

The Issuer Choice Debate

*Merritt B. Fox**

This article responds to Professor Romano's piece in this issue. It concerns our ongoing debate with regard to the desirability of permitting issuers to choose the securities regulation regime by which they are bound. Romano favors issuer choice, arguing that it would result in jurisdictional competition to offer issuers share value maximizing regulations. I, in contrast, believe that abandoning the current mandatory system of federal securities disclosure would likely lower, not increase, U.S. welfare. Each issuer, I argue, would select a regime requiring a level of disclosure less than is socially optimal because its private costs of disclosure would be greater than the social costs of such disclosure.

Professor Romano and I agree on most of the basic analytic building blocks for deciding whether issuer choice is a desirable reform: belief in analyzing the problem in terms of the broadly accepted principles of modern financial economics; recognition that disclosure has costs as well as benefits; and acknowledgment that incentives exist for issuers to provide at least some disclosure. We nevertheless reach the opposite conclusion on the desirability of issuer choice. To start, Romano believes that issuers' private costs of disclosure will not generally be greater than the social costs of such disclosure, whereas I show they will be. Romano argues as well that this is a special case in which any divergence of private and social costs that does exist will not lead to a market failure, at least one possibly correctable by public regulation. I show her argument to be unpersuasive. Finally, Romano interprets the existing empirical evidence as proving mandatory disclosure's lack of social value, while I show that the evidence in fact does not point in either direction.

Where, as here, the theoretical case for the existence of a market failure is strong and the current program for dealing with it is widely

* Alene & Allan F. Smith Professor of Law, University of Michigan. Financial support for this project was provided by the Cook Fund of the University of Michigan.

admired, the advocate of change should have the burden of proof. Professor Romano has not met this burden. If she is serious about advancing her proposal for issuer choice, she needs to show that despite the market failure inherent in issuer choice, there is inevitably an even greater failure in the regulatory response. Absent such a showing, mandatory disclosure should be retained.

INTRODUCTION

Professor Romano has proposed that any issuer not desiring to be bound by the current federal securities regulation regime should be allowed to select instead the regime of any of the fifty U.S. states or any foreign country.¹ She argues that issuer choice would result in jurisdictional competition to offer issuers regulations that would maximize share value. I have maintained that her proposed abandonment of the current mandatory system of federal securities disclosure would likely lower, not increase, U.S. welfare because each issuer would select a regime requiring a level of disclosure less than is socially optimal.² Issuer choice would lead to a significant market failure arising from the fact that each issuer's *private* costs of disclosure would be greater than the *social* costs of such disclosure. Professor Romano attempts to answer my challenge in this issue of *Theoretical Inquiries in Law*.³ This article is a response.⁴

I. DEFINING THE SCOPE OF THE DEBATE

It is helpful at the beginning to set out what the debate is and is not about. Contrary to the impression that a reader of Professor Romano's companion

1 Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 Yale L.J. 2359 (1998).

2 Merritt B. Fox, *Retaining Mandatory Disclosure: Why Issuer Choice Is Not Investor Empowerment*, 85 Va. L. Rev. 1335 (1999).

3 Roberta Romano, *The Need for Competition in International Securities Regulation: A Response to Critics*, 2 Theoretical Inquiries L. 387 (2001).

4 The conditions imposed on this response were that I would base my remarks on Professor Romano's draft of July 24, 2000 [hereinafter Romano, Draft Manuscript], and that she would be permitted to have the last word by making alterations to her draft based on the version of this article that appears here. Thus, Professor Romano's article may contain arguments that I have not seen and thus have not had an opportunity to react to.

article might receive, we actually agree on most of the basic analytic building blocks for answering whether issuer choice is a desirable reform. First, we both agree that the question should be analyzed in terms of the broadly accepted principles of modern financial economics. These would include the principle, derived from the efficient market hypothesis, that an issuer's choice of regulatory regime will be reflected in an unbiased way in the market price of its securities.⁵ They would also include the principles, derived from the capital asset pricing model ("CAPM"), that an increase in an issuer's disclosure level only reduces its unsystematic risk⁶ and that the market will not reward a reduction in an issuer's unsystematic risk with an increase in its share price.⁷ They would include as well the standard assumption that

5 Romano, *supra* note 1, at 2366; Merritt B. Fox, *The Political Economy of Statutory Reach: U.S. Disclosure Rules in a Globalizing Market for Securities*, 97 Mich. L. Rev. 696, 732 (1998) [hereinafter Fox, *Political Economy*]; Merritt B. Fox, *Securities Disclosure in a Globalizing Market: Who Should Regulate Whom*, 97 Mich. L. Rev. 2498, 2533-39 (1997); Fox, *supra* note 2, at 1369, 1415. Professor Romano erroneously stated, "Fox ... claim[s] that firm's disclosure under multiple regulators will be inadequate because markets will not function effectively to discount the shares subject to inadequate disclosure regimes." Romano, Draft Manuscript, *supra* note 4, at 24. Professor Romano cites Fox, *supra* note 2, at 1407, in support of this statement. It is unclear how anything I say at this cite could lead her to attribute such a view to me, at least if her statement is meant, as it appears, to suggest that I think that an issuer's share price in a developed capital market would not reflect a discount for the effects of the applicable disclosure regime on the future expected income stream enjoyed by shareholders. Such a position would be at odds with all of my work over the last ten years in the area of economic analysis of securities law. The market failure that I identify is not in the price functioning of securities markets. It arises from the existence of externalities that result in the private costs of a given firm's disclosure—the disclosure's effect on the income-stream paid to shareholders—being greater than the social costs of this disclosure. As a consequence, the firm chooses a level of disclosure below the level at which the social costs equal the social benefits in terms of the disclosure's effect on the economy as a whole, as measured by the aggregate expected future income stream from all firms in the economy.

6 Romano, *supra* note 3, at 427; Fox, *supra* note 2, at 1349 n.24.

7 Romano, *supra* note 3, at 427; Fox, *supra* note 2, at 1349 n.24, 1357. Professor Romano erroneously states that I contradict myself with respect to this position by later contending that reduction of risk was the essential benefit provided by the mandatory disclosure regime created by the U.S. government in the 1930s. Romano, *supra* note 3, at 427. I make no such contention. The text that she cites for this proposition in fact says that evidence that the 1934 Securities Exchange Act reduced the riskiness of firms "would imply that [the mandated disclosure] did substantially increase the amount of meaningful information in the market, and consequently price accuracy." Fox, *supra* note 2, at 1375. It is the effects of this increase in information and price accuracy on the real economy through

entrepreneurs and investors, like most people, are risk averse.⁸ Second, we agree that disclosure has costs as well as benefits, and so, for each issuer, there is some socially optimal level of disclosure.⁹ Because it is undesirable for

improved project choice and greater managerial adherence to shareholder interests, not the effects on investor welfare of a reduction in firm-specific risk, that I claim to be the "essential" (to use Professor Romano's term) benefit of the securities acts of the 1930s. *Id.* at 1358-68, 1379-80. I do point out that additional disclosure's reduction in firm-specific risk does benefit that portion of investors who are not fully diversified, but I state, "[T]he fact that less than fully diversified investors could protect themselves in this fashion [by diversifying] suggests that this gain from greater disclosure offers a less compelling reason for mandatory disclosure than the reasons discussed in Sec. I.C.2-3 [improved project choice and greater managerial adherence to shareholder interests]," and I make clear that this risk reduction will not on average increase the issuer's share price. *Id.* at 1357, 1357 n.53.

8 Fox, *supra* note 2, at 1357-58; Romano, *supra* note 3, at 428. Professor Romano incorrectly states that I object to investors being modeled as risk averse, *id.* at 429. In fact I simply say, in accordance with CAPM, that when an entrepreneur engages in additional disclosure, the only kind of risk that is reduced is unsystematic risk and that therefore this risk reduction will neither reduce the riskiness of the portfolio of a fully diversified investor nor result in the entrepreneur receiving a higher price for the shares that he is selling. Fox, *supra* note 2, at 1349 n.24. Professor Romano also suggests that any reliance I make on CAPM with regard to these points is undermined by the fact that "the premise of the U.S. disclosure regime that Fox is defending in his article is inconsistent with CAPM, as it is directed to disclosure of firm-specific information and not information about the firm's sensitivity to market risk." Romano, *supra* note 3, at 429 n.107. There is no such inconsistency. The primary benefits that I claim arise from increased disclosure are not risk reduction, but rather an improvement in the real returns generated by capital utilizing enterprises in the economy through improved project choice and greater managerial adherence to shareholder interests. *See supra* note 7.

9 Professor Romano states that I never recognize the possibility that there is a social cost to disclosure, and thus there is never any tradeoff; "disclosure is assumed always to entail a net benefit." Romano, *supra* note 3, at 436 n.123. I cannot explain how Professor Romano arrived at such an erroneous understanding of my position. The section of my article that she cites in support of this statement is entitled "Benefits." It is immediately preceded by an eleven-page section entitled "Costs," which begins with a figure illustrating a *social marginal cost curve* for disclosure and the optimal level of disclosure where this curve intersects the social marginal benefit curve. Fox, *supra* note 2, at 1345-56. The conclusion of my article begins with the statement:

Issuer disclosure serves several social functions ... *Because disclosure involves social costs as well, however, there are limits on how much of this good thing we want.* Thus, each U.S. issuer has an optimal level of disclosure. The fundamental policy question is how to get each issuer to disclose at a level as close to this social optimum as possible.

Id. at 1416-17 (emphasis added).

issuers to be either below or above that level, the core of the debate is which approach—mandatory disclosure or issuer choice—is likely, on average, to get issuers closer to this ideal. Third, we agree that incentives exist for issuers to provide at least some disclosure,¹⁰ which means that issuer choice would not lead to a "race to the bottom."¹¹ Rather, the question is whether it would lead to less disclosure than is socially optimal. Fourth, while I believe, unlike Professor Romano, that abandoning mandatory disclosure for issuer choice would result in a large increase in the agency costs of management during an extended period of transition¹² and that even in long-run equilibrium, issuer choice would lead to somewhat higher agency costs than would retaining mandatory disclosure,¹³ I am willing here, in order to narrow the argument, to assume otherwise in this article and posit that under issuer choice, each firm's management would choose the regime that would lead to a share value that is as high as possible given that every other firm also has a free choice of jurisdiction.¹⁴ For the same reason, although I do not believe it to be the case, I am willing here to assume, as Professor Romano does implicitly,¹⁵ that an issuer's share price will capture the full social benefits of an issuer's chosen level of disclosure in terms of improved allocation of capital and reduced agency costs of management in the economy.¹⁶ Finally, we agree that the

10 Romano, *supra* note 1, at 2374; Fox, *supra* note 2, at 1362.

11 Professor Romano states that I suggest that issuer choice would "result in a race to the bottom" for minimal or no disclosure and that I claim that firms' disclosure under multiple regulators will be inadequate because managers will select lax regimes regardless of contrary investor preferences, as the pricing mechanism will not function effectively to discount the shares subject to inadequate disclosure regimes. *Id.* at 338, 416 n.70. I have never said that issuer choice will result in minimal or no disclosure (Professor Romano provides no cite to support her statement), and as already noted, I explicitly have stated that the pricing mechanism will function effectively to reflect the effect on the cash flow available to an issuer's shareholders from its choice of disclosure regime. *See supra* note 5. I in fact believe that there are private benefits to issuers and their managers from engaging in disclosure, *see supra* note 10 and accompanying text. The problem is that despite these benefits, the level of disclosure chosen will be lower than is socially optimal because for each issuer's disclosure, the marginal social costs will be less than the private costs incurred by the issuer.

12 Fox, *supra* note 2, at 1410-12.

13 *Id.* at 1363-68.

14 The problem that concerns me is that due to the divergence between the social and private costs of disclosure, the aggregate value of all these firms that results from their individually maximizing choices of disclosure regimes will not be as great as if each were required to disclose at a higher, socially optimal level.

15 Romano, *supra* note 1, at 2366-67.

16 Contrary to the assumptions I make here in order to simplify the argument, the social

ever-enlarging number of the world's issuers that have a global market for their shares will put increasing strains on the existing U.S. approach to the reach of its securities laws and that the appropriate response is not international harmonization or the establishment of an international regime, but rather a reassessment of the rules that determine which of the world's issuers the U.S. regime should reach.¹⁷

Despite this consensus on starting points, we reach opposite conclusions on the desirability of issuer choice. This difference in conclusion arises as a result of four areas of disagreement. First, Professor Romano suggests that there is no reason to believe that as a general matter, issuers' private costs of disclosure would be greater than the social costs of such disclosure.¹⁸ I show that in fact, they will be. Second, Professor Romano argues that even if a divergence of private and social costs exists, which would normally lead to market failure correctable by public regulation, the divergence would not have this result in the case of issuer choice of disclosure regime. I find her reasons to be unpersuasive. Third, Professor Romano interprets the existing empirical evidence as proving that mandatory disclosure has not been effective. I show that in fact, the evidence affirmatively suggests that mandatory disclosure does increase the amount of meaningful information in the market and that there

benefits from an issuer's disclosures in fact exceed the private benefits for two "public goods" related reasons. The first is that given that capital is a scarce resource, a higher percentage of deserving proposed new investment projects that entrepreneurs seek to fund through IPOs will be implemented if firms with less-deserving projects disclose more. Thus there are gains to the entrepreneurs of the firms proposing the more-deserving projects if the issuers with the less-promising projects engage in greater disclosure. The entrepreneurs of the firms with the less-deserving projects will not capture these gains. Fox, *supra* note 2, at 1358-62. Second, there are other ways in which information disclosed by one issuer about itself can be useful in analyzing other issuers. The information could, for example, reveal something about possible industry-wide trends, what Ronald Dye refers to as a "financial externality." Ronald A. Dye, *Mandatory Versus Voluntary Disclosures: The Cases of Financial and Real Externalities*, 65 *Acct. Rev.* 1, 2 (1990). Again, these are social benefits that the issuer disclosing the information cannot appropriate through higher share price. Fox, *supra* note 2, at 1362-63.

17 I recommend a change to an issuer nationality approach to this determination, and Professor Romano recommends a change to issuer choice. Fox, *supra* note 2, at 1414-16; Fox, *Political Economy*, *supra* note 5, at 757-65; Romano, *supra* note 3, at 401; Romano, *supra* note 1, at 2418-27.

18 As noted above, *supra* note 16, I believe that an issuer's private benefits from its disclosure are less than the social benefits, due to the public goods nature of the information, and that this adds to issuer choice's market failure, and hence the case for mandatory disclosure. To narrow the argument here, however, I will assume that the private benefits equal the social benefits. See *id.* and accompanying text.

is no affirmative evidence pointing one way or the other concerning which is greater, the social costs or social benefits of this increase in information. Finally, we disagree about the burden of proof. Professor Romano argues that absent affirmative empirical evidence demonstrating net social gains from mandatory disclosure, it should be abandoned. I argue, based in part on the prudential maxim that persons advocating change have to bear the burden of proof, that absent affirmative empirical evidence demonstrating social losses from mandatory disclosure, it should be retained. I show that this allocation of the burden of proof seems particularly justifiable where, as here, there is a strong theoretical case for the existence of a market failure and the existing program is generally well-regarded by persons using more casual empirical bases.

II. WHY AN ISSUER'S PRIVATE COSTS OF DISCLOSURE ARE GENERALLY GREATER THAN THE SOCIAL COSTS OF SUCH DISCLOSURE

Professor Romano makes several statements to the effect that I am incorrect in my claim that the private costs of an issuer's disclosure are generally greater than the social costs of this disclosure. She says, for example, "Fox ... provides a plot of private and social marginal cost and benefit [of an issuer's disclosure] curves in which the social cost curve always lies below the private cost curve There is no unambiguous theoretical basis for this location of the curves."¹⁹ She suggests that it is equally probable that the effect of the disclosure on other firms is negative²⁰ and that "just because Fox defines an interfirm externality to be a positive externality does not make it so."²¹ Notwithstanding Professor Romano's position, there are overwhelming reasons to believe that for any item of issuer information that is relevant to this debate, its disclosure is likely to have a positive effect on one or more of the other firms in the economy and will have a negative effect on none. This

19 Romano, *supra* note 3, at 432.

20 *Id.*

21 *Id.* at 434-35. If I am being arbitrary in this regard, as Professor Romano suggests, so are several prominent securities scholars. See Lucian A. Bebchuk, *Federalism and the Corporation: The Desirable Limits on State Competition in Corporate Law*, 105 Harv. L. Rev. 1435, 1490-91 (1992); John C. Coffee, Jr., *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 Va. L. Rev. 717 (1984); Frank Easterbrook & Daniel Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 Va. L. Rev. 669, 684-85 (1984); Edmund W. Kitch, *The Theory and Practice of Securities Disclosure*, 61 Brook. L.Rev. 763 (1995).

is a very important point because it makes unsustainable Professor Romano's insistence that issuer choice does not involve a market failure.²²

A. The Reasons Private Costs of a Disclosure Tend to Exceed Its Social Costs

1. The Intuition

For each *individual* U.S. issuer, the disclosure of an item of information involves two different kinds of private costs: "operational" costs and "interfirm" costs. Operational costs are the out-of-pocket expenses and the diversions of management and staff time that issuers incur to provide the information. Operational costs are social costs in full as well.

Interfirm costs arise from the fact that the disclosed item of information provided can put the issuer at a disadvantage relative to its competitors, major suppliers, and major customers. Suppose, for example, the information is that a particular line of the issuer's business is especially profitable. With this information, a competitor may be able to appreciate, when it otherwise would not, that an investment by it in this same line of business would have a positive net present value, and it may undertake the investment accordingly. This consequence of the disclosure is a cost to the issuer, because the additional competition from the competitor's investment will drive down the issuer's cash flow. It is a benefit to the competitor, since undertaking the promising investment will increase the competitor's cash flow. A major customer or supplier of the issuer may be able to use the same information to drive a harder bargain with the issuer, thereby pushing the issuer's receipts down or its expenditures up. This consequence of the disclosure is also a cost to the issuer because by pushing its receipts down or expenditures up, the disclosure would again reduce the issuer's cash flow. And the disclosure would again be a benefit to the customer or supplier, because it would increase its cash flow by an amount commensurate with the reduction in the issuer's cash flow.

The critical point is that other firms may well benefit from an issuer's disclosure. To the extent that they do, the issuer's private costs of disclosure are greater than the social costs of this disclosure.

22 Conversely, if Professor Romano is correct that a negative effect is in fact as likely as a positive one, a major element in my argument for retaining mandatory disclosure fails.

2. More Formal Analysis

A more formal analysis shows the generality of this point. Take as a baseline an economy of share value maximizing privately held firms capable of internally or privately funding all of their positive net present value projects. Each firm possesses a large number of items of information. These fall into two groups: kinds of information the public revelation of which will help improve the firm's cash flow from operations²³ and kinds the revelation of which will decrease this cash flow.²⁴ The firm will choose to disclose all the items in the first group and none of the items in the second group. Suppose, however, that by accident, the public discovers an item of information in this second group that the firm had chosen not to reveal. The discovery will decrease the firm's cash flow from operations. At the same time, it will either increase or leave unaffected the cash flow of each of the other firms in the economy. This is because the additional information allows each of these other firms the opportunity to predict with greater accuracy the consequences of each course of action available to it. Where these more accurate predictions indicate that a different course of action would be better than the course the firm would have chosen without the disclosure of the information, the better course of action will be undertaken.²⁵ Thus, on an expected basis, disclosure

23 Examples might be information about the quality of its products or about the nature of the firm as a place to work. For an item to be of the kind that improves cash flow, it is not necessary for it to reflect well on the firm since a reputation for candidness may help the firm sell products or attract workers. As the recent example of Firestone Tire suggests, a firm's failure to disclose a negative piece of information in a timely fashion can sometimes severely reduce long-term cash flow because of the reputational damage when the truth subsequently comes out.

24 One example might be the profitability of a particular line of business, which, as discussed just above, will result in competitors, major suppliers, and major customers acting in ways adverse to the firm, but which will have little effect on the underlying consumer demand for its product. *See supra* Sec. II.A.1. Another example would be where the operational costs of disclosure exceed the benefits in terms of such underlying demand.

There might also be items the disclosure of which would have no effect on cash flow from operations. The firm would be indifferent about disclosing these items and so would presumably disclose some of them and not others. If the cost and benefit functions of disclosure are continuous, however, this would be a very small group of items. And even if it were a larger number of items, it would not change the outcome of the analysis in the text.

25 The value of information, which in this case is received for free, is discussed in a similar fashion in Ronald Gilson & Bernard Black, *The Law and Finance of Corporate Acquisitions* 188-93 (2d ed. 1995).

of an additional item of information can be a benefit, and can never be a harm, to each of the other firms in the economy.

Change the baseline assumptions and imagine that many firms cannot fund internally or privately all of their positive net present value investment projects and that they do raise funds through the public sale of equity. Under these changed circumstances, a firm seeking public shareholders would voluntarily both (i) provide at the time of its offering²⁶ some of the items of information that it would choose not to disclose if it were to remain privately held and (ii) promise to make continued disclosure of similar items in the future. It would do so because the act of disclosing these additional items at the time of the offering and the firm's promise of future disclosure have social benefits—the more efficient allocation of capital and reduced agency costs of management—that the firm can capture through their positive effect on the price at which the firm sells its shares. There are limits, however, on how many additional items the firm will disclose because, as just noted, disclosure of each of these items reduces the firm's operational cash flow.

3. The Market Failure

The question at the center of this debate is whether an issuer that is permitted to choose its own regime when first offering its shares to the public will choose a regime that requires it to disclose, at the time of the offering and periodically thereafter, as many of these additional items of information as is socially optimal. My answer is that it will not. In choosing a regime, the issuer must weigh greater disclosure's positive effects on stock price (which arise from the issuer capturing the resulting social benefits in terms of better capital allocation and agency cost reduction) against greater disclosure's private costs to the firm (the reduction in cash flow from operations as a result of disclosing items that the firm would not have disclosed had it remained private). The problem arises as follows. Consider all the items of information the disclosure of which by the issuer would have positive effects on the cash flows of one or more other firms. The issuer's private

²⁶ The additional items disclosed at the time of the offering are not necessarily ones that reflect well on the firm because they may be disclosed pursuant to a voluntarily selected regime that would inflict negative consequences on the issuer if what was disclosed turned out not to satisfy the regime's requirements. Examples of such a regime would be the provision of audited financials or, as under issuer choice, adoption of a voluntarily-selected legally-binding disclosure regime. The issuer's purpose in selecting such a regime would be to assure investors that at least as to the questions asked by the chosen regime, there is no more negative information beyond what has been disclosed.

cost of disclosing each of these items is greater than the social cost of their disclosure. Of this set of items, there will be a subset where the private costs of their disclosure are higher than the benefits to the issuer, but the social costs are lower than these benefits. Under issuer choice, a share-value maximizing issuer would not choose a regime that requires it to disclose this subset of items. The issuer's failure to disclose this subset of items represents a social loss that could be corrected by mandatory disclosure.

B. Confusing the Effect of the Act of Disclosure with the Implications of the Information Being Disclosed

Professor Romano tries to prove her point that the effect of a disclosure on other firms is as likely to be negative as positive with a "simple example" involving the announcement of the patent of a highly superior new microprocessor by a computer company.²⁷ In reaction to the announcement, Computerco's share price increases and the share prices of its competitors decrease, presumably in reaction to the prospect of the edge that Computerco's products will have in the market. Professor Romano claims that, "This piece of information has higher private benefits than social benefits"²⁸ and suggests that it illustrates how I arbitrarily cut out of my analysis cases where the disclosure involves a "negative externality."

Professor Romano's example in fact involves no negative externality. She confuses the negative implications for the share values of Computerco's competitors of the *fact* behind Computerco's announcement with the effect of the *act* of disclosure on these share values. The fact that Computerco has obtained this patent quite obviously reduces the share values of its competitors because their future cash flows will be lower than they would have been had Computerco not obtained the patent. This will be true, however, whether or not Computerco discloses that it has obtained the new patent. Regardless, once Computerco obtains the patent, the competitors are doomed to lower cash flows than would otherwise have been the case. Since the *act* of disclosure does not itself reduce these cash flows, it has no negative effect in the real economy and hence cannot create a negative externality. The drop in the competitors' share prices following disclosure of the patent involves no loss in the value of these shares; it only involves their prices being brought in line with the drop in their share values that occurred back at the moment when Computerco obtained its patent.

²⁷ Romano, *supra* note 3, at 432-33.

²⁸ *Id.* at 432.

Ironically, the *act* of disclosure in Professor Romano's example is likely in fact to lead to a *positive* externality because it enables Computerco's competitors to know sooner what they will be facing in the future. These competitors, by having more warning, have a greater ability to take compensating steps, such as trying to develop a competing technology or formulating a redirected marketing effort for their existing products.²⁹

III. WILL THE DIVERGENCE OF PRIVATE AND SOCIAL COSTS RESULT IN MARKET FAILURE UNDER ISSUER CHOICE?

I have presented a simple model showing that where the private marginal costs of an issuer's disclosures exceed the social marginal costs of these disclosures, the issuer will wish to disclose at a level less than is socially optimal. Thus, if the issuer is allowed to choose the disclosure regime by which it is governed, it will choose one requiring it to disclose at less than the socially optimal level. This result holds even if the issuer, through an improved price when it sells its shares, fully captures the social benefits arising from the improvements in capital allocation and from the

²⁹ Professor Romano also gives as an example a steel company—Steelco—that announces plans to build a large production plant. She posits that the announcement will deter competitors' similar expansion into the steel market and in so doing will have an adverse effect on social welfare by reducing competition. Again, a significant portion of the effect here will probably be from the act of deciding to build the plant, not its disclosure, since reality will become apparent eventually with or without disclosure and that reality will deter entry. Still, the earlier warning could lead competitors to cancel investment decisions that might be too late to cancel if there were no disclosure. Contrary to Professor Romano, knowing sooner would certainly be a positive externality for the competitors for this reason.

Depending on the circumstances, the disclosures might nevertheless be social welfare reducing because of the reduction in competition—and so instances of social welfare damaging disclosure exist—but it also might be social welfare increasing because it avoids investment in what would be underutilized capacity. Under Professor Romano's hypothetical, however, this disclosure would be made even if Steelco were a private company, and therefore it is not the kind of disclosure relevant to this debate. Moreover, the instances where disclosure enhances static efficiency, by highlighting profitable new opportunities, will be much more common than the kind of situation that Romano highlights. As I discuss in my challenge to Professor Romano's proposal, disclosure's impacts on both static and dynamic efficiency are incidental effects outside of the ordinary domain of financial economics, and how they balance out is something that a country's governmental authorities should decide. Fox, *supra* note 2, at 1346 n.20.

reductions in the agency costs of management induced by its chosen level of disclosure.³⁰ The result represents the straightforward application of the textbook principle from welfare economics that when an actor in a competitive economy incurs private costs that, because of a positive externality, exceed the social costs of its activity, the actor will engage in too little of this activity from a social welfare point of view.³¹

Professor Romano disputes the applicability of this straightforward model to issuer choice, arguing that even if a divergence exists between the private and social costs of issuer disclosure, there will be no market failure, at least not one correctable by public regulation. In her initial proposal, she offers three arguments in support of her position.³² In my challenge to this proposal, I show each of these three arguments to be unconvincing.³³ She attempts to rebut these showings in her companion article in this issue, but, as I discuss below, none of these attempts are successful.

A. The Argument that as a Matter of Theory, the Divergence of Disclosure's Social Costs from Its Private Costs Does Not Necessarily Call for Regulation

Professor Romano's first argument, based primarily on a theoretical article by Ronald Dye,³⁴ is that even if there exists a divergence between the private and social costs of disclosure, the divergence does not mean that mandatory disclosure is necessarily superior to voluntary disclosure.³⁵ Dye's model contemplates a situation in which an issuer's entrepreneur, in advance of a sale of his shares to outside investors, commits to providing information that will reduce by some given amount the uncertainty associated with his issuer's future cash flow to shareholders. Dye compares the level of disclosure that entrepreneurs can be expected to voluntarily commit to provide with the level that is socially optimal. In the part of the model relevant to this discussion,

30 I in fact do not believe that the issuer will capture the full benefits of its disclosure, but for purposes of simplicity, I will make such an assumption here. *See supra* note 16.

31 Whether this positive externality is treated as reducing the social costs of disclosure or augmenting the social benefits from disclosure is arbitrary and in no way affects the result. I have chosen to treat it as reducing the social cost in order to confine disclosure's social benefits to include just its effects on capital allocation and on the agency costs of management in the economy.

32 Romano, *supra* note 1, at 2368, 2380-81.

33 Fox, *supra* note 2, at 1346-56.

34 Dye, *supra* note 16.

35 Romano, *supra* note 1, at 2368.

Dye considers the situation where an issuer's disclosure affects the *cash flows* of one or more other issuers, which he refers to as a "real externality."³⁶ Dye concludes, consistent with my analysis, that "where real externalities are present, optimal and equilibrium voluntary disclosure tend to diverge."³⁷ Professor Romano, however, relies on a second conclusion of Dye's, that the direction of the divergence—whether voluntary disclosure produces too much information or too little—is unclear in the absence of detailed information that a regulator might have difficulty knowing.³⁸

In my challenge to Professor Romano's proposal, I argue that Professor Romano's reliance on Dye's model is misplaced.³⁹ I engage in a careful analysis of Dye's model and show that it applies in only such a restricted range of circumstances and identifies such a narrow set of benefits from disclosure that it is essentially useless as a guide to policy.⁴⁰ I also show that when reasonable estimates of the model's parameters are utilized, the direction of divergence is almost certainly toward voluntary disclosure producing too little information, and so his model in fact supports the case for mandatory disclosure.⁴¹

Before discussing why Professor Romano's attempted rebuttals of these showings miss the mark, I will briefly set out the most important features of Dye's model and the intuitions behind his results. The model exclusively concerns disclosures that are subject to two essential restrictions: (1) the disclosure must be made pursuant to a preexisting entrepreneurial commitment undertaken when the entrepreneur does not know the information that he is committing to provide;⁴² and (2) the disclosure must be made prior to sale of the shares.⁴³ In this restricted situation, the level of disclosure to which the entrepreneur commits will determine the allocation of risk between him and the purchasing investors. A commitment to provide more disclosure will reduce risk for investors and increase risk for the entrepreneur. More disclosure reduces risk for investors because it brings the price that investors will pay for their shares closer, one way or the other, to the discounted present value of the cash flows that they in the end actually receive. The commitment to provide this higher level of disclosure increases risk for

36 Dye, *supra* note 16, at 3.

37 *Id.*

38 *Id.* at 19.

39 Fox, *supra* note 2, at 1347-50.

40 *Id.* at 1346-49 n.24.

41 *Id.* at 1350 n.25.

42 Dye, *supra* note 16, at 5.

43 *Id.* at 3-4.

the entrepreneur because he knows that the disclosure to which he commits will affect the price, but he does not know which way because he does not know its content.⁴⁴ The only impact identified by the model that disclosure can have on social welfare is this potential for altering the allocation of risk between selling entrepreneurs and purchasing outside investors.⁴⁵ The socially optimal level of disclosure, against which the level produced by voluntary disclosure is compared, is measured in terms of what allocation of risk between these two parties maximizes a social utility function that is a weighted average of the expected utility of entrepreneurs and investors. The model shows that in the presence of real externalities, the market will price securities in a fashion that will likely create incentives for the entrepreneur, if disclosure is voluntary, to choose a socially non-optimal level of disclosure.

1. The Restrictions on the Situations to which Dye's Model Applies and the Narrowness of the Benefits from Disclosure that It Considers Make It Useless as a Guide to Policy

It is improper for several reasons to use Dye's model, as Professor Romano does, to rebut my argument that a divergence between the private and social costs of disclosure creates a sound argument for regulation. First, because of the model's twin restrictions on the kind of disclosure to which it applies, the model describes a situation that rarely, if ever, arises in the real world. This is a fundamental problem, because a disclosure must satisfy *both* these restrictions for it to have the risk reallocation effect that is at the core of Dye's model.⁴⁶ If the information is not disclosed before the sale, disclosure can neither reduce risk for investors nor increase risk for entrepreneurs.⁴⁷ If the commitment is not made prior to the entrepreneur knowing what he is committing to disclose, it will not increase the entrepreneur's risk. Second, the model only applies to disclosures associated with public share sales by

44 In the model, if the entrepreneur makes no commitment, no new information will enter the market before the price is set, and so the entrepreneur would know for certain what price he would receive.

45 Dye, *supra* note 16, at 3.

46 Professor Romano articulates very well the standards by which to judge a model. "all models abstract from reality and are therefore unrealistic on some dimension The relevant question is whether the model has abstracted away crucial institutional elements to render the analysis uninformative" Romano, *supra* note 3, at 422. Dye's model does just that because the twin restrictions that make the model unrealistic are essential for disclosure to have a risk-reallocating effect between entrepreneurs and investors that is the basis for the model's social welfare arguments.

47 See Fox, *supra* note 2, at 1349 n.24, for an elaboration of this point.

entrepreneurs. It says nothing about disclosures associated with public share sales by *issuers*, which are the sales that raise funds for new investment. Far more dollars are raised each year in the market from share sales by issuers than from share sales by entrepreneurs, and Professor Romano's proposal would substitute issuer choice for mandatory disclosure in the case of share sales by issuers as well as by entrepreneurs. Third, while the model purports to tell us whether mandatory disclosure is likely to result in a higher level of social welfare than would voluntary disclosure, the only impact of disclosure on social welfare that it considers is its impact on the allocation of risk between entrepreneurs and investors. It does not take into account disclosure's favorable effects on the allocation of capital and on the agency costs of management, which constitute other highly important impacts of disclosure on social welfare. Finally, when reasonable values are assigned to its parameters, Dye's model actually supports mandatory disclosure. These first three reasons will be discussed in this section and the final reason in the section immediately following.

2. *The Restricted Situation*

In my challenge to Professor Romano's proposal, I argue that Dye's model, because of its twin restrictions, applies exclusively to a situation that rarely, if ever, arises in the real world. An issuer makes two kinds of disclosures as a public company, neither of which is covered by Dye's model. One is to provide investors with information at the time that the issuer offers its shares for sale. This is the kind currently regulated by the Securities Act of 1933 ("Securities Act"). In the absence of mandatory disclosure, the issuer would still undoubtedly provide some of this information, perhaps, as under issuer choice, pursuant to a voluntarily selected regime that would inflict negative consequences on the issuer if what was disclosed turned out not to satisfy the regime's requirements. The reason that Dye's model does not cover this kind of disclosure is that the entrepreneur of an issuer considering an initial public offering has no need to commit to providing information prior to the time that the offering commences, at which point he would know the information he was proposing to disclose. Thus, unlike in Dye's model, real world disclosures associated with an initial public offering are not made pursuant to some preexisting entrepreneurial commitment made when the entrepreneur does not know the information that he is committing to provide.⁴⁸

48 Real world disclosures associated with subsequent share offerings would, under an issuer choice regime, be made pursuant to a regime chosen prior to the entrepreneur knowing the information to be disclosed, but in such non-initial public offerings,

The other kind of disclosure that firms make because they are public rather than private companies is periodic disclosures after a public offering. This is the kind of disclosure that is currently regulated by the Securities Exchange Act of 1934 ("Exchange Act"). Again, even in the absence of mandatory disclosure, public firms would undoubtedly, through, for example, a stock exchange listing, commit at the time they offer their shares to provide periodically some of this post-offering information. Here, an entrepreneur does commit to disclose information that he does not know at the time he makes the commitment, but the disclosure will not occur until after the sale of shares and so Dye's other restriction is not satisfied. Thus, the other kind of public issuer disclosure prevalent in the real world—periodic disclosure—is also not covered by Dye's model.

Professor Romano, in disputing my claim that Dye's model has no application to real world disclosure situations, starts by describing Dye's model as involving a simple timeline: the insider manager or entrepreneur chooses a disclosure regime, which is a stylized revelation of the entrepreneur's estimate of the precision (which is the reciprocal of the variance) of the firm's expected cash flow, and then the estimate of the firm's expected cash flow is revealed and the firm is sold to investors, who thereafter receive the realized cash flow.⁴⁹

This description of the model is perfectly accurate, but it completely buries the twin restrictions that the information must be disclosed pursuant to a preexisting commitment made at a time that the entrepreneur does not know the information and that the information must be disclosed before sale. Professor Romano subsequently discusses these restrictions, but does so in such a tortured fashion that she totally avoids their implications.

At the heart of the matter, Professor Romano refuses to acknowledge that these dual restrictions work *together* in a way that makes Dye's model inapplicable to real-world disclosure. Consider, in turn, how she deals with each restriction. She says that the restriction that the commitment to disclose must be made prior to knowing the information is not as unrealistic as I maintain.⁵⁰ As proof, she points to "commitment[s] to making subsequent disclosures" such as "the decision to list on a particular stock exchange or to go public and be subject to the SEC's continuous disclosure regime."⁵¹ She

the portion of shares sold by entrepreneurs relative to the portion sold by issuers is almost certainly very small and Dye's model applies only to sales by entrepreneurs. See *infra* Sec. III.A.1.b.

49 Romano, *supra* note 3, at 422.

50 *Id.*

51 *Id.* at 423. Professor Romano repeats this mistake later when she states, "Fox's contention that it is impossible to make a commitment to engage in future disclosure

is correct, of course, that such commitments occur all the time, as I readily discuss in my challenge to her proposal.⁵² They are not, however, examples of disclosure commitments within the reach of Dye's model, because they relate to disclosures *after* the sale. As for the other restriction—that the committed disclosure must occur before the sale of the shares—she says "presale disclosure is, of course, precisely what happens in the real world of equity investments: in an IPO, investors do not buy shares prior to receiving information about the firm Fox cannot truly object to this timeline construction."⁵³ I, of course, have no objection to this description of the world, and in my challenge to her proposal, I readily acknowledge the existence of this kind of disclosure as well.⁵⁴ Again, however, these disclosures are not within the reach of Dye's model, because they are not made pursuant to commitments undertaken when the entrepreneurs do not know the information to be disclosed.

3. Application Only to Sales by Entrepreneurs

Dye's model only applies to disclosures associated with public share sales by *entrepreneurs* made in order to cash out their holdings, not to disclosures associated with public share sales by *issuers* to fund new investment. Sales

without knowing [its] content," *id.* at 425, and that "Fox's objection to Dye's set-up implies that in the absence of a mandatory disclosure regime, commitment to truthful subsequent disclosure is impossible." *Id.* These claims would indeed be difficult to understand, but I make no such claims. In fact I say exactly the opposite: "At the time of public sale ... entrepreneurs are likely to commit to providing additional information periodically in the future. The decision to list on a stock exchange is an example of such a commitment." Fox, *supra* note 2, at 1348 n.24. I then go on to say that Dye's model does not apply to such a commitment because the disclosure will happen after the sale, the point missed by Professor Romano. *Id.*

52 Fox, *supra* note 2, at 1348 n.24.

53 Romano, *supra* note 3, at 423-24.

54 Professor Romano says, "Fox's objection to modeling disclosure occurring before sale because a firm would not make disclosures before it sells shares is misplaced," *id.* at 424. If I had made such an objection, I would understand why she would have been baffled. But I did not. Again, I in fact said exactly the opposite: "[W]hen the issuer's entrepreneurs decide to have a public sale of its securities, however, they are likely to decide to release [information about the issuer's financial condition] just *before* the sale." Fox, *supra* note 2, at 1348 n.24 (emphasis added). My objection is not that firms do not disclose before sale; rather, it is that disclosures before sale are not made pursuant to preexisting commitments entered into when the entrepreneurs did not know what they were committing to disclose. This is not a small quibble because as discussed in the text above, Dye's results absolutely depend on his assumption that pre-sale disclosure occurs pursuant to this unusual commitment.

by issuers to fund new investment constitute the substantial majority of all public sales of shares and hence generate a substantial majority of all public company disclosures. Professor Romano's proposal would substitute issuer choice for mandatory disclosure in the case of share sales by issuers as well as by entrepreneurs. Yet Dye's model tells us nothing about how the level of voluntary disclosure will compare with the socially optimal level of disclosure in cases of public share sales by issuers. There is not even any way of claiming that the logic of Dye's model might somehow carry over to the issuer sale situation, since the focus of Dye's model—the efficient allocation of risk between entrepreneurs and investors—does not make sense in this new context.⁵⁵ Thus, for the huge market in public offerings by issuers, Dye's model in no way rebuts my argument that because of the divergence between the private and social costs of disclosure, issuer choice will result in a market failure with a predictable direction: too little disclosure.

Professor Romano attempts to deal with this problem by arguing that many IPOs are accompanied by insider sales and that the ability of insiders

55 Professor Romano states in this regard that,

[F]ull ownership sale is a simplification consistent with the model's single period assumption. A more complex model involving multiple periods would facilitate the modeling of partial control sales and would certainly be of value. But to assume, as does Fox, that a more complex model would demonstrate that interfirm externalities are only positive and optimally resolved by the SEC's regime is farfetched. ... [T]he more complicated the model, the greater the probability that the results will be ambiguous. Hence it is most plausible that a more complex model ... would not further Fox's position because it would require even more restrictive parameter assumptions for a regulator to get the disclosure regime right in order to increase social welfare.

Romano, *supra* note 3, at 429. This is not a convincing argument for ignoring the fact that Dye's model does not cover sales by issuers. First, as pointed out in the text, Dye's model, which concerns the allocation of risk between entrepreneurs and investors, does not even make sense when applied to sales by issuers, and so there is no way its logic could easily carry over to sales by issuers. Second, Professor Romano is confused as to which of us needs a model like Dye's to advance his or her position. In my challenge to Professor Romano's proposal, I presented a simple model applicable to both issuer and entrepreneur sales, based on the positive externalities associated with issuer disclosure, that showed that issuer choice would result in a market failure with a predictable direction—too little disclosure—and that regulation could improve social welfare. Professor Romano is attempting to rebut this showing by citing Dye's model to the effect that despite the presence of externalities, voluntary disclosure may result in a socially optimal level of disclosure and that even if it does not, it will be difficult for the regulator to know whether the voluntary level is too high or too low. My point here is simply that this attempt at rebutting my showing clearly has no force with respect to sales by issuers.

to sell their shares in this fashion is important for the economy.⁵⁶ I fully agree, but such arguments are really beside the point given that Professor Romano is proposing to apply issuer choice not only to sales by entrepreneurs but also to the much larger phenomenon of sales by issuers. In effect, Professor Romano is using a model that purports to say something about the tail to recommend how we should wag the dog.

4. The Narrowness of the Benefits from Disclosure Identified in Dye's Model

While Dye's model purports to tell us whether regulation is likely to result in a higher level of social welfare than voluntary disclosure, the only impact on social welfare that it considers is its impact on the allocation of risk between entrepreneurs and investors plus the effect of disclosure externalities on the corporate income stream. This means that at best, the model is only a useful guide to whether or not to retain mandatory disclosure if the argument being made in mandatory disclosure's favor is based on a concern that voluntary disclosure would result in a misallocation of risk between these two groups. Neither I, nor, to my knowledge, any other modern economics-oriented securities scholar who has analyzed this question has seen the argument for mandatory disclosure as arising from such a concern. Rather, my argument for mandatory disclosure is that given the divergence between the private and social cost of disclosure, issuers will choose regimes requiring them to disclose at a level lower than what is socially optimal, where the social benefits of disclosure are improved capital allocation and lower agency costs of management.⁵⁷ Dye's model cannot be used to rebut this argument because it in no way addresses the capital allocation and agency cost impacts of disclosure on social welfare.⁵⁸

5. Using Reasonable Parameters, Dye's Model Suggests the Need for Mandatory Disclosure

When reasonable estimates of the parameters of Dye's model are utilized, the direction of divergence between voluntary disclosure and optimal disclosure is almost certainly toward voluntary disclosure producing too little information. Thus Dye's model in fact supports the case for

⁵⁶ Romano, *supra* note 3, at 428.

⁵⁷ Fox, *supra* note 2, at 1358-68.

⁵⁸ Dye's model abstracts these vital issues away. The extent and quality of firms whose entrepreneurs are offering shares are taken as a given, and so share prices have no capital allocation effect. Nor does disclosure affect the agency costs of management, and hence the impact of these agency costs on the cash flows derived from existing investments or from investments funded by retained earnings.

mandatory disclosure. Dye finds that if an issuer experiences negative private returns from additional disclosures but these disclosures lead to positive market-wide returns, the voluntary level of disclosure will be below what is socially optimal.⁵⁹ He finds the opposite to be true if the issuer experiences positive private returns from additional disclosures, but the market experiences negative returns from them.⁶⁰ While Dye believes that it is hard to know which situation applies for each firm,⁶¹ I have shown otherwise. As summarized below, there is a wide range of items of information for which the effect of disclosure on the issuer's private return is negative and the market-wide effect is positive. There is little or no information for which the effect of disclosure on the issuer's private return is positive and the market-wide one is negative.⁶²

Start first with my claim that there is wide range of items of information for which the effect of disclosure on the issuer's private return is negative and the market-wide effect is positive. As explained earlier, any information that an issuer would not release as a private company ("private company retained information") will be information whose release would have a negative effect on its cash flow from operations, i.e., its private costs are greater than its private benefits.⁶³ Many items of private company retained information are ones the disclosure of which would harm the firm's competitive or bargaining position vis-à-vis other firms.⁶⁴ This harm, which is the "interfirm" portion of the issuer's private cost of disclosing the item, is counterbalanced in social terms by a gain to the issuer's competitors and major suppliers and customers. The rest of the private costs associated with the item's disclosure—the "operational costs"—have no such corresponding positive external effects. Consider, for an issuer going public, all the items of private company retained information where the amount by which the private costs of disclosure exceed the private benefits is less than the interfirm portion of the private costs. For each of these items, the effect of its disclosure on the issuer's returns will be negative, but the effect of the disclosure on "market-wide returns"—the aggregate of the net effect of the disclosure on

59 Dye, *supra* note 16, at 19.

60 *Id.*

61 Dye says that "plausible scenarios can be constructed involving any possible combination of positive or negative private or market-wide returns to additional disclosures." *Id.* Interestingly, however, his only example of an effect of disclosure on a private return is negative, i.e., the cost of an accountant. *Id.* at 18.

62 Fox, *supra* note 2, at 1350 n.25.

63 *See supra* Sec. II.A.

64 *Id.*

the cash flow of the issuer and the net effect on the cash flows of all other firms—will be positive.

Now consider my claim that there are few, if any, items of information for which the effect on an issuer's private return is positive but the market-wide effect is negative. As was discussed earlier,⁶⁵ no disclosure by the issuer should have a negative effect on the returns of any other firms. In sum, Dye's own model suggests that real externalities create a divergence between the voluntary level of disclosure and the socially optimal one and that the direction is toward too little voluntary disclosure.

Professor Romano's only response to my argument that Dye's model actually supports mandatory disclosure is her insistence that a disclosure is as likely to involve a negative externality as a positive one.⁶⁶ She bases this proposition primarily on her misfired example of a "negative externality" in the drop in the share prices of Computerco's competitors following its disclosure of its improved microprocessor patent.⁶⁷ As explained earlier, the drop in the competitors' share prices following the disclosure involves no loss in the value of these shares; it only involves their *prices* being brought in line with the drop in their share *values* that occurred at the moment that Computerco obtained its patent.⁶⁸ The drop in the competitors' share values occurred because their cash flows will be less than they would have been had Computerco not obtained the patent, a drop that would occur whether or not the news were disclosed. Again, the disclosure of the news is likely, in fact, to involve a positive externality because compared to the news not being disclosed, the competitors have more time to make adjustments to what they will be facing in the future, which will soften the patent's negative effects on their cash flows.⁶⁹

65 *Id.*

66 Romano, *supra* note 3, at 433-34.

67 *Id.* at 432.

68 See *supra* Sec. II.B. Professor Romano also supports her proposition that a disclosure's externality is as likely to be negative as positive by citing a long list of studies showing that "disclosure of adverse events experienced by one firm in an industry ... [can] have negative *stock price* effects on rival firms." Romano, *supra* note 3, at 433 (emphasis added). These examples suffer from the same defect as the Computerco example. The disclosure did not cause the negative effect on the cash flows of the other firms; it just helped bring their prices in line with the drop in the expected cash flows of these rival firms that was the result of the facts behind the disclosures.

69 See *supra* Sec. II.B.

5. The Admati and Pfleiderer Model

In her companion piece in this issue, Professor Romano also cites a model developed by Admati and Pfleiderer⁷⁰ as support for the proposition that the divergence between the private and public costs of disclosure does not necessarily warrant mandatory disclosure, because it would be hard for a regulator to know when regulation is needed.⁷¹ The Admati and Pfleiderer model, however, is not relevant to this debate because it does not concern the situation where the private costs of an issuer's disclosures exceed their social costs due to the favorable effects of the disclosures on the operational *cash flows* of one or more other firms (what Dye calls "real externalities"⁷²). It instead deals with the situation where the private benefits of an issuer's disclosures are less than their social benefits because, as is clearly often the case, the disclosures make it possible for investors to make *more accurate valuations* of one or more other firms⁷³ (what Dye calls "financial externalities"⁷⁴ and I refer to as the "public goods" aspect of disclosure). Analytically, these financial externalities pose quite different issues from those posed by real externalities. While I believe that financial externalities add to the case for mandatory disclosure, they are not (as Professor Romano acknowledges⁷⁵) part of the core basis for my position. Indeed, I have assumed in this article, for the purposes of simplifying the argument, that the issuer's private benefits from its chosen level of disclosure capture the full social benefits in terms of improved capital allocation and reduced agency costs of management resulting from these more accurate valuations of other issuers.⁷⁶

B. Will Diversified Investors Solve the Problem?

Professor Romano's second argument is that the externality producing the divergence between social and private costs does not require mandatory disclosure because "the majority of investors hold portfolios ... and therefore, unlike the issuer, they will internalize the externality if *they* make the

70 Anat Admati & Paul Pfleiderer, *Forcing Firms to Talk: Financial Disclosure Regulation and Externality* (1998).

71 Romano, *supra* note 3, at 421, 436-39.

72 Dye, *supra* note 16, at 2.

73 Admati & Pfleiderer, *supra* note 70, at 2 (setting out the assumption that "firms' values are correlated and the disclosures made by one firm are used by investors valuing other firms").

74 Dye, *supra* note 16, at 2.

75 Romano, *supra* note 3, at 475 n.218.

76 See *supra* note 16 and accompanying text.

disclosure decision."⁷⁷ In my challenge to Professor Romano's proposal, I contest the idea that they do in fact make the disclosure decision. I argue that Professor Romano fails to identify the mechanism by which portfolio investors effectively *act* on their preferences and somehow correct the bias in issuer decision-making toward underdisclosure that is created by the divergence between the private and social costs of disclosure. She still hasn't.

1. IPO Disclosure

I start by looking at an IPO operating in an issuer-choice world. Because the private costs of disclosure are greater than the social costs, the IPO will have a lower cash flow from operations if it chooses the regime requiring a socially optimal level of disclosure than if it chooses a regime requiring somewhat less disclosure. Assuming, as both Professor Romano and I generally do, the existence of an efficient market that sets the IPO's share price equal to the expected value of its cash flow discounted to present value at the risk-adjusted market rate, the choice of the laxer, socially sub-optimal regime will result in a higher share price, and so this is the choice the firm will make. Professor Romano never explains why this scenario is somehow changed by the fact that the market for the IPO's shares includes potential purchasers who own shares in other firms that would be benefited by the IPO choosing the stricter regime. These potential purchasers would *individually* prefer the IPO to choose the stricter, socially optimal regime, because it would make their holdings in the other firms more valuable. The mystery, however, is how the existence of this preference would translate into some kind of share price bonus sufficient to get the IPO to choose this stricter regime.

Consider what will go through the minds of the managers of the IPO firm concerning the choice of regime. They will ask themselves what would happen if they were to announce that they will in fact choose the stricter regime, despite the fact that this choice would diminish the firm's expected cash flow. The answer is that no one would pay a penny more for the IPO's shares than what is called for by this diminished expected cash flow. This statement is as true of the potential purchasers who hold shares in the firms that would be benefited by the IPO's choice of the stricter regime as it is of any other potential purchaser of the IPO's shares, because the holders of the shares in the other firms will get the benefit of the IPO firm's choice of the stricter regime whether they buy its shares or not. Thus, even for them,

77 Romano, *supra* note 1, at 2368 (emphasis added).

they will only buy the IPO's shares if they are priced to yield a risk-adjusted expected rate of return competitive with all the other securities in the market. The managers of the IPO firm, after going through this mental exercise, will obviously choose the laxer regime.

It is true that if shareholders of these other firms could costlessly bargain among themselves and with the managers of the IPO firm, they could come to a Coasian bargain, leaving everyone better off, that would involve the IPO choosing the stricter regime in return for a payment of some kind to the IPO from those who would benefit from it choosing the stricter regime. The collective action problems involved in reaching such a bargain are insuperable, however. They cannot be solved by trying to link the Coasian bargain to the offering of shares, since the benefits of the Coasian bargain to the shareholders of the other firms are entirely independent of whether or not they purchase the IPO's shares. Moreover, the very nature of a public offering militates any such linkage, since the IPO issuer, by offering its shares, is in essence offering its expected future cash flows in competition with thousands of other future cash flows of other issuers that are for sale in the primary and secondary markets for securities.

Professor Romano's responses to this problem are non-starters. She says, to begin with, that "[Fox] does not advance any explanation for why [shareholders in the other firms] would not buy the [IPO] shares to guarantee that it makes the correct disclosure choice."⁷⁸ It is unclear exactly what she means. She may be suggesting that the managers of the IPO would choose the stricter regime at the time of the offering in order to somehow cater to a market of the shareholders in these other firms. As I have just explained,⁷⁹ however, there is no way that the managers would in fact adopt such a strategy. Or she may be admitting that the IPO managers would choose the laxer regime at the time of the offering, as I have predicted, but that the shareholders of the other firms would buy all the IPO shares and then, after the offering, use their shareholder franchise in the IPO to vote a change in regime. If so, the change is *too late* as far as disclosure at the time of the offering is concerned. Thus,

78 Romano, *supra* note 3, at 441. Professor Romano goes on to claim that in response to this possibility, "[Fox] simply posits that [the shareholders of the other firms] cannot purchase [the IPO firm's] shares and thereby affect the disclosure regime." *Id.* It would be obviously ridiculous for me to assert that these shareholders of the other firms cannot purchase the IPO firm's shares and I have not done so. Professor Romano provides no cite in support of her claim.

79 See also Fox, *supra* note 2, at 1351.

at a minimum, diversified investors cannot internalize the externality and correct the issuer bias for too little *new issue IPO* disclosure.⁸⁰

Professor Romano then suggests that "[Fox] assumes that the externality benefit goes only one way, from [the IPO] to the [other firms]. If it goes both ways, then diversified investors ... should want [the IPO firm and the other firms] to select the same, interfirm externality-revealing disclosure regime." I could not agree more—that is why I favor mandatory disclosure—but in saying this, Professor Romano continues to leave unanswered the question of how this preference of diversified investors will be translated into the IPO firm selecting the stricter, socially optimal regime. Equally unhelpful is her assertion that underwriters will negotiate the choice of regime with the IPO issuer and that the underwriters will need to be responsive to their repeat institutional customers. These repeat-player institutional investors are not any more interested in buying shares that yield a below market return than any other investor. And since institutional investors are themselves numerous and buy and sell in a competitive market for securities, they do not appear to solve the collective action problem.⁸¹

2. Periodic Disclosure

It is unlikely that the existence of diversified investors would correct the bias in issuer decision-making toward too little *periodic* disclosure as well. Again, assume an issuer facing a choice between a stricter regime that requires the socially optimal level of periodic disclosure (the level at which social costs equal the benefits) and a laxer one that requires the lower level of periodic disclosure at which the firm's private costs equal the benefits. We have already seen that the existence of diversified investors holding shares in other firms that would benefit from the issuer choosing the stricter regime will not create an inducement for the issuer to choose the stricter regime *at the time* of its initial share offering. I will now show that despite

80 The idea that these shareholders could switch the IPO's regime at least for periodic disclosure purposes is also impractical. *See infra* Sec. III.B.2.

81 In support of this proposition, Professor Romano cites evidence of the influence of investment bankers in the choice of Delaware as the state of incorporation by many firms at the time they go public. Romano, *supra* note 3, at 445 n.142. This evidence may be correct, but it is irrelevant to the role investment bankers would play in the choice of a disclosure regime. The choice of a jurisdiction of incorporation, unlike the choice of a disclosure regime, involves no externalities, and so when the issuer chooses the jurisdiction that maximizes the sale price of its shares, it is, under our joint assumptions about market prices, likely to be making the socially optimal choice. *See Fox, supra* note 2, at 1392-93.

the existence of diversified investors, it is also very improbable that *after* the offering, a majority of shareholders will vote for the issuer to switch to the stricter regime.⁸²

For a shareholder of the issuer to enjoy a net benefit from the issuer switching from the laxer to the stricter regime, the percentage of shares that she holds in each of the other firms that would be positively affected by the issuer switching to the stricter regime must be great enough that they average to a figure equal to or greater than the percentage of the issuer's shares that she holds.⁸³ For most issuers in the real world, a majority of their shares are held by persons who do not meet this condition. For these issuers, consequently, the number of share votes cast by persons in favor of switching to the stricter regime would be insufficient to effect a change. More generally, the only way that this condition could be met with respect to the holders of a majority of shares of all the issuers in the economy is for each and every investor in the economy to be an index investor, i.e., to hold the same percentage of shares of each issuer as every other investor does. Absent every investor being an index investor, shareholder voting will never be able, even in theory, to fully correct for the downward bias in the issuer's selection of regime.

Professor Romano's responses do not effectively counter this basic truth. She argues that a vast majority of institutional investors hold indexed portfolios.⁸⁴ She does not say, nor can she, that the indexed portion of these institutions' stock investments constitutes anything approaching a majority, let alone all, of the shareholdings of most of the issuers in the U.S. economy. Moreover, even those shares that are held in indexed portfolios are not in large portion likely to be voted in the fashion predicted by Professor Romano. The activism of CREF and the handful of large public pension funds referred to by Professor Romano does not contradict the fact that most shares held in indexed portfolios are held by entities—private pension funds and mutual funds—that are notoriously inactive on corporate governance issues.⁸⁵ Indeed, the activism

82 Fox, *supra* note 2, at 1351-53.

83 The average would be weighted in proportion to the extent of the effect of the issuer's disclosure on each of these firms. This statement sets forth the necessary condition for the issuer shareholder to enjoy a net benefit from the switch at the margin, where the issuer's private costs from disclosure just exceed its social costs.

84 Romano, *supra* note 3, at 440.

85 See John C. Coffee, Jr., *Liquidity versus Control: The Institutional Investor as Corporate Monitor*, 91 Colum. L. Rev. 1277 (1991). Professor Romano mistakenly misconstrues my cite to this article as being in support of the proposition that most of the gains from diversification are available from portfolios with a hundred or even fewer stocks, and she suggests that the article in fact stands for the proposition

of Professor Romano's handful of activists is not very probative. All of the activist corporate governance initiatives of which I am aware involve reforms that are intended to increase the share value of each individual corporation that adopts it, regardless of whether any other corporations also adopt it. In contrast, the stricter, socially optimal disclosure regime is a reform that would make any individual firm adopting it less valuable; its virtue is that it will make the aggregate of all firms more valuable if all firms adopt it. Professor Romano cites no examples of her activists backing reforms of this second sort.⁸⁶

that mutual funds and other investors hold hundreds of firms. Romano, *supra* note 3, at 546 n.431. I in fact cited a different authority for the proposition concerning gains from diversification and correctly cite Coffee's article for the proposition that for that portion of issuer shares that are held by institutional investors, they are not likely to be voted in corporate governance activist fashion. Fox, *supra* note 2, at 1352 n.30.

86 In my challenge to Professor Romano's proposal, I make two additional arguments why diversified shareholders cannot be reasonably expected to internalize the externalities and correct the downward bias of issuers, arguments that she unsuccessfully attempts to dismiss as "strange." Romano, *supra* note 3, at 443-44.

My first argument is that even in a case where a majority of an issuer's shareholders do meet the condition of having sufficient percentage holdings in each of the firms positively affected by the issuer's switching to the stricter regime, it would be a breach of fiduciary duty for management to act on the majority's behalf and approve the switch, because the switch decreases the issuer's share value and hence leaves the issuer's minority shareholders worse off. Fox, *supra* note 2, at 1352-53 n.31. In response, Professor Romano starts by insisting that as a doctrinal matter, the management decision to switch to the stricter regime would be a matter of business judgment and would involve no self-interest. Romano, *supra* note 3, at 443. This is incorrect since management would be acting on behalf of the personal interests of the majority shareholders, which has the same element of managerial self-interest as when management adopts measures damaging minority shareholders that serve the personal interests of a control shareholder. She then suggests that in any event, the minority IPO or secondary-market purchasers have no complaint because they "buy shares in a firm already operating under a particular regime." *Id.* This suggestion entirely misses the mark since the question I was addressing is the likelihood that an issuer would *switch* to the stricter regime due to its having diversified shareholders. Thus the issuer would not be operating under the stricter regime at the time of the minority shareholders' purchases. Finally, Professor Romano comments that if my argument were correct, I would be advocating a regime that would "require managers to breach their fiduciary duty." *Id.* at 443 n.144. This comment truly is "ridiculous." There are all kinds of regulations, from pollution control to mandatory disclosure, the undetected breach of which by the managers of an individual issuer might increase share value of that issuer. Obeying such a regulation is not a breach of fiduciary duty, and no one would say that its adoption by the government forces "managerial misconduct." *Id.* If government is

C. Does the SEC Require Disclosure of Information Involving Interfirm Externalities?

Professor Romano argues in her initial proposal that the divergence between the private and social costs of disclosure cannot be used to justify mandatory disclosure because the disclosures actually mandated by the SEC involve no externalities.⁸⁷ She cites in support of this argument the SEC's line of business ("LOB") reporting requirement, which she says "might be seen as ... designed to assist third parties," but studies of which, according to her, "show no significant change in stock price."⁸⁸ In my challenge to her proposal, I make three points in disagreement. First, I say that almost all potential corporate disclosures—including whatever the SEC might require—would have at least some positive externality associated with them since they would help competitors, major suppliers, and major customers choose with greater precision the courses of action that would most likely maximize their cash flows.⁸⁹ Second, I list a set of disclosures that are in fact required by the SEC and that seem to me would be self-evidently useful to competitors, major

functioning properly, the regulation is adopted because compliance increases social welfare.

My second argument is that if Professor Romano's assertion that diversified investors can internalize the externalities of disclosure and correct for issuer bias, then for any type of corporate behavior that negatively affects other public corporations, each corporation should be allowed to select the regulatory regime of its choice. Fox, *supra* note 2, at 1353. Professor Romano objects to the examples that I have given of patent infringement and breach of contract on the grounds that the goals served by these regimes include concerns relating to the interests of third parties. She may be correct, at least with regard to my choice of the patent infringement example, but that does not subtract from the force of the larger principle behind my argument. Much of our regulatory and liability apparatus is designed to correct for interbusiness externalities that would otherwise lead to socially suboptimal business decisions. The externalities in the cases discussed in Ronald Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960), are prime examples. Any interbusiness externality among public companies that does not directly involve third, non-corporate parties is indistinguishable at the theoretical level from the externality arising out of issuer disclosure. We do not rely on shareholders to internalize the externalities and force their managers to choose a socially optimal regime to regulate the liability in those situations because to do so would be totally impractical. For the same reason, it makes no sense to rely on such an approach in the case of disclosure.

87 Romano, *supra* note 1, at 2380.

88 *Id.*

89 Fox, *supra* note 2, at 1350 n.25, 1353. I elaborate on this point in this article, see *supra* Sec. II.A.2.

suppliers, or major customers.⁹⁰ Finally, I point out that the LOB studies cited by Professor Romano show that imposition of the LOB requirement was followed by a reduction in the total variance and dispersion of the share prices of the affected issuers as well as increased accuracy in analyst's forecasts. Regardless of the lack of effect of this requirement on investor returns in these stocks, the price variance reduction and the improvement in analyst accuracy indicate that the LOB requirement prompted the disclosure of meaningful new information to the market.⁹¹ I consider below Professor Romano's attempt in her companion article to deal with each of these points.

1. The Idea that Almost Every Corporate Disclosure Has at Least Some Positive Externality

Professor Romano does not deal head on with the logic that almost any corporate disclosure involves at least some positive externality because it can help competitors, major suppliers, and major customers predict their future environments better and hence enable them to choose courses of action that better enhance their cash flows. Rather, her first response is to say that the text of the regulations themselves suggests that they are not intended to require disclosures that have positive externalities associated with them. She states, "[T]here are express provisions in Regulation S-K that explicitly exempt firms from disclosing information that would 'affect adversely the registrant's competitive position.'"⁹² What she does not say is that the provision she cites is a proviso applicable to only a single paragraph-long disclosure requirement out of a set of regulations that goes on for one-hundred pages. The single requirement that is subject to Professor Romano's proviso concerns new products in the pre-production stage about which the issuer has already made information public and that would require a material amount of investment or are otherwise material. The proviso states, "*This paragraph* is not intended to require disclosure of otherwise nonpublic information the disclosure of which would affect adversely the registrant's competitive position."⁹³ The fact that the SEC shows concern for proprietary information in the special situation of a planned new product in the pre-production stage hardly demonstrates SEC solicitude for protecting issuers from the competitive effects of information disclosure across the whole range

90 Fox, *supra* note 2, at 1353-54.

91 *Id.*

92 Romano, *supra* note 3, at 446.

93 Reg. S-K, Item 101, 17 C.F.R. § 229.101(c)(ii) (1999) (emphasis added).

of required disclosure. Indeed, the absence of similar provisos elsewhere in the regulations suggests just the opposite.

As a further response, Professor Romano cites particular categories of required disclosure that she claims would not have positive externalities. Professor Romano gives as an example depreciation, an item that I had said was inadequately disclosed prior to the passage of the 1933 and 1934 Securities Acts. She says, "Depreciation has no bearing on other firms' cash flows ... it has no bearing on a firm's own cash flows because accountants' measure of book depreciation has no connection to an asset's economic depreciation."⁹⁴ Professor Romano's statement is, of course, absolutely correct, but it cuts in exactly the opposite direction from the way she intends. The problem with pre-1934 disclosure was that many of the issuers that disclosed earnings figures did not disclose the amount of depreciation they had calculated to arrive at these earnings figures. It was only with the requirement that depreciation be disclosed that investors and analysts could in fact use an issuer's earnings figures to make meaningful inferences about its cash flow.⁹⁵

2. *SEC-Required Disclosures that Seem Self-Evidently Useful to Competitors*

Professor Romano responds to my list of SEC-required disclosures that seem self-evidently useful to competitors by selecting some actual responses to these requirements and arguing how uninformative they would be to competitors. Depending on the sample disclosure, her argument rests either on the idea that the text of the disclosure is on its face meaningless boiler plate or on the idea that the information was already publicly known prior to the issuer's SEC filing.

94 Romano, *supra* note 3, at 459.

95 See Fox, *supra* note 2, at 1378. Professor Romano tries to make a similar point with respect to the required disclosure of sales. She states:

To Fox, this [the sales requirement] demonstrates that the SEC's disclosure policy includes valuable interfirm externalities. He is mistaken. The SEC mandated disclosure of gross or net sales and cost of goods sold; marginal cost data, information that could enable competitors to ascertain their rivals' profitability, are not revealed in these disclosures

Romano, *supra* note 3, at 460. This statement is a wonderful example of the "nirvana complex." The fact that marginal cost data (the provision of which would cause accountants huge methodological problems) would be even more informative to competitors hardly makes sales data useless to them. Competitors can make better inferences about profits if they have sales and cost of sales figures than if they do not, particularly given that they often already have good information about price.

a. Boiler Plate. Professor Romano describes many of her samples as "generic" in ways that "indicate that any benefits to competitors would be either accidental or trivial."⁹⁶ It is impossible to deny that many SEC-mandated disclosures have the look of boiler plate, but merely providing illustrations of this kind of disclosure misses the point of what can often be revealed by asking the questions that prompted them. First, the questions that in many instances prompt only banal answers in other instances prompt disclosure of significant detail. This is because in these other cases, the banal answer would be misleading without disclosure of the significant detail. Indeed, recognizing this second set of cases is the single most important skill of a securities lawyer. Second, even the most banal of Professor Romano's examples—her excerpt of the research and development section of Merk & Co.'s 1999 10-K—contain information of greater interest to competitors than she acknowledges. For example, it states that Merk's 2000 expenditures on R&D will be almost 20% greater than in 1999. Most importantly, there are better ways than surveying the set of disclosures selected by Professor Romano to illustrate her particular points to determine the extent to which mandated disclosure provides meaningful information. There is abundant anecdotal evidence, for example, that analysts pour over SEC-issuer disclosure filings as soon as they become available. They would not do so unless they found the filings to contain meaningful information, not just "generic and banal disclosures." Moreover, as discussed below, there is significant hard empirical evidence that mandatory disclosure reduces price variance, which strongly suggests that the information produced improves the ability of the market to forecast issuers' future cash flows.⁹⁷ The twin facts that SEC rules require disclosure in areas that would appear to be useful to competitors, major suppliers, and major customers and that there is both anecdotal and hard empirical evidence of meaningful information being prompted by these rules strongly suggest that some of the information prompted is in fact useful to these other firms.

b. Information Was Already Publicly Known. Professor Romano includes one illustration that does contain detailed disclosures: PageNet's 1999 10-K, which included, among other things, the fact that its auditors expressed substantial doubt about its ability to continue as a going concern.⁹⁸ She argues, however, that the disclosures provided no "information of value to competitors" because PageNet's financial difficulties were well-known prior

96 Romano, *supra* note 3, at 458.

97 See *infra* Sec. III.C.3; Fox, *supra* note 2, at 1354-55, 1369-80, 1393-95.

98 Romano, *supra* note 3, at 459 n.163.

to the release of the annual report: its debt had been downgraded in the previous quarter, and it had, in fact, entered into a merger agreement with its major competitor to stave off bankruptcy."⁹⁹ It is really impossible to judge by comparing the filing to some news clippings whether the extent of PageNet's problems was in fact as fully apparent in as credible a way before the 10-K filing as after. Certainly PageNet had very strong interfirm reasons to keep as much of the bad news private as it could get away with—not so much related to competitors as to major suppliers and customers.

Even if all of the information in Pagenet's 10-K was previously publicly known, this may well have been because Pagenet understood that it would be required to reveal the information in an SEC filing anyway and decided it might as well get credit for getting it out sooner. Without this SEC requirement, Pagenet's earlier announcements, if any, might well not have been as full or as accurate. Professor Romano anticipates my making this argument and preemptively responds that firms have positive incentives to release good news and that bond-rating agencies and other market professionals have strong incentives to ferret out bad news.¹⁰⁰ This preemptive response is not persuasive. I too believe that firms receive benefits from releasing good news and, because they are trying to preserve credibility or are acting pursuant to beneficial preexisting promises, receive benefits from releasing bad news as well. My concern is that the private costs of disclosure are higher than the social costs, which means that despite these benefits, firms will release less information than is socially optimal. Undoubtedly bond-rating agencies and market professionals will ferret out at least some additional bad news, but mandatory disclosure is a superior way for the public to receive the information. There is obviously much less social cost and greater accuracy if the issuer, which already knows the information, simply releases it, rather than if outsiders are forced to use scarce resources to search for the information, a search that often can only result in an informed guess.

3. Line of Business Reporting Studies

The LOB studies show reduced total variance in returns and price dispersion after imposition of the LOB requirement and increased accuracy in analyst's forecasts.¹⁰¹ This reduced total variance suggests that the newly disclosed information made it easier for investors and analysts to predict future cash flows, and hence share prices tended to be closer to what the actual returns

⁹⁹ *Id.* at 453.

¹⁰⁰ *Id.* at 459.

¹⁰¹ See Fox, *supra* note 2, at 1354-55.

turned out to be.¹⁰² The increased accuracy in analyst's forecasts helps confirm this conclusion. Thus the LOB requirement appears to have prompted the disclosure of meaningful new information. Since, as Professor Romano seems to admit,¹⁰³ the kind of information that the requirement seeks to prompt would be useful to other firms and since the studies show that the requirement in fact provoked disclosure of meaningful information of some kind, the studies strongly suggest that the LOB requirement is in fact producing information useful to other firms.

Professor Romano never directly explains what is wrong with this logic, why she believes it is inappropriate to infer from the results showing reduced variance and increased analyst forecast accuracy that the LOB requirement forced disclosure of *meaningful information*. She sidesteps these questions by instead making two alternative arguments. Her first is that the LOB studies show that "the disclosures were not informative" because they show no statistically significant increase in actual returns of the newly disclosing firms after imposition of the LOB requirement.¹⁰⁴ In my challenge to her proposal, I pointed out that the absence of the statistically significant increase in returns is not surprising—and not probative to the informativeness of the disclosures—because LOB disclosure is going to reveal as many situations where the market would otherwise overvalue shares as where it would otherwise undervalue them.¹⁰⁵ In her companion article in this issue, Professor Romano's reaction to this point is to state, "[T]his rationalization is totally inconsistent with [Fox's] criticism of Dye's model, as well as the basis for his social welfare analysis of disclosure policy, in which he asserts that the externality is positive." There is no such inconsistency. The fact that about half the time the extra information disclosed by the LOB requirement is negative (relative to how the market would have evaluated the issuer's future cash flows without the information) in no way indicates that in those instances the disclosure has a negative externality. First of all, the reaction of the issuer's price to the disclosure tells us nothing about its effects on other firms. Moreover, even if we were looking at the prices of the other firms, Professor Romano's statement would evince the same confusion as she has in her Computerco example between the effect of the *act* of disclosure and the implications of the information being disclosed.¹⁰⁶

Professor Romano's second argument is that the reduction in variance does

102 *Id.* at 1354-55, 1369-70.

103 Romano, *supra* note 1, at 2380.

104 *Id.*

105 Fox, *supra* note 2, at 1355.

106 *See supra* Sec. I.B.

not show that the information disclosed pursuant to the LOB requirement involved interfirm externalities. This argument needs to be put in the context of the history of the debate between us. In her initial proposal, Professor Romano cited the LOB studies in support of the proposition that a requirement that would appear to call for disclosure of information involving an externality cannot be effectively implemented because "either firms will not *meaningfully disclose information* that can benefit their competitors or they will delist to avoid such disclosure."¹⁰⁷ In my challenge to her proposal, I responded that the reduction in variance and improved analyst forecasts showed that imposition of the LOB requirement in fact meant that the requirement did prompt the disclosure of some kind of "meaningful" information that was not previously reaching the market. Professor Romano's reply is that a change in the variances of the prices of the issuers making the LOB disclosures is not a measure of the external effects of these disclosures, that only a change in the prices themselves would be such a measure.¹⁰⁸ True enough, but the price changes that would need to be measured would relate to the prices of the firms *receiving* the information, not the prices of firms *disclosing* the information, and so they tell us nothing about whether the *receiving* firms experienced any price change.¹⁰⁹ The LOB

107 Romano, *supra* note 1, at 2381 (citation omitted, emphasis added).

108 Romano, *supra* note 3, at 463.

109 The only way to measure directly whether the LOB requirement produced a positive externality would be to examine whether at the time the requirement is imposed, there is a share price improvement by firms that are themselves too undiversified to have to engage in segment reporting, but that compete with more diversified firms that are required to provide segmented reporting. If the LOB-required disclosures involve a positive externality, as I maintain, the adoption of this requirement by the SEC should have a differential effect on the two kinds of firms. SEC adoption of the LOB requirement would confer a pure benefit on the less-diversified firms, since they receive additional information but do not need to provide any. SEC adoption of the requirement would impose both a cost and benefit on the more diversified firms since they would incur the interfirm costs of providing information that they did not disclose before, but also would receive information from other firms that they did not receive before. This would be a useful study to run. If the study found a statistically significant price reaction, it would settle the issue. If the study found a price change that was not statistically significant, it might well not settle the matter since it is very possible that there is too much background noise to be able to pick up any plausibly sized externality. See Fox, *supra* note 2, at 1387-90. In that event, as now, we would need to refer to more indirect evidence to resolve the matter.

In contrast to this hypothetical study, the existing LOB studies examine the effect of adoption of the requirement on the share price of the more diversified firms that are required to disclose. The absence of effect on the prices of the disclosing

studies only examine the price effect of SEC adoption on the firms *disclosing* the information.

In her initial proposal, Professor Romano argued that the LOB studies affirmatively support her position. She claimed that they show that a requirement that appears to require information helpful to competitors in fact provides no meaningful disclosure. Based on her assumption that her claim is correct, Professor Romano contended that the studies therefore show "an essential weakness of the third-party externality rationale for the federal regime of mandatory disclosure: a theory that cannot be implemented effectively cannot serve as the basis for public policy."¹¹⁰ Her claim, however, is not correct: the LOB studies do not show that the requirement had no external effect—they do not speak directly to that issue because they do not examine the effect on the prices of firms receiving the disclosures—and so they show no essential weakness. In fact the LOB studies not only fail to affirmatively help her position, they affirmatively help mine. The LOB studies' conclusion that the price variance of the disclosing firms did drop after SEC adoption of the LOB requirement provides indirect evidence that the disclosures do have an external effect, even if a change in price variance is not a direct measure of that effect. This drop in variance does convincingly demonstrate that the requirement did prompt the disclosure of meaningful information. It is always possible that the meaningful information that it prompted was not useful to competitors, but the more plausible inference is that the information was useful to them because that is the kind of information for which the requirement calls.¹¹¹

firms that is revealed by the studies tells us nothing about whether the information disclosed involves an externality since, even if it does, the firms incur both interfirm costs and externality benefits from the LOB requirement.

110 Romano, *supra* note 1, at 2381.

111 Professor Romano suggests that the reduction in variance is best understood as an effect produced by standardization, enabling greater comparability across firms. Romano, *supra* note 3, at 463. She does not explain exactly what she means by "standardization" and why it would lead to reduced variance, let alone why the reduction in variance is best understood as produced by standardization rather than by an increase in meaningful information. In any event, it seems likely that to the extent that standardization helps reduce variance of individual stocks, it does so because the information that is provided in standardized form has a clearer meaning and thus permits investors and analysts to make more accurate predictions about issuers' future cash flows. This same clearer meaning should be useful to competitors, major suppliers, and major customers as well and thus should increase the externality associated with the issuers' disclosures.

IV. THE EMPIRICAL EVIDENCE

In her initial proposal, Professor Romano interpreted the existing empirical evidence as proving that mandatory disclosure has not been effective.¹¹² In my challenge to her proposal, I show that in fact the evidence affirmatively suggests that mandatory disclosure does increase the amount of meaningful information in the market. I also show that there is no affirmative empirical evidence one way or the other concerning which is greater, the social costs or social benefits of this increase in information. In her companion article in this issue, Professor Romano describes these showings as "mistaken."¹¹³ Her reasons, however, are unpersuasive.

A. The Effect on Price Variance of the Imposition of the Federal Securities Laws

1. The Significance of a Reduction in Variance

a. The Connection between Information and Price Accuracy. The efficient market hypothesis suggests that an issuer's share price will be an unbiased estimate of the share's actual value whether there is a lot of publicly available information about the issuer or only a little. More information, however, will increase the expected accuracy of the price. The expected accuracy of a price is the likelihood that the price is relatively close, one way or the other, to the share's "actual value," i.e., what the holder of the share ultimately actually receives in dividends and distributions, discounted to present value. More information leads to greater expected price accuracy because with more information, speculators—the persons who set an issuer's share price in the market—have a more accurate sense of the issuer's future.

b. Variance as the Best Practical Measure of Increased Information and Price Accuracy. The best measure practically available of the expected accuracy of an unbiased share price over time is its variance: if on average, over time, the share's price is closer to its actual value, the price will move up and down less than if on average it is further from the share's actual value.¹¹⁴ Thus an appropriate way of measuring whether imposition of

112 Romano, *supra* note 1, at 2373-80.

113 Romano, *supra* note 3, at 464.

114 The relationship between price accuracy and variance can be seen in more formal statistical terms. Consider price to be a random variable generated by a distribution function with a mean equal to actual value (reflecting the fact that the price is unbiased). A good measure of the price's expected closeness to actual value would

the federal securities laws in the 1930s increased the amount of meaningful information in the market and the accuracy of share prices is to measure whether it reduced the price variance of the affected issuers.

c. The Social Benefits of More Information and Greater Price Accuracy. In my challenge to Professor Romano's proposal, I carefully analyze the social benefits from more information and greater price accuracy in terms of the ways that they assist the functioning of the real economy.¹¹⁵ These benefits come primarily in the form of better capital allocation and reduced agency costs of management.

d. Conclusions. The foregoing discussion leads to two conclusions. First, a reduction in price variance suggests an increase in meaningful information and price accuracy. Second, an increase in meaningful information and price accuracy creates social benefits.¹¹⁶

2. Romano's Critique of the Significance of Reduced Variance

Professor Romano objects to each of these conclusions and, as a result, considers any reduction in price variance revealed by the empirical studies to lack significance.

a. Variance as a Measure. Romano argues that my proposition that a change in price variance is an appropriate way of measuring the effect of the federal securities laws on the amount of meaningful information in the market and the accuracy of share prices is based on a misunderstanding of the literature.¹¹⁷ She states, "It is textbook learning that in an efficient market, new information that is of value to investors affects stock prices, not their variance."¹¹⁸ The section of the textbook to which she cites, however, simply

then be the variance of the distribution—the expected value of the square of the deviation from actual value. The greater the variance, the lower the price's expected accuracy. This is essentially the same approach as Dye uses in his model. Dye, *supra* note 16, at 4-5.

115 Fox, *supra* note 2, at 1356-68.

116 Whether the social benefits from an increase in meaningful information and price accuracy are greater than the social costs is, of course, a separate question, which needs separate discussion. See Fox, *supra* note 2, at 1393-95.

117 Romano, *supra* note 3, at 472. Professor Romano correctly points out that my quote from Stigler to the effect that price dispersion is a measure of ignorance in the market is out of context and that the idea he was communicating in the article from which the quote is taken is not applicable to the issue at hand. *Id.* at 472-73. Regrettable as my inadvertent mis-cite of Stigler is, it does not make any less valid the logic of the idea that price variance is the best practical measure of increased information and price accuracy.

118 *Id.* at 473-74. See also *id.* at 476-77.

makes the well-known point that in an efficient market, the public release of a piece of information revealing a change in the value of a stock will result in a rapid change in price.¹¹⁹ This is perfectly true and totally irrelevant. The point in the textbook would provide useful guidance if we were trying to measure whether the release of a single piece of information reveals something new about the value of a single issuer. But that is not the task before us. Rather, we are trying to measure whether a whole disclosure system reveals new things about the large number of firms to which it applies. If in fact it does reveal new things about these firms, it will reveal that some of them are less valuable and others more valuable than they would have appeared without the required disclosures.

Put simply, the problem is as follows. Under our shared assumptions, prior to imposition of the federal mandatory disclosure regime, the shares of U.S. issuers traded in an efficient market. Thus, share prices reflected all publicly available information and represented unbiased estimates of the actual value of the shares. After imposition of the regime, the same was still true. The question of whether the regime prompted the disclosure of meaningful new information cannot be determined by whether there was a change in share price, since both sets of prices—before and after the imposition of the regime—will be unbiased and, thus, on average, both sets of prices equal the actual values of the respective shares involved.¹²⁰ A reduction in variance, however, would, as explained above, suggest that the regime prompted the disclosure of meaningful new information. What makes

119 Stephen A. Ross et al., *Corporate Finance* 319 (5th ed. 1999).

120 See Fox, *supra* note 2, at 1359. This statement requires a slight refinement. It would be totally correct if the disclosure regime had no effect on the underlying cash flows of the affected issuers, because the prices before imposition of the regime and the prices after would both be unbiased estimates of the same cash flows and hence on average would equal each other. Imposition of the regime, however, will affect the underlying cash flows of U.S. issuers. Each issuer's cash flow will be reduced by the costs of the required disclosures. If the regime prompts disclosure of meaningful new information, this same cash flow will at the same time be increased by improvements in capital allocation, reduced agency costs of management, and the positive externalities of the disclosures from other firms.

If the net effects on each firm could be measured and aggregated over all firms, it would still not provide a test of whether meaningful new information had been revealed. After all, meaningful new information might be revealed, but the costs might just equal the benefits. It would, however, answer the bottom line question of whether the imposition was socially worthwhile. Unfortunately, for reasons I detail in my challenge to Professor Romano's proposal, the existing studies suggest that background noise makes these effects statistically unmeasurable. See Fox, *supra* note 2, at 1383-85, 1387-89.

Professor Romano's resistance to this idea particularly surprising is that as she herself describes, a reduced variance is exactly the way Dye models an increase in meaningful disclosure.¹²¹

b. The Connection between Increased Price Accuracy and Social Welfare. Professor Romano also argues that even if my explanation of the variance reduction after imposition of the 1933 Act is right—that it reflects more accurate prices—"the 1933 Act cannot be characterized as improving investor welfare."¹²² Her reason is that "the variance reduction ... was a measure of firm-specific risk and not market risk" and "[t]extbook finance theory teaches that the risk that is priced is market risk, and hence, investor wealth is not affected by a reduction in firm-specific risk."¹²³ True enough, but as Professor Romano assumes for this part of her argument, the variance reduction is also a measure of more accurate share prices. Investor wealth can be increased by the improved capital allocation in the real economy that results from more accurate share prices, not just by a reduction in market risk. Indeed, her argument is completely unresponsive to my challenge to her proposal, because I have always claimed that the effects of disclosure on the real economy, not risk reduction, is disclosure's primary benefit.¹²⁴

3. The Empirical Results

a. Studies of New Issue Disclosure by Stigler and Simon. George Stigler examines two groups of new share issues, one from the period 1923-1928 (prior to the passage of the Securities Act, with its new issue disclosure requirements) and the other from the period 1949-1955 (after the Act's passage). For each group, he calculates the average of the price performance of the group members over the five years after issuance relative to the price performance of the market as a whole for the corresponding period (thus controlling for factors affecting the market as a whole). He finds that the variance in the relative price performance of individual share issues around the average of the group as a whole declined by almost half between the pre-Act group and the post-Act group.¹²⁵ Carol Simon comes to a similar conclusion making comparisons between the pre-Act period and several post-Act periods.¹²⁶

121 Romano, *supra* note 3, at 421; Dye, *supra* note 16, at 4-5. See also *supra* note 113.

122 Romano, *supra* note 3, at 482.

123 *Id.*

124 See *supra* note 7 and accompanying text.

125 George Stigler, *Public Regulation of the Securities Markets*, 37 J. Bus. 117, 122, 123 tbl. 3 (1964).

126 Carol J. Simon, *The Effect of the 1933 Securities Act on Investor Information and the Performance of New Issues*, 79 Am. Econ. Rev. 295, 300, 309-10 (1989). Both

This reduction in variance suggests that the Securities Act new issue disclosure requirements increased price accuracy and the amount of meaningful information in the market. Romano argues that the decrease in variance occurred instead because the Act forced riskier share issues off the market. That is possible, but I invite the reader to survey her arguments¹²⁷ and mine¹²⁸ to determine whether she might be straining in her insistence that her explanation is more plausible than the seemingly straightforward explanation that at least some of the large amount of detailed disclosure required by the Act introduced new meaningful information into the market.

*b. Studies of Periodic Disclosure by Benston.*¹²⁹ George Benston studied the effect of the periodic disclosure requirements under the Exchange Act. Benston looked at 466 New York Stock Exchange ("NYSE") firms for a period starting prior to the imposition of the Exchange Act regime and running to a point ninety months after its imposition, using the market model to determine the variance of their month-to-month residuals as a measure of price dispersion.¹³⁰

Benston generates two sets of results relevant to the Act's effects on variance. The first set of results show that when all the firms in the sample are looked at as a single group, their price variability, after subtraction for market-wide effects, declined by about one-third from the pre-Act period to the post-Act period.¹³¹ This would imply that the regime's periodic disclosure requirements as a whole increased the supply of meaningful information in the market and improved price accuracy.

Benston ignores this first set of results, however, which Romano chooses to do as well. Their logic for doing so is that sales data are the only data required by the Act that were not already required by the NYSE and that Benston had a more sophisticated test, discussed below, of the effect of sales disclosure. The problem, as I demonstrate in my challenge to Professor Romano's proposal, is that they have their history wrong: *there were no such NYSE requirements.*¹³² Prior to the imposition of the Exchange Act's periodic

Stigler's and Simon's studies are discussed in more detail in Fox, *supra* note 2, at 1372.

127 Romano, *supra* note 1, at 2377; Romano, *supra* note 3, at 477-83.

128 Fox, *supra* note 2, at 1371-72 n.83.

129 This study is discussed in more detail in Fox, *supra* note 2, at 1373-79.

130 George Benston, *Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934*, 63 Am. Econ. Rev. 132 (1973).

131 *Id.* at 148-49 tbl. 4. This variability was measured by the average standard deviation of the members' residuals produced by the market model.

132 Fox, *supra* note 2, at 1376-78.

requirements, an issuer's only obligation to make disclosures was pursuant to its listing agreement with the NYSE.¹³³ The earlier an issuer was listed on the Exchange, the less its agreement required. And even the most recently listed firms in Benston's sample were not required to provide certified income and balance sheets or quarterly earnings results information or information about the shareholdings and remuneration of officers, directors, and major shareholders.¹³⁴

Romano argues in response that many issuers provided various kinds of information voluntarily.¹³⁵ Again, I invite the reader to compare Professor Romano's account with mine and make her own conclusions as to whether it is likely that everything required by the Exchange Act other than sales was already being provided by issuers. The important question, however is why Professor Romano relies exclusively on disputed, inherently qualitative, subjective accounts concerning the state of pre-Exchange Act disclosure to determine whether the Exchange Act prompted the disclosure of any meaningful information (other than perhaps sales) rather than explore the implications of Benston's quantitative results.¹³⁶

The second set of Benston's results is derived from the division of his sample firms between ones that disclosed sales data (the "disclosure firms") prior to the Exchange Act from ones that did not (the "non-disclosure firms"). He found that the average decline in the variance of the residuals of the non-disclosing firms was greater than that of the disclosing firms, which would be consistent with the newly required sales disclosures of the previously non-disclosing firms being meaningful, but only by a very small, statistically insignificant amount.¹³⁷

I readily admit that because the difference between the groups is not statistically significant, the results do not affirmatively add to the case

133 *Id.*

134 *Id.*

135 Romano, *supra* note 3, at 467-68.

136 Professor Romano states,

[I]t is perilous to rely exclusively, as does Fox, on the characterization of the state of disclosure quality made by contemporaries of the SEC—most of whom were partisans in a pitched political battle in the midst of an economic depression—to measure its achievement.

Romano, *supra* note 3, at 470. Romano has our roles reversed. It is she who is saying that we should rely on the contemporaneous characterizations of disclosure quality—that she says show that sales were the only important kind of disclosure not already supplied by most issuers—in preference to what subsequent empirical research suggests about this question.

137 Benston, *supra* note 130, at 148-49 tbl. 4.

that imposition of the federal mandatory disclosure regime prompted the disclosure of new, meaningful information, the way the variance reductions in the Stigler and Simon studies do. The question is what more, if anything, can one infer from these results? The answer is nothing: The lack of statistical significance simply means that we cannot, with high confidence, reject the null hypothesis that the difference is due to chance. It in no way affirmatively shows that the Exchange Act's sales disclosure requirement does not prompt the disclosure of meaningful information that would otherwise not be revealed.

In my challenge to Professor Romano's proposal, I go on to discuss a number of reasons that would add to the likelihood that we would not observe a statistically significant greater variance reduction for the non-disclosure firms than for disclosure firms even if in fact the sales requirement does prompt the disclosure of meaningful information. My first point is that the sales requirement is just a single requirement among many and while it may generate enough meaningful new information relative to its costs to be socially worthwhile, the amount generated may still be small relative to the level of background noise and thus the imposition of the sales requirement is unlikely to be accompanied by a statistically significant change in variance.¹³⁸ My second point is that while Benston characterized the disclosing firms as providing the same quality of sales disclosure before and after the Exchange Act, accounts by others suggest that prior to the Act, there was great variation among these firms in how these sales figures were calculated.¹³⁹ While the accounts of both Benston and these others have inherently qualitative, subjective features about them, if the accounts of the others are correct, which is perfectly possible, then there was not as much of a difference between the disclosure and non-disclosure firms in the pre-Act period as Benston claims. This would mute any differences in the price dispersion reactions of the two groups to imposition of the requirement even if the requirement did decrease the dispersion of the previously non-disclosing firm.¹⁴⁰ My third point is that the incentives to comply with the Exchange Act's periodic disclosure requirements are considerably greater today than they were in the 1930s, because the risk of damages liability for failure to comply has increased. Thus, there was less likelihood of a statistically significant price reaction in Benston's test given the 1930s' level of compliance than if

138 Fox, *supra* note 2, at 1373-74 n.91. I develop this point more fully in a somewhat different context later in the article, *id.* at 1387-90.

139 *Id.*

140 *Id.*

compliance during his ninety-month post-Act period had been as high as it is today.¹⁴¹

In her companion piece in this issue, Professor Romano takes strong exception to my second and third points. With respect to my second point, she says that I dispute the underlying basis of Benston's test in contending that "all firms, regardless of their pre-Act disclosure status, benefited equally from the legislation."¹⁴² This is a strawman argument because I never make such a contention. In fact, I agree with Professor Romano's characterization of Benston's test as elegant¹⁴³ in the sense that its design avoids the usual pitfalls of longitudinal comparisons. I merely suggest that the experiment that Benston claims he is running depends on his subjective, qualitative description of the behavior of the so-called disclosing firms prior to the Act. His description is that prior to the Act, the disclosure firms disclosed exactly the same information as they did after the Act. As noted above, others disagree and assert that the quality of the pre-Act sales disclosures by the disclosing firms was not as high as that of their post-Act disclosures. If the account of the others concerning the pre-Act behavior of the disclosing firms is correct, the experiment Benston is running is different from the one he claims to be running. In that event, since the differences in the extent to which each group changed its behavior would be muted relative to what Benston claims, there would be a lower chance that imposition of the sales requirement would be accompanied by a statistically significant difference between the disclosing and non-disclosing firms in the amount by which their variances declined.¹⁴⁴

Professor Romano states that my third point, concerning the fact that there are greater incentives to comply with the Exchange Act's periodic disclosure requirements today than in the 1930s, is "as curious as it is insubstantial" because I am asking the reader "to give credence to the argument that even if the 1934 Act had no impact on prices, if we could redo Benston's test today, we would uncover an impact."¹⁴⁵ She goes on to argue that, "[T]here is nothing to suggest that Fox's speculation is correct."¹⁴⁶ The basis to my "speculation" is, of course, the standard economics assumption that people respond to incentives.¹⁴⁷ This speculation is necessary

141 *Id.*

142 Romano, *supra* note 3, at 466.

143 *Id.*

144 Fox, *supra* note 2, at 1374 n.91.

145 Romano, *supra* note 3, at 471.

146 *Id.*

147 While Professor Romano ignores the incentives basis for my "speculation," she argues that circumstances have changed in other ways since the 1930s—the development of an extensive industry producing information about firms—that

because Professor Romano is suggesting that we adopt issuer choice in place of the mandatory disclosure regime of today, not in place of the one of sixty years ago. All that I am suggesting is that if the regime in the 1930s in fact prompted meaningful new disclosure about sales but not enough to be likely to be accompanied by a statistically significant difference in variance changes between the disclosing and non-disclosing firms, the level of disclosure that would have been prompted if today's compliance incentives were in effect then would have been more likely to have been accompanied by a statistically significant difference in variance changes.

B. The Effect of New Issue Mandatory Disclosure on Rate of Return

1. The Existing Studies

George Stigler, in the same study discussed above, took his two groups of new share issues—the one from the pre-Securities Act period of 1923-1928 and the other from the post-Act period of 1949-1955—and compared their respective five-year-post-issue growth in prices as a ratio of the growth in prices in the market as a whole. The post-Act group did no better than the pre-Act group.¹⁴⁸ Gregg Jarrell¹⁴⁹ and Carol Simon¹⁵⁰ come up with similar results, at least for seasoned issuers.

Professor Romano argued in her initial proposal that these findings "strongly suggest that the new federal regime had, at best, no effect on investor welfare."¹⁵¹ I argue in my challenge to her proposal that all three studies share a fundamental design flaw.¹⁵² These studies purport to test whether the social benefits of mandatory disclosure exceed its social costs by comparing, before and after the Securities Act, the rate of return enjoyed by

suggest even less need for mandated disclosure than in the 1930s. *Id.* There are two problems with her argument, however. First, this industry first arose after the passage of the securities acts in an environment where the mandatory disclosure system provided it with ample feedstock for its work. Second, while it is true that if mandatory disclosure were eliminated, some of the information currently disclosed pursuant to the mandatory regime could instead be produced by the research of this industry, the resources used by the industry to produce this information would be largely a waste since the issuer already knows the information.

148 Stigler, *supra* note 61, at 122-24.

149 Gregg Jarrell, *The Economic Effects of Federal Regulation of the Market for New Securities Issues*, 24 J.L. & Econ. 613 (1981).

150 Carol J. Simon, *The Effect of the 1933 Securities Act on Investor Information and the Performance of New Issues*, 79 Am. Econ. Rev. 295 (1989).

151 Romano, *supra* note 1, at 2376.

152 Fox, *supra* note 2, at 1382-83.

purchasers of newly issued shares *relative* to the rate of return enjoyed by investors in the stock market generally. The flaw is that in a well functioning capital market, there should be no difference at any point in time between the risk-adjusted expected rate of return enjoyed by new equity purchasers and that enjoyed by purchasers of shares in the secondary market. Both before and after adoption of the Act, investors who purchased new share issues were free to be purchasers in the secondary market instead, and vice versa. This connection between the primary and secondary markets for equities means that the ratio of risk-adjusted expected returns in the two markets should always be one-to-one and should be unaffected by whether the imposition of mandatory disclosure led to a net social gain or not.

Professor Romano's response to this critique is to claim that,

[Fox's] position is entirely inconsistent with Fox's thesis that mandated disclosure was necessitated by the inadequacy of the disclosure produced by the market. For if voluntary disclosure is inadequate, then returns should have improved after the 1933 Act; investors would have no longer been misled about firm values and improperly pricing the securities. The relative rate of return on new issues should have increased after the Act¹⁵³

The inconsistency is actually with Professor Romano here. Her statement is directly contrary to her strongly held belief that the regulatory regime under which an issuer operates will be reflected in an unbiased way in the market prices of its securities, including the initial prices at the time of offering.¹⁵⁴ The correctness of this belief is an absolutely necessary (though not sufficient) condition for her issuer choice proposal to be viable, because market prices need to work in this fashion for issuers to have an incentive to follow investor preferences. If the 1933 Act in fact corrects for inadequacies in voluntary disclosure, these improvements will be reflected in the *initial price* of the securities issued after passage of the Act. The initial investors in these securities will pay this initial price. Their percentage *returns*—what the studies measure—should be normal, just as the percentage returns earned by investors in securities issued prior to the passage of the Act should be normal. Again, Professor Romano is ignoring my argument that the gain from the imposition of the Securities Act on new share issues was an increase in share price accuracy and its resulting beneficial effects on the allocation of capital in the economy.¹⁵⁵

153 Romano, *supra* note 3, at 477-78.

154 Romano, *supra* note 1, at 2366; *see also supra* note 5.

155 As I explain in more detail in my challenge to Professor Romano's proposal, if the

C. The Effect of Periodic Mandatory Disclosure on Rate of Return

George Benston considered the impact of mandatory periodic disclosure on shareholder returns.¹⁵⁶ Benston's study, which is part of the same article discussed above, does not suffer from the defect that plagues the new issue disclosure rate of return studies just discussed. This is because Benston's study compares the change in market valuation of the already outstanding shares of two sets of firms, one of which—the non-disclosure firms—would be expected to be more affected by the reform than the other set—the disclosure firms—if in fact the reform, as a general matter, enhanced social welfare by reducing the agency costs of management.

Benston used the market model to calculate each group's cumulative abnormal average return ("CAAR") for the period of February 1934 to June 1935, a period during which the Exchange Act's mandatory disclosure requirements were initially imposed. Benston found that the CAARs were +.10% for the disclosing group compared with +.72% for the non-disclosing firms. Thus each group's CAAR has the sign suggesting that imposition of the requirements increased the group's value. Neither figure, however, is significantly different from zero statistically.¹⁵⁷

The lack of statistical significance means that these results provide no affirmative evidence that the benefits from Exchange Act mandatory periodic disclosure are greater than its costs. These results also, however, provide no evidence that the benefits are not greater than the costs.¹⁵⁸ This is

gains from this improvement in capital allocation exceed the costs of Securities Act disclosure, this should be reflected by an increase in the overall economy-wide risk-adjusted rate of return on investment. However, because new stock offerings have represented only a small fraction of the total amount of real investment occurring in the corporate sector each year, even if the net gains are large in absolute dollar terms, the increase in this overall rate of return will be quite small, which would be difficult to detect empirically because of the huge amount of background noise. See Fox, *supra* note 2, at 1383-85.

156 See Benston, *supra* note 130 and discussion in *supra* Sec. II.A.1.a.

157 Benston, *supra* note 130, at 148.

158 Gilson and Black summarize well the implications of the failure to find a significant result:

Suppose that an event study fails to find a statistically significant result. That does *not* mean that the announcement being studied had no effect, nor even that the announcement was unimportant. All it does is give us a *rough upper bound* on how important and unexpected the announcement was.

Lawyers and policymakers sometimes treat the absence of a *significant* change as equivalent to *no change in value*. This is simply wrong. Gilson & Black, *supra* note 25, at 223.

particularly so because the weakness of Benston's statistical tests makes it extremely unlikely that they would pick up any plausibly sized increase in value from imposition of the sales requirement. Consider the example that I give in my challenge to Professor Romano's proposal. Suppose that requiring the non-disclosing firms to disclose their sales figures had a sufficiently great positive impact on the devices that limit managerial discretion that despite the costs of the requirement, it increased the firms' value by $\frac{1}{2}\%$. In today's market, this would represent a net social gain of about \$19 billion, obviously enough to make the requirement hugely desirable. What are the odds that this increase of $\frac{1}{2}\%$ in the actual value of the non-disclosure firms would, given the background noise revealed by Benston's study, have been accompanied by a CAAR large enough to be considered statistically significant at the 95% confidence level? The answer is one chance in twenty-five.¹⁵⁹ This example shows that mandatory disclosure was bound to fail the test Benston set up for it because whatever the value to investors of the sales disclosure requirement, it was almost certainly going to appear statistically insignificant. This point devastates Professor Romano's claim that Benston's study shows that the Exchange Act mandatory disclosure is not worthwhile.

CONCLUSION

This article reaffirms two unassailable facts. First, the case that issuer choice will lead to market failure is overwhelming. Thus, theory clearly demonstrates that issuer choice will lead to a social welfare shortfall correctable by regulation. Second, the empirical studies on whether imposition of the U.S. mandatory disclosure in the 1930s in fact led to an increase or decrease in social welfare provide no affirmative empirical

159 Fox, *supra* note 2, at 1387-89. The odds are actually even worse than one in twenty-five since several features of Benston's study work to make the CAAR of the non-disclosure firms on average understate any net gain from the sales disclosure requirement. First, the non-disclosure firms themselves represent 38% of the market, and so any improvement that they enjoy will have a substantial positive effect on the market-wide return, which is subtracted out in the market model to calculate their CAAR. Secondly, as discussed earlier, the disclosure firms may have also enjoyed improvements in the quality of their sales disclosures, and so any gains they enjoy from this will also add to the market return and be subtracted from the non-disclosure firms' CAAR. Finally, because of the externalities associated with the disclosures by the non-disclosure firms, the disclosure firms will enjoy further benefits from imposition of the requirement that are social benefits that will not be picked up by the non-disclosing firms' CAAR. *Id.* at 1390-92.

evidence in support of either proposition, and the matter is unlikely to be resolved any time soon. If Professor Romano is serious about advancing her proposal for issuer choice, she should stop battling these hard facts and instead engage in a serious attempt to show that despite the market failure inherent in issuer choice, there is inevitably an even greater failure in the regulatory response. Absent such a showing, the much-admired U.S. regime of mandatory disclosure should be retained.

