not well diversified so that for such investors the average standard deviation or some other measure of total variability of returns on individual assets is also important.

Therefore, it is highly relevant to point out that convincing statistical evidence is available which indicates that a high proportion of portfolios are dominated by a small number of assets and thus are not well diversified (Blume et al (1974); Blume and Friend (1975)).<sup>1</sup> Nearly one-third of all stock owned by U.S. individuals in 1971 was held in portfolios with fewer than five stocks, over 55 percent in portfolios with less than ten stocks, and one or two stocks dominated not only such portfolios but a surprisingly high proportion of portfolios with a larger number of stocks. To assume that investors with such portfolios would use beta to the exclusion of total variability as a measure of risk is to assume they are irrational and to vitiate portfolio theory.

Turning to Benston's objections to our evaluation of the empirical evidence on the desirability of a total variability measure "to supplement the analysis," he quotes or paraphrases Miller and Scholes (1971) (whom we also cited), Jensen (1972), and Fama and MacBeth (1973) to the contrary.<sup>2</sup> He clearly misinterprets Miller and Scholes, probably also Fama and MacBeth, and perhaps also Jensen. Miller and Scholes state in reasonably clear language, and Fama and MacBeth as I interpret them, that it is possible though not proved that the empirical data they investigate are consistent with capital asset pricing theory which implies that beta of an individual stock if we could properly measure it is the only relevant measure of its risk. Jensen, whom Benston quotes out of context (see rest of footnote 35, p. 367 to which Benston refers), is making the statement quoted about portfolios rather than

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<sup>1</sup> Blume, M.E. & I. Friend (1975), "The Asset Structure of Individual Portfolios and Some Implications for Utility Functions," Journal of Finance, May; and Blume, M.E., I. Friend, & J. Crockett (1974), "Stockownership in the United States: Characteristics and Trends," Survey of Current Business, November.

<sup>2</sup> Miller, M.H. & M. Scholes (1971), "Rates of Return in Relation to Risk: A Re-examination of Some Recent Findings," in M.C. Jensen (ed.) Studies in the Theory of Capital Markets (Praeger, New York); Jensen, M. (1972), "Capital Markets: Theory and Evidence," Bell Journal of Economics, Autumn; Fama, E.F. & J. MacBeth (1973), "Risk, Return and Equilibrium: Empirical Tests," Journal of Political Economy, May.

individual securities and depends on Fama and MacBeth for its extension to individual assets. It seems to me, at the present state of the arts in capital asset pricing theory, that if we are concerned with realistic explanation of real world phenomena--not the most elegant theory which may or may not be applicable--it is necessary to take total or residual variability into account as well as beta.<sup>1</sup>

Therefore, for outstanding stocks also, the evidence referred to above seems to lend greater support to the conclusion that disclosure has improved market efficiency than to the conclusion that it has had no effect or an unfavorable effect. This evidence includes indirect tests drawn from market equilibrium theory that suggest an improvement in market structure from the 1920s to the post-World War II period and, more importantly, direct tests indicating that published accounting data can be useful in making investment decisions, thereby contributing to market efficiency.

Two more recent tests conducted to determine whether accounting data provide new information to the market found it highly probable that they do. Thus, in a study of "abnormal" returns associated with quarterly earnings announcements, Watts [1978] concludes that significant abnormal returns are observed but do not cover all transactions costs to ordinary investors.<sup>2</sup> Another study of the effect of quarterly reports on security analysts' forecasts of earnings per share [Elton-Gruber-Koo (1981)] concludes there is "strong [and statistically highly significant] evidence supporting the hypothesis that interim reports

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<sup>1</sup> For a more recent discussion of this issue, see I. Friend & R. Westerfield, "Risk and Capital Asset Prices," Journal of Banking and Finance, 5(1981), 291-315.

<sup>2</sup> Ross S. Watts, "Systematic Abnormal Returns After Quarterly Earnings Announcements," Journal of Financial Economics 6, (1978).

affect expectations."<sup>1</sup>

Two other types of studies in recent years provide additional insight into the usefulness of and need for SEC-mandated disclosure. A group of studies of the consequences of the post-war SEC regulations requiring multiproduct firms to disclose revenues and profits by product-line in their annual reports (Kinney 1981, Barefield and Comisky 1975, Collins 1975, and Collins 1976) indicate that product-line data are more useful in anticipating changes in total firm earnings than are accounting data combining all product lines, again supplying evidence of the value of disclosure requirements for stock market efficiency.<sup>2</sup> On the basis of these papers, Collins and Simmonds (1979) conclude "that disclosure of segmented data does enhance one's ability to predict the future earnings of multisegment firms."<sup>3</sup> In that paper, they also examine the informational content of segmented disclosure with respect to market risk assessments and unlike Horwitz and Kolodony (1977)<sup>4</sup> they conclude that line-of-business reporting requirements have affected the market's perception

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<sup>1</sup> Edwin J. Elton, Martin J. Gruber, & Suk Mo Koo, "Expectational Data: The Effect of Quarterly Reports," Working Paper Series, No. 235, Salomon Brothers Center for the Study of Financial Institutions, New York University, June 1981.

<sup>2</sup> Kinney, W., Jr., "Predicting Earnings: Entity vs. Subentity Data," Journal of Accounting Research (Spring 1971), pp. 127-36; Barefield, R. & E. Comiskey, "The Impact of the SEC's Line of Business Disclosure Requirements on the Accuracy of Analysts' Forecasts of Earnings Per Share," Working Paper, Krannert School of Industrial Administration, Purdue University, March 1975; D.W. Collins, "SEC Product Line Reporting and Market Efficiency," Journal of Financial Economics, July 1975; and Collins, D.W., "Predicting Earnings with Subentity Data: Some Further Evidence," Journal of Accounting Research, (December 1976), pp. 163-77.

<sup>3</sup> Daniel W. Collins & Richard R. Simmonds, "SEC Line-of-Business Disclosure and Market Risk Adjustments," Journal of Accounting Research, Vol. 17 (no. 2), Autumn 1979.

<sup>4</sup> Horwitz, B., and R. Kolodny, "Line of Business Reporting and Security Prices: An Analysis of an SEC Disclosure Rule." Bell Journal of Economics (Spring 1977): 243-49.

of the riskiness of multisegment firms.

Another type of study furnishing evidence on the potential usefulness of mandated disclosure is provided in an analysis by Lurie and Pastena.<sup>1</sup> This study found that, where the SEC reporting requirements grant management flexibility within a fiscal year in reporting unusual events that might affect earnings, favorable items tended to be reported early in the fiscal year whereas unfavorable items tended to be reported late. This strongly suggests that management is eager to disclose favorable information as soon as possible and to delay the disclosure of unfavorable information, although prompt reporting in both cases would be more conducive to the maintenance of an efficient market.

It should be noted that, as in the case of new-issue disclosure, further study is needed of specific disclosure requirements applicable to outstanding stock to determine whether they are useful and how they can be made more useful. There is reason to believe that in some cases the SEC has mandated disclosure while paying insufficient attention to the comparative costs and benefits, such as in the corporate disclosure of replacement-cost data mandated by the SEC.<sup>2</sup> Whereas replacement-cost data may be extremely useful to investors in view of the great differences in an inflationary period between book and true earnings, the implementation of this requirement is likely to be very costly, and there is as yet no consensus on the techniques for making the necessary calculations or on the magnitude of the resulting benefits. In such instances, involving mandatory disclosure of information not normally compiled for internal purposes by the corporations, it would be highly desirable

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<sup>1</sup>A. Lurie and V. Pastena, "How Promptly Do Corporations Disclose Their Problems?" Financial Analysts Journal (September-October 1975).

<sup>2</sup>This requirement by the SEC was withdrawn in 1979 when a similar requirement was adopted by the Financial Accounting Standards Board.

for the SEC to go beyond simply obtaining general reactions from the business, academic, and professional communities. It should also, whenever possible, conduct a small sample survey of cooperating business firms to determine the approximate costs of the proposal and carry out an analysis of likely benefits (as measured, e.g., by the effect of replacement-cost accounting on a company's stock price relative to stock prices of otherwise comparable firms).

A quite different example of the SEC inhibiting potentially useful voluntary disclosure concerns the area of management's earnings forecasts. Formerly such forecasts were effectively discouraged. Although these forecasts are inevitably subject to a wide margin of error and to occasional serious abuse, any indications of prospective earnings are of potential value to investors, and management is likely to be in a better position to provide such insights than are other sources.<sup>1</sup> Management is not likely to provide earnings forecasts on a voluntary basis so long as it is not protected against liability suits based on charges of erroneous and thus misleading projections. The SEC has in recent years moved in the direction of making it less risky for management to publish such forecasts by so-called "safe-harbor" provisions. However, frequently, securities (as well as other) legislation has tended to encourage nuisance suits against management, with appreciable costs to the corporate stockholders and to the court system. The law firms that represent the plaintiffs and assume little risk seem all too often to be the principal beneficiaries.

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<sup>1</sup> In spite of the legal constraints on their short-term trading, corporate insiders are one of the two groups of investors who are known to have above-average stock investment performance, both in trading for their own account and in the timing of stock repurchases for their corporations. Exchange specialists, in trading for their own account, comprise the other group.

The available evidence discussed above seems to me to indicate that, quite apart from equity considerations, the trend toward increased disclosure mandated by the SEC has probably had in general, if not necessarily in every instance, a salutary effect on the securities market. It may be useful, therefore, to consider two theoretical arguments that have been adduced to question the economic rationale of compulsory disclosure.

First, it is sometimes asserted that since individuals learn from experience, they would not be expected to repeat their investment errors and that hence mandated protection is unnecessary. Unfortunately, the average investor in an unregulated market is likely to be at a substantial competitive disadvantage compared with market makers and corporate insiders (investment bankers, exchange specialists and company officers, directors, and principal stockholders). By the time he has learned from one experience he is likely to be confronted by another situation that may be or at least seem quite different, and even if he himself has become a wiser man, new investors lacking his firsthand experience are waiting to take his place. Moreover, if the only lessons investors, old and new, learn from experience is that they cannot rely on the adequacy of disclosure, the cost of capital is likely to increase and the informational and allocational efficiency of the stock market to suffer since the relationship of market prices to the future returns on stock is likely to diminish.

Second, it is sometimes argued that to the extent that disclosure of information is valuable, management can be relied on to make it available to stockholders and the market, either because management is assumed to act in the best interest of stockholders or because competition will force it to make such disclosure to reduce the riskiness of its stock and thereby



its cost of capital (and in the process to maximize stock price). Although management may and probably does generally act in the best interests of its stockholders, clearly there are times when there may be conflicting interests. Since managers have finite lives, they may take advantage of occasions when they can maximize their own long-range interests by actions not necessarily consistent with the long-range interests of their stockholders. Moreover, there are other times when maximal protection of the stockholders' interests can be attained at the expense of the market generally, as when management holds up the disclosure of unfavorable information.<sup>1</sup>

Nor does the record support the view that competition will force management to make disclosure, except perhaps over a period too long to be useful to most investors in their lifetime. Thus, whereas the proportion of NYSE corporations that reported so basic a financial datum as annual sales increased moderately in the second half of the 1920s from 55 percent in 1926 to 62 percent in 1930, it did not change thereafter through 1934, the last year before all registered companies were required to file such (and additional) information under the Securities and Exchange Act of 1934.<sup>2</sup> Under subsequent SEC regulations these companies were required to make public their quarterly as well as annual sales - data that virtually all well-run companies would regularly compile for internal purposes. Prior to another SEC regulation, relatively few firms regularly published product-line data in their annual reports, and as noted earlier, when management is given discretion in its reporting of unfavorable items, it tends to delay as long as possible. Disclosure mandated by the SEC is not only likely to take place earlier, but investors probably also

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<sup>1</sup> Stockholders might benefit either through sales of at least part of their shareholdings or through long-term corporate gains achieved as a result of delayed disclosure of unfavorable information (e.g., through raising money from external sources at a lower cost than would otherwise be possible.).

tend to feel that it provides a more reliable picture of a company's financial position.

To summarize, economic as well as equity considerations seem to support the general value to investors of the greater financial disclosure that has taken place under the stimulus of Federal securities regulations. More research is required to evaluate the usefulness of a number of specific disclosure requirements, particularly those relating to information not generally compiled for internal use. However, even where the economic benefits do not appear to justify the costs, equity considerations would still have to be weighed in deciding on the desirability of specific types of disclosure.

#### Restrictions on Speculative Activity

In addition to disclosure, stock-market regulation has restricted several types of speculative activity to promote efficient and equitable markets. The economic as well as noneconomic reasons for regulations designed to prevent the more flagrant manipulation of securities prices require little explanation. Theoretically, such regulations might improve both efficiency and equity in the capital markets, even though empirical evidence may be required to assess whether the benefits exist and justify the cost. Restrictions on certain types of speculation - margin trading, short selling, writing and buying of options, and trading by corporate and market insiders - are frequently rationalized on similar grounds, but theory alone cannot prove the existence of economic benefits from such policies; it requires evidence. For example, it is easy enough to use theoretical arguments to "demonstrate" that under plausible conditions speculators on the average must stabilize stock prices so long as it is assumed that their activities do not affect the demand for stock by other investors. This, however, is a heroic assumption and requires

empirical verification. The following discussion will consider the relevant evidence on the effect of regulatory restrictions for two classes of "speculators," viz, margin traders and corporate insiders -- the two groups for which the impact of regulation has received most attention in the professional literature.<sup>1</sup> This discussion will be summary in nature and is intended mainly to correct some misconceptions.

### Margin Regulations

Of the different types of restrictions on speculative activity, the regulation of margin trading has been especially subject to criticism by economists because it interferes, at least theoretically, with the optimal adjustment of portfolios to desired levels of risk as well as with the ability of speculators to stabilize market prices, and because it has no obvious strong equity rationale. Margin regulation originally reflected congressional concern about the possible abuse of securities credit and its impact on the economy as a whole as well as on the stock market itself. Currently, advocates of margin regulation seem more concerned with the potentially adverse effect of margin trading on the market than on the economy.

The empirical evidence on the impact of margin regulation on market efficiency is conflicting, with some studies concluding that market efficiency has been improved as a consequence of such regulation, and others that it

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<sup>1</sup>An earlier discussion of the literature dealing with the effect of regulatory restrictions on short selling, the writing and buying of options, and exchange specialists, as well as on margin trading and insider transactions, appears in Blume and Friend, The Changing Role of the Individual Investor, *supra*.

has not.<sup>1</sup> The most recent, and probably most useful, of these studies are those based on cross-section data, which make it possible to hold constant the other economic and institutional changes that obscure time-series analysis of the effect of changes in margin requirements on the stock market. These studies indicate that the imposition of 100-percent margin requirements on individual stocks was associated with a halt to the marked upward price movement that had typically preceded the new margin requirement.<sup>2</sup> Moreover, these stocks, or at least those listed on the NYSE, did not rise again after the lifting of this special margin requirement, suggesting that this requirement not only reduced market volatility but may have contributed to market efficiency. However, the evidence is far from conclusive.<sup>3</sup>

#### Insider Trading

There is fairly strong evidence that corporate insiders (officers, directors, and principal stockholders) have fared better in their investment performance than has the market as a whole, tending to sell when the prices of their

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<sup>1</sup> T.G. Moore, "Stock Market Margin Requirements," The Journal of Political Economy (April 1966); Friend, "The S.E.C. and the Economic Performance of Securities Market," in H.G. Manne, ed., Economic Policy and the Regulation of Corporate Securities, American Enterprise Institute for Public Policy Research, 1969, pp. 205-7; G.W. Douglas, "Risk in the Equity Markets: An Empirical Appraisal of Market Efficiency," Yale Economic Essays (Spring 1969); Officer, "The Variability of the Market Factor of the New York Stock Exchange," supra; J.A. Largay, III, "100% Margins: Combating Speculation in Individual Security Issues," supra; J. Largay and R. West, "Margin Changes and Stock Price Behavior," supra; and W.L. Eckardt and D.L. Rogoff, "100% Margins Revisited," supra.

<sup>2</sup> See Largay, III, "100% Margins." These findings were largely corroborated in an updated and somewhat more comprehensive analysis by Eckardt and Rogoff, "100% Margins Revisited."

<sup>3</sup> While the results are hardly conclusive, there does not seem to be much justification for the rather cavalier treatment by the staff of the Federal Reserve Board (in A Review and Evaluation of Federal Margin Regulations, December 1984) of the highly relevant cross-section evidence presented by Largay and Eckardt and Rogoff. The latter evidence seems much more relevant to the evaluation of the effectiveness of margin regulations than the random walk tests employed by the Federal Reserve staff.

equity issues are relatively high and to buy when they are relatively low.<sup>1</sup> Since much of this above-average performance reflects relatively long holding periods,<sup>2</sup> it is likely that trading by corporate insiders has correctly anticipated (rather than caused) subsequent fluctuations in price and has thus contributed to market efficiency. It is hard to tell whether the superior performance by insiders reflects the more extensive and earlier corporate information available to them, a greater ability to make use of such information, or some combination of the two. However, even if this performance is regarded as the result of the monopolistic access of insiders to corporate information, their trading appears to contribute to a reduction in the disparities between current stock prices and their longer-run values.

From the viewpoint of the regulation of insider trading, mainly provisions for fairly prompt disclosure of such trading and corporate recovery of their short-term profits, the relevant question is whether it is desirable to maintain or change the present constraints on the exclusive advantages possessed by corporate insiders. On equity grounds, to minimize potential conflicts of interest, it would probably be regarded as desirable to minimize the monopolistic advantages enjoyed by corporate insiders. However, to the

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<sup>1</sup> H.K. Wu, Corporate Insider Trading, Profitability and Stock Price Movement, Ph.D. Dissertation, University of Pennsylvania, 1963; J.H. Lorie and V. Niederhoffer, "Predictive and Statistical Properties of Insider Trading," Journal of Law and Economics (April 1968); S.P. Pratt and C.W. de Vere, "Relationships Between Insider Trading and Rates of Return for NYSE Common Stocks, 1960-1966," in Modern Developments in Investment Management, J. Lorie and R. Brealey, eds. (New York: Praeger, 1970); J.J. Jaffe, "Special Information and Insider Trading," Journal of Business (July 1974); and J.E. Finnerty, "Insiders and Market Efficiency," Journal of Finance (September 1976).

<sup>2</sup> Sales by corporate insiders seem to have a much longer lead time than insider purchases in their relation to stock prices (Finnerty, "Insiders and Market Efficiency"). Most of the differential returns on purchases by insiders have been realized in the first six months.

extent that this involves constraints on trading rather than disclosure alone, restrictions on insider trading might well reduce market efficiency. Thus a major potential conflict exists between equity and efficiency considerations.

If on equity grounds it is desirable to minimize the ability of corporate insiders to profit from their monopolistic access to company information, one way of reducing the impact of such measures on market efficiency would be to encourage to the extent possible corporate repurchases and reissuance of its own shares. A recent study indicates that, like corporate insiders acting on their own behalf, corporate officials similarly evidence an above-average ability to detect, and profitably exploit for their stockholders, price-value divergences in their companies' stock (as measured by the performance of the companies' net stock-purchase programs).<sup>1</sup> These divergences, it might be noted, do not appear to have been fully corrected for more than two years.

Another recent study has raised some questions about the usefulness of insider regulation even on equity grounds; that is, for the protection of stockholders, quite apart from market-efficiency considerations.<sup>2</sup> That study indicates that the resolution of two lawsuits involving the SEC (Cady, Roberts and Texas Gulf Sulphur), which might have led corporate insiders to expect stricter enforcement of the insider trading rules, did not in fact have a statistically significant effect on the profitability and volume of insider trading.

The new evidence is certainly relevant to the effectiveness of these legal actions; however, its relevance for the broader effectiveness of Section 16B of the 1974 Act (relating to corporate recovery of short-term profits

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<sup>1</sup> S.S. Stewart, Jr., "Should a Corporation Repurchase Its Own Shares?" Journal of Finance (June 1976).

<sup>2</sup> J.F. Jaffe, "The Effect of Regulation Changes on Insider Trading," The Bell Journal of Economics and Management Science (Spring 1974).

by insiders) is not clear, nor does it seem to be at all relevant to the effectiveness of Section 16A (relating to full-disclosure provisions for insiders).<sup>1</sup> Thus, if these provisions of the 1934 Act had been effective well before the first of the relevant legal actions (the November 1961 Cady, Roberts decision), the interpretation of the results would be radically different. Given the extreme variability of stock price changes and rates of return, it would not be surprising to find that new evidence of stricter enforcement of the SEC insider trading rules had little effect. Even before Cady, Roberts, there were the full-disclosure and short-term profit rules and the prospect of private litigation for recovery of insider profits.

Clearly what is required for a more convincing response to the effect of insider regulation on stockholder experience is a careful comparison of pre-SEC and post-SEC insider behavior from the scattered evidence available. A reading of the major U.S. government investigations of the stock market and related abuses of the 1920s cited earlier leads me to believe that insider abuses have declined substantially since then, probably in part due to the disclosure provisions and restrictions imposed on insiders by the 1934 Securities Exchange Act.<sup>2</sup> However, more persuasive evidence has yet to be collected.

#### Some Concluding Comments

This paper has not attempted to be exhaustive in its discussion of the various types of regulatory interference with free market processes in the securities market. However, some mention might be made of the ultimate type of interference when trading in individual stocks or on rare occasions in the market as a whole is temporarily stopped in the face

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<sup>1</sup> Actually, Cady, Roberts involves activities which did not require corporate insider disclosure.

<sup>2</sup> There is evidence that from 1922 to 1939 there was a sizable decline in the relative importance of insider ownership. See National Wealth and Income, a report by the Federal Trade Commission, GPO, 1926, p. 159 and T.N.E.C. Investigation of Concentration of Economic Power, Monograph No. 29, GPO, 1940, pp. 57-58.

of major disruption in the market. A colleague and I presented evidence many years ago that under certain extreme circumstances (e.g., the assassination of President Kennedy) such action seemed desirable, avoiding drastic discontinuities in price which retrospectively seemed unwarranted.<sup>1</sup> More recently, a study of the Canadian markets would seem to lead to similar conclusions since up to the suspension of trading activity in allegedly manipulated stocks substantial (and statistically significant) abnormal returns were realized while after suspension abnormal losses were realized without any subsequent recovery.<sup>2</sup>

To conclude, it remains my view that securities legislation in the U.S., and particularly that part relating to disclosure, has on the whole benefitted the stock market and the economy.<sup>3</sup> It continues to amuse me that many economic critics of securities legislation have essentially argued that the case for such legislation must rest on statistically irrefutable evidence that it has benefitted the economy, not that the evidence for should be stronger than the evidence against. The search for better tests and more conclusive evidence should certainly be encouraged though greater effort might be made not to confuse technical sophistication with economic relevance. However, except for ideologues, I suspect that for many years our judgment about mandated disclosure and other types of securities regulation will have to rest on the wide range of admittedly imperfect types of tests discussed in this paper, rather than on the statistical significance implied by any single test.

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<sup>1</sup> "The S.E.C. Through a Glass Darkly," supra.

<sup>2</sup> L. Kryzanowski, "Misinformation and Regulatory Actions in the Canadian Capital Markets: Some Empirical Evidence," The Bell Journal of Economics, Autumn 1978.

<sup>3</sup> It should be stated that in view of the paucity of data this paper has not touched on comparative transaction costs for outstanding stocks in the pre- and post-SEC periods. However, there is some evidence that commission rates on outstanding stock increased over this period at least until the elimination of fixed commission rates (Friend, in Mann (ed.), p. 185), while bid-ask spreads decreased somewhat (Blume and Friend, The Changing Role of the Individual Investor, pp. 155-158).