Inefficiency in the Market for Initial Public Offerings

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The market for initial public offerings ("IPOs") of common stock is inefficient, and this fact is not reflected in securities law. New statistical evidence shows that, on average, companies go public at times when the general stock market is priced 22.7% higher than its normal level, and that underwriters sell IPO stock at a further 12.5% premium to the prevailing, high market. These two figures are based on the long-term performance of IPOs and comparable non-IPO stocks over the period 1970 to 1990, and are consistent with the beliefs of knowledgeable practicing investors.

The value and number of IPOs varies greatly from year to year, but overpayment by the public averages out to at least $1.4 billion annually, counting both of the aforementioned pricing phenomena. The effort to capture this inefficiency draws resources away from productive economic activity and so imposes a drag on national well-being beyond the amount of the overpayment. To at least some degree, the short-term benefits to issuing companies and investment banks are offset by the intense cyclical nature of the IPO market.

Certain practices of underwriters facilitate IPO overpricing. These practices include stabilization, issuance of unduly positive research reports on recent IPOs, the syndicate penalty bid, and refusal to lend shares for short sales. Securities law can and should be used to discourage or eliminate these activities.
Inefficiency in the Market for Initial Public Offerings

Jonathan A. Shayne*
Larry D. Soderquist**

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I. INTRODUCTION

The market for initial public offerings ("IPOs") is inefficient. In these transactions, businesses sell their common stock to the public for the first time. On average, the price of IPO stock closes the first day of trading more than ten percent higher than the price at which underwriters began selling it that morning. Most commentators have suggested that the aftermarket trading price reflects the true worth of

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the stock, and so have concluded that underwriters underprice IPOs.\(^1\) A recent study by Loughran and Ritter, however, reveals a second, less widely understood inefficiency that coexists with the first: long-term overpricing.\(^2\) The researchers have found that IPO shares underperform non-IPO shares, if both classes of investments are tracked for several years.

As Louis Lowenstein suggests, short-term underpricing is as much a selling technique as it is a true inefficiency.\(^3\) More important is the phenomenon of long-term overpricing, because it represents a permanent transfer of wealth from buyers to sellers, and because it reduces society's total wealth by distorting the allocation of goods and services in the broader economy.

Securities law condones certain practices of securities firms that contribute to price inefficiency. The real issue for us is whether the law should now be changed, in light of the new evidence of overpricing that the Loughran and Ritter study provides. Part II looks at Loughran and Ritter's work on overpricing, earlier studies, and related anecdotal evidence of overpricing. Next, Part III discusses the negative impact of long-term overpricing on investors, the business community, and the securities industry itself. Finally, Part IV looks at the practices of securities firms that support price inefficiency, and considers how securities law should be changed to discourage such practices.

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II. EVIDENCE OF OVERPRICING

A. The Loughran and Ritter Study

The most useful work on IPOs as investments is a recent study by Loughran and Ritter. This study concludes that IPOs are poor investments, relative to stocks generally, in the long run. Our own analysis of Loughran and Ritter's results shows two underlying phenomena: (1) IPOs are made in high markets; and, beyond that (2) IPOs underperform the seasoned stocks available in such markets.

Loughran and Ritter provide data that can be used to compare the results of two hypothetical investment strategies over the period 1970 to 1990. The first strategy, buying an equivalent amount of seasoned (non-IPO) stocks annually and holding each year's investment for essentially five years, would have returned 104.2 percent beyond the initial investment. The second strategy, buying seasoned stocks directly in proportion to the number of IPOs made that year, and again holding for five years, would have returned only 66.4 percent. In other words, one would have made more money buying seasoned stocks steadily than one would have made by concentrating purchases of them during IPO seasons. Arithmetically,

5. See id. at 29 (Table 1). Loughran and Ritter present the 66.4% figure directly in the table, calculating it by weighting the returns of the seasoned firms in each year by the number of IPOs done that year. We have calculated the 104.2% figure ourselves, from the same table, by weighting the seasoned firm returns for each year equally. Both numbers are, by their nature, inflation-adjusted.

Loughran and Ritter use a sample of 4,753 IPOs—a group consisting of all or nearly all operating companies going public in the U.S. during 1970 to 1990 whose stock was included in the NASDAQ system, listed on the American Stock Exchange ("ASE"), or listed on the New York Stock Exchange ("NYSE"). See id. at 24. The matching seasoned stocks they use were also NASDAQ, ASE or NYSE stocks, and were close in market capitalization to the IPOs, but larger. Id. at 27. The issuers of the seasoned stocks had been public, without issuing any additional stock, for at least five years as of the time of each IPO. Id. Loughran and Ritter measure the performance of some stocks over less than five years, because they terminate performance tracking on December 31, 1992. Id. at 25. The data underlying the 66.4% and 104.2% figures reflect the purchase of the same amount of seasoned stock regardless of the size of the IPO. See id. at 28.

With regard to the 66.4% figure, a yearly weighting by dollar volume rather than by number of IPOs would be cleaner for our purposes. See text accompanying note 23. However, the number of IPOs in a given year and their aggregate value are correlated so closely, particularly once inflation is taken into account, that weighting by value would not yield a materially different result. See Roger G. Ibbotson, Jody L. Sindelar, and Jay R. Ritter, Initial Public Offerings, 1 J. Applied Corp. Fin. 37, 41 (Summer 1988) (Table 1) (listing the number and aggregate value of IPOs during the period 1960 to 1987).
these figures mean that the general stock market was 22.7 percent overvalued during the periods IPOs were made, relative to the market's normal value.  

Figure 1, researched and prepared by the Authors, is consistent with Loughran and Ritter's data. It shows a reasonably tight correlation between the volume of IPOs and the valuation of the stock market during the years 1970 to 1993. We measure the volume of IPOs each year as a ratio of the total dollar value of IPOs to the size of the nation's economy (measured by gross domestic product). We measure the valuation of the stock market by the multiple it accorded the dividends paid by the average stock.

6. We turn the performance figures into ones for valuation by the following logic. First, we treat the prices at which the securities traded at the end of the five-year window studied as their true value. Second, we treat any difference in performance over those five years as the expression of the market's misvaluation of those securities five years before. If, as is the case here, a dollar invested under the first strategy becomes only $1.664 after five years, and the same amount invested under the second strategy becomes $2.042, then the value received under the first strategy is only 81.5% of the amount paid, which we compute by the expression $1.664 / 2.042$. Furthermore, because buyers paid a dollar for something worth, as time revealed, only $0.815, they paid 22.7% too much, which we compute by the expression $(1.000 - (0.815)) / 0.815$.

7. This ratio by its nature corrects for the effects of inflation and real growth in the American economy.

The net dollar volume of IPOs per year is according to Securities Data Company, which keeps a computerized database that begins with the year 1970. We screened out IPOs of real estate investment trusts and closed-end investment funds, that is, of non-operating companies. Search of Database C, Securities Data Co., Newark, N.J. (Feb. 17, 1994) (using a search for items with "INDUSTRYCODE" not "RI" or "IF"). Data on gross domestic product are from Bureau of Economic Analysis, U.S. Dept of Commerce, National Income and Product Accounts, 73 Surv. Current Bus. 7, 47 (Sept. 1993) (Table 1) (showing statistics for 1970 through 1992), and from Economic Series, Value Line Investment Survey 100 (Dec. 17, 1993) (1993 estimate).

8. We base the valuation measure on information from the Value Line Investment Survey, a widely-used weekly stock research service. Value Line reports, on its cover page, the median estimated dividend yield of all the dividend-paying stocks it reviews. (The dividend yield of a stock is its annual dividend rate per share divided by its current market price per share.) Harold Levine, Director of Statistical Services at Value Line, graciously provided us with a printout of this data series covering nearly all of the subject period. We use the figure Value Line published during the first week of each quarter. We graph the inverse of Value Line's figure to reflect the fact that the market is high when dividend yields are low.
The Timing of IPOs, 1970-93

IPO Volume is a fraction representing the total dollar value of IPOs divided by gross domestic product.
Returning to Loughran and Ritter's data, it shows not only that IPOs are made at a time when the general market is high, but also a second, separate kind of overvaluation: that IPOs underperform seasoned stocks trading at the same time IPOs are made. Loughran and Ritter contrast the investment performance of IPO stocks to that of stock in seasoned firms of similar size. The seasoned firms in the sample had been public for at least five years, without issuing any stock, as of the time of each IPO. Again, the period Loughran and Ritter study is 1970 to 1990. They measure performance from the close of each IPO's first reported day of trading to the end of, essentially, a five-year window, and show that the total amount of money invested in IPOs, $117.6 billion, grew to only $157.4 billion, while an investment in seasoned stocks, made in the same amount and at the same time, grew to $196.4 billion. These results are expressed in 1991 dollars. As before, we translate the results into their arithmetic equivalent, and determine that the IPOs of this period, when purchased at the close of the first day of trading, and compared to seasoned stocks available contemporaneously, were overvalued by 24.8 percent.

To the 24.8 percent overvaluation figure, we make an adjustment to reflect the fact that buyers of the IPOs at the offering price, as opposed to the closing price, enjoyed rapid returns during the
first day of ownership. The average such initial return is 10.9 per-
cent, and when it is factored into Loughran and Ritter's results, the
degree of this contemporaneous type of overvaluation is brought down
from 24.8 percent to 12.5 percent. This leaves us with the conclusion that IPOs are doubly over-
priced. They are made at a time when the market is overpriced by
22.7 percent, relative to its historical norm, and then are priced a
further 12.5 percent over this already high-priced general market.

15. We use our own estimate here because no definitive value-weighted figure has been
published. We reach the figure 10.9% based on the data in the following table, weighting each
initial return, in the second column, by the product of gross proceeds and sample size, in the
outer columns. We use the midpoint of the gross proceeds range in all cases except for the
largest offerings, for which we use the bottom of the range.

<table>
<thead>
<tr>
<th>Gross Proceeds ($ mm)</th>
<th>Average Initial Return (%)</th>
<th>Average Aftermarket Return (%)</th>
<th>(1+a)(1+b)-1 Average Total Return (%)</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 2.99</td>
<td>27.5</td>
<td>17.9</td>
<td>50.3</td>
<td>221</td>
</tr>
<tr>
<td>3 - 4.99</td>
<td>18.0</td>
<td>20.9</td>
<td>42.7</td>
<td>296</td>
</tr>
<tr>
<td>5 - 9.99</td>
<td>11.3</td>
<td>40.1</td>
<td>55.9</td>
<td>379</td>
</tr>
<tr>
<td>10 - 14.99</td>
<td>7.5</td>
<td>46.3</td>
<td>57.3</td>
<td>211</td>
</tr>
<tr>
<td>15 - 24.99</td>
<td>10.1</td>
<td>44.0</td>
<td>55.5</td>
<td>200</td>
</tr>
<tr>
<td>25 - 353.95</td>
<td>10.0</td>
<td>39.8</td>
<td>53.8</td>
<td>219</td>
</tr>
</tbody>
</table>

The table, which covers the period 1975 to 1984, is adapted from Jay R. Ritter, The Long-Run
column (b) is calculated over a three-year holding period. Id. The period 1975 to 1984 appears,
for present purposes, to be no different from longer stretches of history in the capital markets.
See Loughran and Ritter, 50 J. Fin. at 28 (cited in note 2). Note that the smaller IPOs have
significantly higher initial returns than the larger ones.

Loughran and Ritter hypothesize that the value-weighted initial return for their sample is
10%. Id. at 38. Ritter has told the Authors that although he has not published it, he has
calculated the number before, and the 10% figure that Loughran and he assume is in line with
his calculations. Telephone interview with Jay R. Ritter (March 1, 1993). For further data on
initial returns, see Clifford W. Smith, Jr., Raising Capital: Theory and Evidence, 4 Midland
Corp. Fin. J. 6, 19 (Spring 1986) (summarizing several studies on new issue pricing).

In the typical IPO that experiences a run-up in the aftermarket price, all of the initial
increase reportedly occurs during the first ten minutes of trading. Paul H. Schultz and Mir A.
Zaman, Aftermarket Support and Underpricing of Initial Public Offerings, 35 J. Fin. Econ. 190,
206 (1994).

16. We factor an initial return of 10.9% into Loughran and Ritter's results, and calculate
that the IPOs cost $106.0 billion at their offering price. Their final worth remains $157.4 bil-
lion. The matching portfolio of seasoned stocks with this same, lower starting value would have
finally been worth $117.0 billion, because $117.6 billion / $196.4 billion = $106.0 billion / $177.0 billion. We translate the figures $157.4 billion and $177.0 billion into the 12.5%
overvaluation figure using the same logic as in note 6.

17. It is worth noting, in regard to the 12.5% figure, that this shows only that an issuer
makes its IPO on average at a premium to the general market. Whether or not it sells stock for
a premium to the price of comparable stocks in the same industry is a separate question. So it
is conceivable that, although IPOs are overpriced relative to their long-term or intrinsic value,
The second effect compounds the first, and the end result is that IPOs sell for a level 38 percent above their long-term value.18

B. Prior Studies

Earlier studies of the long-term performance of IPOs have been made, but none of these studies is nearly as useful for present purposes. Problems vary from study to study, but fall broadly into three categories. First, these studies generally follow the performance of each IPO for less than the five years covered by Loughran and Ritter. Underperformance continues steadily for that long,19 so studies covering a shorter period do not reveal the full extent of the inefficiency.

The second problem with several of these studies is that they compare the performance of IPOs to an inappropriate benchmark, typically the NASDAQ Composite Index. To a significant extent, the NASDAQ index itself has been an index of IPOs and recent IPOs, because NASDAQ was established only in 197120 and has grown rapidly during active IPO markets.21 A finding that, during the 1980s, the performance of IPOs was not much different from that of the NASDAQ index is not as newsworthy as it might seem, for no asset can outperform itself.22 A much better benchmark is the one that Loughran and Ritter use: seasoned issues comparable in size to the IPOs under study.

The third problem with many of these studies is that they weight the results of each IPO in their samples equally rather than by value, giving too much emphasis to the performance of smaller IPOs. they may sell for their industry’s going rate, or even below it. One study finds that this is not the case. Ritter, 46 J. Fin at 6, 8, 11 (cited in note 15) (finding that, during the period 1975 to 1984, IPOs significantly underperformed comparable to exchange-listed stocks matched by size and industry when followed for three years, with each observation weighted equally). Even if this were the case, however, we may still ask to what extent securities law should encourage the pricing of IPOs at a rate that is substantially in excess of their intrinsic, long-term value. We do not think a potential IPO issuer has a right to issue stock at or near the valuation multiples of comparable seasoned issues if its underwriters must use manipulative techniques in order to get that price.

18. 1.227 x 1.125 = 1.380. For example, suppose a seasoned stock trades at $10.00 under average market conditions. In IPO season, if we ignore the fact that stocks trade mostly in quarters and eighths, it would trade at $12.27, and if the stock were in a firm going public at that time, it would sell for $13.80, that is, at a 38% premium to its long-term or intrinsic $10.00 value.


21. In 1982, there were 3,284 firms with securities included in the NASDAQ system; in 1983, there were 3,901. Id. at 67.

The smaller offerings give investors a lower total return, overall, than the others. Equal weighting may be a sensible way to look at IPOs if the issue is how well an individual investor is likely to do buying equal dollar amounts in each offering, but when the question is how all investors as a class fare, as it should be in matters of public policy, one needs to take account of the fact that this class necessarily puts more money into big IPOs than small ones.

The above three considerations essentially dispense with all the relevant work other than Loughran and Ritter's, except for an


24. The equal weighting used by Loughran and Ritter that is described at the end of the second paragraph of note 5 is not problematic, because the topic there is the performance of seasoned stocks, not IPOs.

25. The studies and other works we have reviewed, other than those discussed in the text, include the following:

(1) Aggarwal and Rivoli, 19 Fin. Mgmt. 45 (cited in note 14). This study covers 1977 to 1987, id. at 46, and shows underperformance by IPOs, see id. at 52. The study suffers from all three problems identified in the text. First, it tracks IPO performance only one year, not the five years covered by Loughran and Ritter. Id. at 49. Second, it uses as its benchmark the NASDAQ Composite Index, id. at 52, not the more relevant benchmark used by Loughran and Ritter of seasoned issues comparable in size to the IPOs under study. Third, Aggarwal and Rivoli weight the results of each IPO in their samples equally rather than by value, giving too much emphasis to the performance of smaller IPOs. See id. at 52 (failing to indicate that averages reported are value-weighted).

(2) Janet Cooper Alexander, The Lawsuit Avoidance Theory of Why Initial Public Offerings Are Underpriced, 41 UCLA L. Rev. 17 (1993). Alexander, a legal commentator, tentatively suggests that IPOs are priced correctly at the offering, but bases this primarily on the study by Jay Ritter discussed below in this footnote. Thus, her conclusions are based on a study which tracked stocks only three years and used equal weighting. Id. at 70.

(3) Stephen A. Buser and K. C. Chan, NASDAQ/NMS Qualification Standards, Ohio Registration Experience and the Price Performance of Initial Public Offerings (Ohio Department of Commerce and National Association of Securities Dealers, Inc., April 1987) (on file with the Authors). Professors Buser and Chan cover 1981 to 1985 and find no risk-adjusted underperformance by IPOs. Id. at 4. The problems with the Buser and Chan study are: (1) the IPOs are tracked only two years, id. at 4, 20; (2) the NASDAQ Composite Index is the benchmark, id. at 20; and (3) the sample of IPOs includes only those that qualified for NASDAQ's National Market System, leaving out smaller issues, id. at 4, 6.

(4) Mark Hulbert, Getting Taken, Forbes 216 (June 24, 1991). This magazine article covers January 1981 through April 1991, and finds underperformance by IPOs. Id. One problem with it is that the benchmarks used are the Standard & Poor's 500 ("S&P 500") and the NASDAQ Composite. Id. at 220. The S&P 500 is not a good benchmark because it consists of large capitalization stocks, and the market sometimes values large- and small-capitalization stocks differently. The other problem with the Hulbert article is that it uses equal weighting. Id. at 216.

(5) Loughran, 33 J. Fin. Econ. 241 (cited in note 19). This article covers 1973 to 1988 and reports underperformance by IPOs. Id. at 259. However, this study uses equal weighting. Telephone interview with Tim Loughran (Feb. 11, 1995).

(6) James R. Norman and Scott DeCarlo, Picking the Best New Issues, Forbes 174 (June 20, 1994). This article covers 1984 through part of 1994 and finds overperformance by IPOs. Id. However, the article adopts the S&P 500 and NASDAQ Composite as benchmarks, fails to
influential 1975 study by Roger G. Ibbotson. Reviewing IPOs made during the period 1960 to 1969, Ibbotson suggests that they were underpriced, not overpriced, relative to the market in the long term. The study is flawed from our perspective, however, because it examines the performance of only one randomly-selected IPO for each month covered. The sample this technique produces overweights, very substantially, the importance of those times when IPOs were few, but priced relatively low. Still, it is worth noting that this study was so persuasive in its day that it chilled other research for a decade.

C. Market Commentary

One should take the overpricing evidence from Loughran and Ritter all the more seriously because it echoes what knowledgeable practicing investors have said about IPOs, or about the more general class of newly issued securities. Warren E. Buffett, whose reputation for financial insight is well-deserved, has written:

account for dividends and apparently uses equal weighting. Id. The methodology is otherwise not reported in sufficient detail. Id.

(7) Ritter, 46 J. Fin. 3 (cited in note 15). Ritter covers the years 1975 to 1984, id. at 6, and finds underperformance by IPOs, see id. at 11 (graph showing this result). This Ritter study tracks IPOs for only three-years, id. at 3, and also uses equal weighting, id. at 6.

(8) Richard L. Stern and Paul Bornstein, Why New Issues Are Lousy Investments, Forbes 152 (Dec. 2, 1985). This article covers January 1975 through June 1985, id., and finds underperformance by IPOs over that period, see id. The first problem with the study is that it uses as its benchmark the S&P 500. Id. Beyond that, the article fails to report the methodology used in the study in sufficient detail.


27. Id. at 236.

28. Id. at 265. More specifically, he shows that the IPOs rose to an 11.4% premium from their offering price in their first month of trading, id. at 246, and that from this higher price they were priced efficiently and neither outperformed nor underperformed the market, id. at 265. The size of the sample is 120, see id. at 237 n.a, and the returns are adjusted for risk, id. at 239-41. Ibbotson follows the performance of his sample for up to five years. Id. at 237.

29. Id. at 236.

30. That IPOs made during slow IPO markets perform significantly better, that is, are priced lower, than those made during fast ones, is clear from the performance figures that Loughran and Ritter present in their study. See Loughran and Ritter, 50 J. Fin. at 29 (Table I) (cited in note 2). For evidence that most IPO dollars are raised in a relatively few number of years when the market is priced high, see Figure 1 and accompanying text.

The range of IPO activity during the period Ibbotson covered was great: in 1969, the busiest year, there were 771 IPOs, while in 1963, the slowest, there were only 82. Ibbotson, 2 J. Fin. Econ. at 237 (cited in note 1).

31. See note 25 for the compendium of studies from 1975 and later.

32. Buffett is the chairman of Berkshire Hathaway Inc., a holding company with diverse activities, including insurance and reinsurance. Berkshire Hathaway Inc., 1992 Annual Report, inside front cover (1993) ("Berkshire Hathaway Report"). His primary role is to make investment and other capital allocation decisions for Berkshire. See id. His investment performance has been exceptionally good, earning those who have invested with him as either limited
[A]n intelligent investor in common stocks will do better in the secondary market than he will do buying new issues.

The new-issue market is ruled by controlling stockholders and corporations, who can usually select the timing of offerings or, if the market looks unfavorable, can avoid an offering altogether. Understandably, these sellers are not going to offer any bargains. Indeed, selling shareholders are often motivated to unload only when they feel the market is overpaying.

Benjamin Graham, Buffett's former teacher and employer, and the founder of modern security analysis, has given similar advice:

Our one recommendation is that all investors should be wary of new issues—which means, simply, that these should be subjected to careful examination and unusually severe tests before they are purchased.

There are two reasons for this double caveat. The first is that new issues have special salesmanship behind them, which calls therefore for a special degree of sales resistance. The second is that most new issues are sold under "favorable market conditions"—which means favorable for the seller and consequently less favorable for the buyer.

The academic community may have been slow to see that IPOs are relatively poor investments, but to professional investors, the idea is not new, at least with regard to new issues generally.

Another investor worth listening to is Peter Lynch, who managed Fidelity Magellan Fund between 1977 and 1990, and during that time established one of the best mutual fund performance records in the country.

Often with the exciting longshots the pressure builds to buy at the initial public offering . . . or else you're too late. This is rarely true, although there


35. Gone With the Winds, Forbes 27, 27 (April 15, 1976).
38. See id. (stating "Thanks to a run of inspired stock-picking, especially during the six years to 1982, Magellan led America's ten-year fund-performance rankings for most of the 1980s").
are some cases where the early buying surge brings fantastic profits in a single day.

IPOs of brand-new enterprises are very risky because there's so little to go on. Although I've bought some that have done well over time . . . . I'd say three out of four have been long-term disappointments.

I've done better with IPOs of companies that have been spun out of other companies, or in related situations where the new entity actually has a track record . . . . These were established businesses already, and you could research them the same way you research Ford or Coca-Cola.  

We take this to mean that speculative issues account for a disproportionate amount of the IPO overpricing problem.

III. IMPACT OF OVERPRICING

Gross proceeds from IPOs average $5.0 billion per year.  This makes the average annual overpayment $1.4 billion, using again the 38 percent estimate of overpricing.  The beneficiaries of this overpayment are those who own the firms prior to the IPOs.

The figure $1.4 billion probably understates the amount of wealth redistributed. Flipping, the practice of buying IPO shares at the offering price and quickly reselling them in the aftermarket, takes advantage of the tendency of IPOs to jump in price during their first day of trading. If the relatively sophisticated investors who know about this phenomenon buy shares at the offering, and relatively unsophisticated investors buy from them in the aftermarket, there is a second transfer of wealth over and above the transfer that takes place at the offering price.

40. IPO issuers raised a total of $106.0 billion, in 1991 dollars, during the period 1970 to 1990. See notes 9-16 and accompanying text.
41. The intrinsic or long-term value of the IPOs is $3.6 billion, because $3.6 billion x 1.38 = $5.0 billion. The overpayment is market value less this long-term value: $5.0 billion - $3.6 billion = $1.4 billion. For derivation of the 38% figure, see Part II.A.
42. Even if it is the firm selling shares rather than the prior, private owners, these owners benefit. This can be seen most clearly in the hypothetical case of a firm that sells an infinitesimally small percentage of its equity for an infinitely large price—the ultimate overpriced IPO. In such a case, the firm has become more valuable because of the cash infusion, and a formerly private owner's percentage of ownership has not been reduced in any significant way. After such an IPO, this person owns the same percentage of a more valuable firm, and so enjoys a pure transfer of wealth, even though it is the firm that actually sold the shares. There may be a certain amount of overlap that would reduce the size of the transfer. Someone who is an IPO seller through the venture capital investments of his or her pension fund may be an IPO buyer individually.
43. See Anthony J. Correra, Block that Sale! War on IPO Flippers Hurts Little Guy, Barron's 43, 43 (June 1, 1992) (defining "flippers").
Beyond its redistributive effect, overpricing causes a misallocation of economic resources, and this imposes an absolute social cost. It encourages venture capitalists, investment bankers, lawyers, accountants, and others in business to devote themselves to capturing the profit to be made on overpayments rather than to real economic activity. Society is poorer by the loss of the real goods and services that these parties would produce if they were otherwise engaged.

We also believe that IPO market inefficiency has a serious negative impact on privately-held companies that may wish to go public, as well as on securities firms that do underwritings. For both private companies and the investment banking industry, the extra short-term gains and profits that can flow from overpricing must be weighed against a less happy effect: the highly cyclical nature of the IPO market. The most serious problem with the IPO market from a business standpoint is that it is boom or bust. As Figure 1 shows, it races full ahead, in a frenzy, until it comes almost to a halt. Privately-held companies often find it impossible to do an IPO, and securities firms see their investment banking departments go from eighteen-hour days to idleness overnight. Everyone would be better off if the ups and downs of the IPO market could be moderated, and we believe it likely that market inefficiency contributes to the cyclical nature of the IPO market. The exact mechanism behind the cyclical nature is probably largely psychological, but both long-term overpricing and short-term underpricing seem to play an important part. We expect that if IPOs were priced closer to their long-term value, they would be done successfully at more points in the market cycle, and not just when the market is “hot.”

IV. PRACTICES OF UNDERWRITERS AND PROPOSED REFORMS

Current law condones several practices of underwriters that support the price of IPOs. Included in these practices are stabilization, the issuance of research on recent IPOs, and the syndicate penalty bid. Securities law should take a new approach to each.

A. Stabilization at the Offering

Stabilization pegs the price of a security so that it will not drop below a certain level. The Securities and Exchange Commission ("Commission") has described stabilization as "the buying of a security
for the limited purpose of preventing or retarding a decline in its open
market price in order to facilitate its distribution to the public." As
an example, in an IPO in which shares are being sold at a fixed price
of $20, the lead underwriter, on behalf of the underwriting syndicate,
would stabilize price by maintaining, during the distribution, an offer
to buy shares at the offering price. The bid keeps the price of the
stock from dropping, if demand is weak, below the offering price, and
thus creates the appearance that the issue is more desirable to the
market than it actually is. This attracts buyers. It should not, logically, but the reality is that it does.

The practice is inarguably manipulative. Were it not for the
specific exception allowed in Section 9(a)(6) of the Securities
Exchange Act of 1934 ("Exchange Act") and Rule 10b-7, stabilization
would be illegal under the anti-manipulation provisions of the
Exchange Act.

The current law on stabilization was not written with much
conviction. Indecisiveness is apparent in a 1934 report of the House
Committee on Interstate and Foreign Commerce, which states, "The
evidence as to the value of pegging and stabilizing operations,
particularly in relation to new issues, is far from conclusive." The
issue was delegated to the discretion of the Securities and Exchange
Commission in Exchange Act Section 9(a)(6) because, the report con-
tinues, the committee wanted to proceed cautiously.

In 1940, the Commission issued a statement on the subject of
stabilization that remains the predominant account of its

45. One commentator has observed that stabilization may explain the tendency of IPO
stocks to finish their first day of trading at a price higher, on average, than the offering price.
If, absent stabilization, such initial returns would be distributed randomly about zero and with
a mean of zero, then stabilization would make the mean positive by censoring the negative side
of the distribution. See Judith S. Ruud, Underwriter Price Support and the IPO Underpricing
47. 17 C.F.R. § 240.10b-7 (1994).
48. The main such provisions are Exchange Act §§ 9 and 10(b), 15 U.S.C. §§ 78i & 78j(b)
(1988), and, under Section 10(b), Rule 10b-5, 17 C.F.R. § 240.10b-5 (1994). See also text
accompanying notes 88-92.

It should be noted that there are limits on and special requirements relating to stabilization.
One is that it may not be at a price higher than the offering price. Rule 10b-7(j), 17 C.F.R. §
240.10b-7(j) (1994). Another is that if the registrant or any of the underwriters knows or has
reason to believe that stabilization may take place, this must be disclosed in the prospectus.
Regulation S-K, Item 502(d)(1), 17 C.F.R. § 229.502(d)(1) (1994). (It is doubtful that many
investors understand the disclosure regarding stabilization, and those who do have no practical
way of finding out whether or not stabilization is actually taking place).
50. Id.
There the Commission noted: "There are many who feel that stabilizing, since it is a form of manipulation, is inherently fraudulent and hence should be wholly prohibited under all circumstances." Such voices were in a minority on the Commission, however, which decided to continue to allow stabilization, a standard underwriting practice then as now. The Commission cited, most notably, its concern (which after a decade of economic depression must have been acute) for the "needs of industry for capital—needs which it has not been demonstrated can be served without stabilizing." It noted also that it had no proof that the arguments underwriters had made in defense of the practice were unsound. The Commission added that, at some time in the future, with "study and care," it might be able to come up with a better solution.

Commissioner Healy wrote an unequivocal dissent. He believed that Congress had meant to outlaw stabilization, but backed down under the "strenuous fight" it faced in doing so, presumably from underwriters. The essence of his dissent was simple: "If an underwriter cannot distribute at the offering price without resort to artificially maintaining the price, he should not distribute at that price." In his view, the protection of investors and the public interest are identical. He did not think that legitimate industry needed to resort to deception in order to meet its capital needs.

The succeeding years of stock market history support Commissioner Healy's view. The statistics we now have on the long-term performance of IPOs as investments show rather clearly that IPOs sell for more than they are worth in the long run, and make it doubtful that stabilization is a beneficial or innocuous practice. Abolition of stabilization is an option, but a modest approach to reform would be to amend Rule 10b-7 to allow stabilization in IPOs only at a price that is, say, 5 percent or more below the offering price. An offering at $20.00, for example, could be stabilized only at $19.00 or

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52. Rule 10b-7, although it came fifteen years later, was essentially a restatement of the principles the Commission had already been applying. Wm. Ward Foshay, Market Activities of Participants in Securities Distributions, 45 Va. L. Rev. 907, 918-19 (1959).
54. Id. at 10,974.
55. Id.
56. Id. at 10,975.
57. Id. at 10,978.
58. Id. at 10,980.
59. Id. at 10,981.
60. Id.
less. Under such a rule, underwriters would be under greater pressure to price an issue low enough to attract buyers on fundamental grounds, but would still have the power to stanch a serious panic.

B. Price Support in the Aftermarket

There are several reasons why an underwriter would like to support the aftermarket price of an IPO. The first is that the more highly valued an issuer’s stock is in the market, the more likely the issuer is to do an offering. If the price of stock from a recent IPO were supported, this would increase the chance that the issuer would do another offering with the underwriter of the IPO, generating more underwriting revenue. Second, price support preserves reputation with brokerage customers by making sure that their investments do well at least in the short run. Third, the underwriter faces potential liability under Section 11 of the Securities Act of 1933 (“Securities Act”) for rescissory damages based on a material misstatement or omission in the registration statement, especially during the first year after the offering. As long as the price of the security stays at or above the offering price, Section 11 is not a concern because there are no damages on which a plaintiff could sue the underwriter. Keeping the trading price up, then, is a guard against the threat of Section 11. A corollary idea to all of the foregoing is that if underwriters could not support aftermarket prices, there would be less overpricing. Secondary offerings would occur, at the choice of each issuer, either at lower prices or not at all, and underwriters would price initial public offerings lower in order to keep brokerage customers happy and, perhaps, plaintiff’s attorneys at bay.

1. Research Coverage

Perhaps the most subtle issue with regard to aftermarket support is the extent to which securities law should allow underwriters to distribute research reports on companies they have recently taken public. The concern here is that underwriters may write unduly positive reports to support aftermarket prices. The anecdotal evidence suggests that this takes place. Traders, according to the Wall Street Journal, refer to an underwriter’s research report on a recent IPO as

63. If the market price drops below the price in the IPO, especially shortly after the offering, a suit under Section 11 is virtually a certainty.
a "booster shot,"\textsuperscript{64} and one chief research analyst told the newspaper, "I see a lot of firms that want investment banking business, and they think their job is to say, 'Buy, buy, buy.'"\textsuperscript{65} Separately, another analyst has said that investment banks prefer the interests of present and potential underwriting clients to those of brokerage customers, even if that means recommending an overvalued stock for purchase.\textsuperscript{66} The reasons, this analyst said, are that an investment bank that supports a company with research coverage stands a better chance of getting underwriting business from it in the future, and that underwriting is a more lucrative business than brokerage.\textsuperscript{67} Again, the most likely issuer to provide underwriting business is one whose stock is valued highly in the market. News reports have recounted specific instances in which investment bankers have pressured analysts to write positive reports.\textsuperscript{68}

Statistics confirm the bias toward optimism both in and outside the underwriting context. One study finds that the earnings estimates analysts publish are, on average, significantly too high.\textsuperscript{69} Another, which classifies brokerage house recommendations on a sample of stocks during the period 1988 to 1991 as either "buy," "hold," or "sell," finds that brokerage firms without an underwriting relationship with the company in question issued "buys" in 56.0 percent of cases, "holds" in 37.0 percent, and "sells" in 7.1 percent.\textsuperscript{70} When covering underwriting clients, firms issued "buys" in 71.5

\textsuperscript{64} William Power, \textit{Why Hot, New Stocks Get Booster Shots}, Wall St. J. C1, C1 (Feb. 10, 1993). Power notes that not long after an IPO, "a positive research report is almost sure to appear, boosting the stock." Id.

\textsuperscript{65} Id. at C2.

\textsuperscript{66} Telephone interview with a research analyst at an investment bank (Feb. 26, 1993) (under condition of anonymity). Compare Richard L. Stern and Charles M. Bartlett Jr., \textit{But the Client Is Delighted}, Forbes 130, 130 (April 3, 1989) ("Too often, when an underwriter brings a stock to the public, its chief concern is the company issuing it, not the small investor buying it").

\textsuperscript{67} Telephone interview with a research analyst (cited in note 66).


\textsuperscript{69} Patricia C. O'Brien, \textit{Corporate Earnings and the Macroeconomy} 2, 23 (Sept. 1993) (unpublished University of Michigan manuscript, on file with Authors). Professor O'Brien's study is comprehensive: the period covered is January 1976 through June 1988, the earnings estimates checked are apparently all those in the I/B/E/S Summary database, the number of estimates is 12,734, and the number of firms whose earnings are estimated is 1,752. See id. at 6-7.

\textsuperscript{70} John R. Dorfman, \textit{Brokerage Firms That Underwrite a Stock Issue Usually Have Kind Words for It, Study Shows}, Wall St. J. C2, C2 (July 19, 1993) (reporting conclusions reached by Professor Maureen McNichols and Hsiou-wei Lin, both of the Graduate School of Business, Stanford University). According to Dorfman, the study covered "about 300" stocks. Id.
percent of cases, "holds" in 27.8 percent, and "sells" in only 0.7 percent. This bias toward optimism has real consequences for investors. Odd as it may seem, among the stocks making up the Standard & Poor's 500 Index during the period 1970 to 1979, those that were the most highly followed by research analysts returned an average of 9 percent per year, while the next most followed class returned 13 percent per year, and the least followed, 16 percent per year. So "research" is somewhat of a misnomer. The value of it seems to be negative.

Securities law takes some account of this problem, but does not go as far as it might. After an IPO is begun, there is a "quiet period" during which no securities firm will publish a research report about the issuer because the report might be considered an illegal prospectus. Under Securities Act Section 4(3) and Rule 174, this period is twenty-five calendar days for most IPOs, ninety days for the smaller ones. In light of the evidence that IPOs are overpriced, and the likelihood that research reports facilitate this overpricing by serving as a form of aftermarket price support, we believe the quiet period should be longer—at least ninety days, and perhaps as long as a year.

The Commission could extend the quiet period to ninety days for all IPOs simply by rewriting Rule 174. This action would not cure the overpricing Loughran and Ritter observe, however, because the Commission reduced the quiet period from ninety to twenty-five days

71. Id.
72. Avner Arbel and Paul Strebel, Pay Attention to Neglected Firms!, 9 J. Portfolio Mgmt. 37, 38 (Winter 1983). The returns include dividends. Id. While correlated with the tendency of smaller stocks to outperform larger ones, the effect of neglect by analysts persists independently, for the most part. See id. at 39. Arbel and Strebel cover the market for seasoned issues rather than IPOs, but there is no apparent reason to expect research to have a different effect in the IPO market.
76. Section 4(3) creates an exemption from § 5 for dealers. However, this exemption does not cover transactions that take place prior to a certain time after, essentially, the date on which the security was first bona fide offered to the public. Section 4(3) makes this period ninety days for IPOs and forty days for other offerings, but gives the Securities and Exchange Commission authority to shorten the period further by rule or order. With regard to IPOs, Rule 174 reduces the period to twenty-five calendar days when the security is exchange-listed or traded on NASDAQ.
only in 1988, close to the end of the period Loughran and Ritter study. Going longer than ninety days would require Congress to amend Section 4(3).

An objection to lengthening the quiet period by amending Rule 174 or Section 4(3) is that such action would lengthen the prospectus delivery period, and thus would impose increased costs of printing and delivery on dealers to no particular end. To avoid those costs, Congress and the Commission might better lengthen the quiet period through a new, directly targeted statutory provision or rule that would not affect the prospectus delivery period.

2. Syndicate Penalty Bid

Another form of aftermarket price support that we suspect contributes to market inefficiency is the syndicate penalty bid, which is a matter of contract among the underwriters and the selling group. They agree that if shares sold as part of the offering are resold into the market within a specified period, the underwriter or agent that originally sold the shares will give back to the syndicate the profit spread or commission on those shares, or in some cases, 150 to 200 percent of that amount. The penalty period can run up to a month, but five trading days appears to be typical. The effect is to encourage brokers to avoid placing shares with buyers who might "flip" the shares, or to persuade their customers not to sell until the


78. Regarding this study, see Part IIA.


80. See generally Phillip Maher, Winning the War on Flippers Has Brokers Howling in Pain, 56 Investment Dealers' Dig. 6 (May 7, 1990);Correra, Barron's at 43 (cited in note 43); Hal Lux, SEC Panel Endorses New 'Flipping' Surveillance, 58 Investment Dealers' Dig. 9 (June 1, 1992).

81. Maher, 56 Investment Dealers' Dig. at 7 (noting that one firm imposed a 150% penalty); Correra, Barron's at 43 (reporting that some brokers have lost sums equal to double their commission).

To track flipping, the underwriters deliver the shares physically rather than electronically. If the syndicate buys back shares in the aftermarket, the managing underwriter can trace which member sold them via numbers on the certificate.

82. Gretchen Morgenson and Steven Ramos, Danger Zone, Forbes 66, 68 (Jan. 18, 1993).

83. See Correra, Barron's at 43 (cited in note 43) (noting that "[a] syndicate penalty bid may be in force for five trading days, although some have stretched out over an amazing 30 days").

84. For a definition of flipping, see text accompanying note 43.
penalty period has passed. By constricting aftermarket supply, the practice supports the trading price.

There is some sense among those in the securities business that the practice is less than fair. After his firm was penalized $5,000, which, we admit, would tend to introduce some bias, a regional syndicate manager told Investment Dealers' Digest that the practice manipulates prices higher than they otherwise would be. He said: "It's really unfair. It's restraint of trade... Customers don't know about it. The prospectus doesn't mention 30 days. Sure it says the underwriter will stabilize, but this was not the intent. The stabilization period used to be one day, maybe two—but 30 days later—come on!" Likewise, some brokers have complained to the Securities and Exchange Commission.

To eliminate use of the syndicate penalty bid, the Commission and the courts could construe statutes and regulations that already prohibit manipulation as extending to it. Securities Act Section 17(a) is broad enough to support such a reading, and so are Exchange Act Section 10(b) and Rule 10b-5. Exchange Act Section 15(c)(1) and Rule 15c1-2 also could be so interpreted, although they apply only to the over-the-counter market. The Commission could also pass an explicit prohibition as a new rule under Exchange Act Section 10(b). At the very least, the Commission should pass a rule requiring that use of the syndicate penalty bid, like stabilization, be disclosed in the prospectus.

3. Refusal to Lend Shares for Short Sales

In order to sell a stock short, that is, to sell a certain number of shares that one does not already own, one must borrow these shares for delivery to the purchaser. The hope of the short-seller is to repay the lender of the delivered shares in the initial transaction, whoever that might be, with new shares bought later, at a lower price. If that hope is realized, the short-seller pockets a profit. If the price rises, on

85. Maher, 56 Investment Dealers' Dig. at 7 (cited in note 80).
86. Id.
87. Id. Also, an investment adviser from New Mexico criticized the practice as "anti-competitive" in an article in Barron's, and said that his complaints to the Commission had been passed along to the National Association of Securities Dealers. Correra, Barron's at 43 (cited in note 43).
the other hand, the short-seller bears the loss. The borrowing and delivery of shares is invisible to nearly all short-sellers because their brokerage house handles it for them. If there are no shares available for borrowing, the brokerage house will refuse to execute a short sale. After an IPO, a number of shares are in the margin accounts of customers of the underwriters and thus available to be lent to short-sellers under the traditional terms of margin account agreements, yet often the underwriters choose not to lend the shares. This prevents short selling, making the aftermarket price of the stock higher than it otherwise would be. Securities law should not tolerate securities firms having different policies as to the lending of shares based on whether or not the firm was an underwriter of the issue in question. The means available to courts and the Commission to restrain or eliminate this practice are essentially the same as discussed above with respect to the syndicate penalty bid.

4. Other Practices

There are three other simple but effective techniques of aftermarket price support that some underwriters use. The first, which is a matter for enforcement rather than law- or rule-making, is simply refusing to execute a customer's order to sell. The second, a variation on the first, is allowing a broker to sell a customer's shares only once the broker has found a buyer to take the other side of the trade at a price acceptable to the underwriter. Presumably, neither of these practices is widespread, at least among larger underwriters. Much more widespread are understandings between the purchaser of IPO shares and the underwriter that, in exchange for being allotted shares at the offering price, the purchaser will not sell the shares for

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93. For a good account of the essentials of short sales, see Pessin, Illustrated Encyclopedia of the Securities Industry at 436 (cited in note 79).
94. A limiting factor is that, regardless of the account agreement, the value of the shares borrowed may not exceed the debit balance of the account from which the shares are borrowed.
95. Morgenson and Ramos, Forbes at 89 (cited in note 82).
96. See Part IV.B.2.
97. For an instance in which allegations of this sort were reportedly made, see Ann Hagedorn and Anne Newman, Highflying Broker: Blair New Issues Defy Gravity—With Help from J. Morton Davis, Wall St. J. A1, A8 (May 6, 1991).
98. See Sonja Steptoe, SEC Action Against Firm Shows Pitfalls for Penny-Stock Investors, Wall St. J. C1, C6 (April 17, 1989) (stating that “customers weren’t told that the firm wouldn’t allow them to sell their holdings unless and until a broker found a buyer for them, the SEC claims”).
some period.\textsuperscript{99} This last practice could be controlled by the same means discussed above with regard to the syndicate penalty bid,\textsuperscript{100} although enforcement would be difficult because of the largely unspoken nature of these understandings.

V. CONCLUSION

Recall that IPOs are made at a time when seasoned stocks are overvalued by 22.7 percent;\textsuperscript{101} that IPOs sell for a 12.5 percent premium on top of that;\textsuperscript{102} that these two effects, taken together, make IPOs overpriced by 38 percent;\textsuperscript{103} and that the total overpayment in IPOs is about $1.4 billion annually.\textsuperscript{104} Recall also that IPOs jump over 10 percent in price during their first day of trading.\textsuperscript{105} These inefficiencies work against the investing public, who earn inadequate returns from IPO investments in the long run. The allocation of goods and services in the broader economy, moreover, is distorted by the draining of resources into efforts to capture overpricing. Companies that go public and the securities industry benefit from overpricing in a sense, but they also suffer from the intense cyclicality of the IPO market, with which the pricing inefficiencies are associated.

Underwriters make use of certain practices that are essentially manipulative, and that allow them to set offering prices in IPOs higher than they otherwise would be. Securities law should not condone these practices. Underwriters should have less power to stabilize IPOs. The quiet period, during which research reports are not distributed, should last at least ninety days following an IPO, and perhaps even a year, rather than the current twenty-five days. Less fundamental changes in the IPO process would help also. The syndicate penalty bid should be banned or at least publicly disclosed, and securities firms should be required to make IPO shares available for short sales as freely as other shares.

\textsuperscript{99} Morgenson and Ramos, Forbes at 67 (cited in note 82). Industry officials confirm that this goes on. Telephone interview with the syndicate manager of an investment bank (March 1, 1993) (under condition of anonymity); Telephone interview with a research analyst (cited in note 66).

\textsuperscript{100} See Part IV.B.2.

\textsuperscript{101} See note 6 and accompanying text.

\textsuperscript{102} See note 16 and accompanying text.

\textsuperscript{103} See note 18 and accompanying text.

\textsuperscript{104} See note 41 and accompanying text.

\textsuperscript{105} See note 15.