AFTERMARKET PRICE PERFORMANCE OF 1978 NEW ISSUES

by

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I. Introduction

The new issues securities market has been an important source of funds for young, fast growing companies. Its continued success as a funding vehicle is largely dependent upon its ability to provide adequate compensation to investors for the additional risk they are assuming when purchasing securities in an initial public offering. The purpose of this paper is to analyze the stock price performance of companies that went public in 1978, and draw conclusions about the degree to which investors in new issues were compensated for their risk.

Much of the analytical methodology is based on Craig Simmons' "Immediate, Short, and Longer Run Performance of New Issues,"[1] which reviewed the performance of initial public offerings in 1971. On average, the Simmons report found that the long run performance of new issues was considerably worse than the market as a whole. Since the overall market trend in 1971 was relatively flat when compared to the steadily rising indexes of the early and late 1960's, the report implicitly raised the question of whether a market for initial public offerings could continue to exist in anything other than a "go-go" economy. Initial public offerings almost dried up during 1973 and 1974, providing one answer to the report's implied question. However, when looking at the unequivocal success of the 1978 new issues, in spite of the lack of a hot market, one begins to wonder if the very nature of the new issues market has changed since the Simmons report. Several findings of this paper provide evidence

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that it has.

To compare the 1978 new issues market with the 1971 market examined by Simmons, this study will focus on three areas of new issues price performance:

1) Immediate price performance--the difference between the issue price and the first price recorded on the secondary market. This initial premium primarily benefits the underwriters because it represents a cushion against loss on their committed funds. While the premium is a real cost to the issuing company because it diminishes the proceeds per share issued, it may provide the long term benefit of enhancing the acceptance of later issues because the corporation might gain a reputation for "leaving something on the table" for investors. In light of the initial premium's function as a risk factor, it will be expected to vary directly with the riskiness of the issue.
2) Medium and long term price performance, and the extent to which the riskiness of lower quality issues is compensated for by a higher rate of price appreciation.
3) The degree to which the medium and long term price performance of new issues exceeds the rate of price appreciation of the market as a whole. Since investors assume greater risk by investing in an unproven security rather than in a stock that has demonstrated its capacity to survive, it is expected that the price appreciation of new issues should exceed that of alternative equity investments.

This study will also focus on two areas not covered by the Simmons report:

1) The price performance of new issues after excluding the effects of the initial premium. In view of the generally greater risk of new issues, this net price appreciation for new issues would be expected to be greater than that for seasoned issues.

2) Short, medium, and long term price appreciation of new issues when disaggregated according to type of underwriting, size of revenues, line of business, and initial valuation per share.

II. Implementation

The sample for this study consists of the 41 initial public equity offerings that were made in 1978, as reported in Going Public[2] and Standard & Poor's Daily Stock Price Record: Over The Counter. Classification of the stocks according to type of underwriting, company revenues, line of business, and valuation of the offering was made according to information provided by Going Public. Six aftermarket prices per stock were obtained from the Daily Stock Price Record, and they are: the closing bid price on the first day the stock is traded on the secondary market; one, three, and six months following the first day of secondary trading; November 30, 1979, and April 8, 1980. Stock prices were adjusted for all recorded splits, and shares that were dropped from trading on any recorded marketplace were considered to be valueless. The latter factor could cause the results to be biased downwards, because shares that apparently have no market may still have some value.

Perhaps the first point of comparison between the 1978 new issues and the 1971 new issues which Simmons studied is in the number of offerings: the 1971 study encompassed 170 issues, while in 1978 there were only 41 qualified new issues. It is possible that much of the difference in results is attributable to the increased caution and selectivity of underwriters in the latter half of the 1970's.

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2. Howard & Company, Philadelphia, PA. Published Quarterly. While the periodical reports 46 initial offerings in 1978, only the 41 offerings that had established secondary markets in that year were included.

III. Analysis of Aggregate Price Performance

As can be seen in Table 1, there was a 59% probability that a new issue would close at a premium on the first day of trading on the secondary exchange, a figure almost identical to the incidence of initial premiums reported by Simmons. However, the probability of a high initial premium was greater in 1978 than in 1971: 17% of the new issues in 1978 reached initial premiums of over 50%, compared to 12% in 1971; and fully 39% of the 1978 issues showed premiums greater than 25%, compared to only 25% in 1971. The table shows a surprising consistency over the period in the number of issues trading at a premium, except that there is a steady migration toward a premium of over 100%: by April 8, 1980, 34% of the issues were in this category. This is in sharp contrast to the premium trend of the 1971 new issues. As the recession gained strength in late 1972, fewer stocks were maintaining their earlier premiums, and by October, 1973, only 9% of the stocks were trading at a premium.

Table 2 examines whether the initial premium or discount is an accurate forecast of the long term performance of the stock. The table disaggregates subsequent price appreciation according to the size of the initial aftermarket premium. In general, it appears that the issues having an initial premium greater than 50% were overvalued by the market: 57% of the stocks in the two relevant categories were selling below their first market price by April, 1980. In the case of an initial premium of less than 51%, however, the market's judgement of the stock's long term potential seems to have been more accurate: over half of the stocks in these two categories were trading at or above their first market price by April, 1980. The over-

Table 1

Distribution of Price Appreciation of New Issues

at Selected Intervals After Offering

Price Appreciation of Issue	First Dealer Quotation		1 Month Dealer Quotation		3 Month Dealer Quotation		6 Month Dealer Quotation		Nov. 30 '79 Dealer Quotation		Apr. 8 '80 Dealer Quotation	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
More than 100%	3	7.3	3	7.3	2	4.9	6	14.6	13	31.7	14	34.1
51% - 100%	4	9.8	7	17.1	9	22.0	5	12.2	5	12.2	4	9.8
26% - 50%	9	22.0	4	9.8	7	17.1	10	24.4	3	7.3	5	12.2
1% - 25%	8	19.5	9	22.0	6	14.6	8	19.5	7	17.1	3	7.3
At or Below Offering Price	17	41.5	18	43.9	17	41.5	12	29.3	13	31.7	15	36.6
Totals	41	100	41	100	41	100	41	100	41	100	41	100

Table 2
Aftermarket Price Activity of Common Stock New Issues
At Selected Intervals By Initial Premium Classification

Issue Premium	Subsequent Premium	1 Month Quotation No.	1 Month Quotation %	3 Month Quotation No.	3 Month Quotation %	6 Month Quotation No.	6 Month Quotation %	Nov. 30 '79 Quotation No.	Nov. 30 '79 Quotation %	Apr. 8 '80 Quotation No.	Apr. 8 '80 Quotation %
Over 100% Appreciation	Over 100%	1	33.3	1	33.3	2	66.7	2	66.7	1	33.3
	51-100%	2	66.7	2	66.7	-	-	-	-	1	33.3
	26-50%	-	-	-	-	-	-	-	-	-	-
--3 issues--	1-25%	-	-	-	-	1	33.3	-	-	1	33.3
	At or Below Offering Price	-	-	-	-	-	-	1	33.3	-	-
51-100% Appreciation	Over 100%	1	50.0	1	25.0	2	50.0	2	50.0	2	50.0
	51-100%	1	25.0	2	50.0	-	-	-	-	-	-
	26-50%	1	25.0	-	-	1	25.0	-	-	-	-
--4 issues--	1-25%	-	-	1	25.0	-	-	1	25.0	-	-
	At or Below Offering Price	-	-	-	-	1	25.0	1	25.0	2	50.0
26-50% Appreciation	Over 100%	-	-	-	-	-	-	2	22.2	4	44.4
	51-100%	4	44.4	2	22.2	1	11.1	1	11.1	1	11.1
	26-50%	1	11.1	2	22.2	3	33.3	1	11.1	1	11.1
--9 issues--	1-25%	2	22.2	1	11.1	2	22.2	2	22.2	-	-
	At or Below Offering Price	2	22.2	4	44.4	3	33.3	3	33.3	3	33.3
1-25% Appreciation	Over 100%	-	-	-	-	1	12.5	5	62.5	4	50.0
	51-100%	-	-	1	12.5	1	12.5	-	-	1	12.5
	26-50%	1	12.5	3	37.5	2	25.0	-	-	-	-
--8 issues--	1-25%	5	62.5	1	12.5	3	37.5	2	25.0	2	25.0
	At or Below Offering Price	2	25.0	3	37.5	1	12.5	1	12.5	1	12.5
At or Below Offering Price	Over 100%	-	-	-	-	1	5.9	2	11.8	2	11.8
	51-100%	-	-	2	11.8	3	17.6	4	23.5	2	11.8
	26-50%	1	5.9	2	11.8	3	17.6	2	11.8	4	23.5
	1-25%	2	11.8	3	17.6	3	17.6	2	11.8	-	-
-17 issues-	At or Below Offering Price	14	82.4	10	58.8	7	41.2	7	41.2	9	52.9

all performance of 1978 new issues having an initial premium was far superior to that of the 1971 issues: 90% of the 1971 issues with an initial premium were trading below their first aftermarket price by October, 1973. Both surveys indicate that stocks having an initial discount or no premium in the aftermarket are likely to remain as such over the long term, although the odds of subsequent price improvement were considerably greater in 1978 than in 1971. The Simmons report shows that by October, 1973, 93% of the stocks which opened at a discount continued to sell below the issue price, while in 1978 53% of the stocks opening at a discount had not migrated to a premium category by April, 1980 (although over half were at a premium from the 6 month quotation through November 30, 1979).

IV. Analysis of Comparative Price Performance

As seen in Table 3, the average initial aftermarket premium for the 1978 new issues was 25%, or double the 1971 initial premium of 13%. It should be noted that this table calculates the rates of price appreciation from the sum of the individual rates, while the results of the Simmons report may be biased downwards because it computes the aggregate rates from the unweighted sum of prices at each quotation period.

As was the case in the Simmons report, the initial price appreciation of the apparently higher risk issues underwritten on a best efforts basis was considerably greater than for those that were firmly underwritten. According to Simmons, "the relatively high average initial premium on best efforts issues appears to reflect a fairly substantial market distortion", because the 1971 best efforts issues fared considerably worse than the firm issues over the long term.[3] However, the differential in initial premiums seems justified for the 1978 new issues: by April 8, 1980, issues that were underwritten through best efforts had appreciated an average of 138%, while for those firmly underwritten the appreciation was 52%. "T" tests on the differences between mean rates of price appreciation reveal no statistically significant difference between the two at any quotation period, perhaps reflecting the wide variability of returns of any group of new issues.

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3. Simmons, page 10.

Table 3

Unadjusted Average Price Appreciation Percentages

by Selected Criteria

	First Quotation	1 Month Quotation	3 Month Quotation	6 Month Quotation	Nov. 30 '79 Quotation	Apr. 8 '80 Quotation
ALL ISSUES	25.34	23.35	36.06	57.88	62.82	81.09
UNDERWRITING METHOD						
Best Efforts	36.23	35.74	32.53	51.00	78.10	137.69
Firm	19.70	16.93	37.89	61.45	54.90	51.73
REVENUES AT REGISTRATION						
Startup	49.25	36.77	86.78	139.27	99.19	141.28
Up to $1 MM	15.11	21.78	10.78	44.11	17.56	55.56
$1 to $10 MM	27.61	40.61	16.15	22.14	35.99	55.72
$10 to $20 MM	17.12	13.93	16.85	19.93	67.22	78.84
$20 to $50 MM	1.93	-1.86	1.73	17.27	40.06	29.61
Over $50 MM	13.95	20.35	21.21	7.96	58.76	40.77
LINE OF BUSINESS						
Retail	11.77	11.59	4.34	-7.55	3.84	-28.72
Service	16.06	14.23	71.94	105.80	40.67	35.30
Manufacturing	18.99	22.61	20.62	35.55	52.92	50.11
Natural Resources	83.33	55.93	47.33	98.60	200.33	399.73
VALUATION OF ISSUE						
P/E over 10, positive NI	13.57	15.80	4.68	21.37	58.09	62.37
P/E under 10, pos. NI	12.28	16.57	31.30	30.25	56.50	56.87
No Earnings/Share	44.41	34.77	71.78	110.49	71.01	113.08
Equity/Share under 10	22.27	27.36	21.53	26.58	64.47	72.48
Equity/Share over 10	28.57	19.15	51.31	90.75	61.09	90.13

Selected data in Table 3 seem to support the first two hypotheses presented earlier, which hold that the size of the initial premium will vary directly with the riskiness of the issue, and that a higher average long term rate of return should be realized from the riskier issues. Stocks in several high risk categories--Best Efforts, Startup, and No Earnings/Share--exhibited premiums that were consistently greater than their less risky counterparts. Natural Resources issues (80% of which were startup operations) showed the most impressive premiums throughout the period, reaching an average gain of 400% by April, 1980. Capital invested in new issues fitting the above four criteria in 1978 would have appreciated by 471% by April, 1980. However, any conclusions should be drawn with extreme care since Natural Resource new issues tended to fall as a group in the high risk categories and it happened that during this period Natural Resource stocks tended to outperform the market averages.

V. Analysis of New Issues Price Performance in Relation to Overall Market Activity

Table 3 shows that the long term price performance of new issues was quite good. All issues appreciated an average of 81% by April, 1980, and only one category (retail) showed an average loss by the final quotation period. In order to verify the third hypothesis presented earlier--that price appreciation of new issues should exceed that of the market as a whole--nominal rates of appreciation must be adjusted by an overall market index. To maintain comparability with the Simmons report, the performance figures in Table 4 reflect adjustments on an issue-by-issue basis using a calculated New York Stock Exchange Composite Index Price Relative.[4]

Once again, the 1978 results are in sharp contrast to those of the 1971 sample. While the earlier survey shows an average adjusted loss of 52% on the last quotation date, this survey shows an average adjusted gain of 70% at the same point.[5] The adjustment indicated that overall "Big Board" market factors accounted for 11 percentage points of the average new issue price appreciation on April 8, 1980. The superiority of new issues performance over the market is not limited to the NYSE index: between January 3, 1978, and April 8, 1980, the OTC composite index (adjusted by the NYSE) increased by 35%, considerably less than the adjusted gain of 69% recorded by the new issues.

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4. Deflator = $NYSE_{t+i} / NYSE_t$ (t = date of registration; i = first dealer quote, 1, 3, 6 months, Nov. 30, 1979, and April 8, 1980)

$$\text{Adjusted Rate of Appreciation} = \frac{P_{t+i} / P_t}{NYSE_{t+i} / NYSE_t}$$

Table 4

Adjusted Average Price Appreciation Percentages

by Selected Criteria

	First Quotation	1 Month Quotation	3 Month Quotation	6 Month Quotation	Nov. 30 '79 Quotation	Apr. 8 '80 Quotation
ALL ISSUES	24.22	21.40	32.78	52.26	45.52	69.72
UNDERWRITING METHOD						
Best Efforts	32.70	32.14	25.54	44.72	55.54	117.69
Firm	19.82	15.83	36.53	56.17	40.32	44.85
REVENUES AT REGISTRATION						
Startup	45.10	32.45	79.19	130.36	72.99	118.53
Up to $1 MM	15.90	16.16	3.96	30.15	1.81	41.61
$1 to $10 MM	28.38	41.58	19.65	22.30	28.02	54.16
$10 to $20 MM	17.62	14.05	17.63	19.09	54.61	74.66
$20 to $50 MM	1.72	-2.73	-1.62	10.29	24.79	22.52
Over $50 MM	13.84	19.03	18.36	5.37	43.58	47.96
LINE OF BUSINESS						
Retail	10.90	10.94	0.56	-11.06	-5.73	-30.85
Service	16.09	12.15	69.56	98.21	26.40	28.21
Manufacturing	18.55	22.10	19.32	32.02	39.41	45.06
Natural Resources	76.58	47.18	34.15	86.82	154.26	345.07
VALUATION OF ISSUE						
P/E over 10, pos. NI	13.90	17.19	5.71	18.67	44.82	57.33
P/E under 10, pos. NI	12.21	13.90	27.40	25.13	41.44	49.88
No Earnings /Share	41.19	29.63	64.22	101.52	48.31	92.81
Equity /Share under 10	22.68	27.24	19.96	23.36	50.04	66.26
Equity /Share over 10	25.84	15.27	46.24	82.60	40.78	73.36

On a disaggregated basis by line of business, new issue price performance appears to surpass the market as a whole in the areas of Natural Resources and Manufacturing. S & P's composite oil stock index increased by 54% over the period of study, compared to the 400% unadjusted appreciation recorded by Natural Resources new issues. S & P's "400 Industrials" index increased by 10% over the period, compared to a 50% appreciation in the new issues of Manufacturing concerns. New issues of retailers appeared to do no better than the stocks of their established counterparts: retailers' new issues lost 29% over the period, compared to decline of 29% in S & P's composite retail index. New issues in the Service category, which appreciated by 35%, have no comparable S & P index for established stocks.

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5. It is interesting to note that the average 1971 new issue performed worse than the market, with the last reported adjusted loss on the high risk, best efforts underwritten issues being about double that of the more secure, firmly underwritten issues (-71% vs. -37%). A dramatic reversal is apparent in the 1978 survey: the final adjusted gain on issues underwritten through best efforts is over 2 1/2 times greater than those that were firmly underwritten (118% vs. 45%).

VI. New Issue Performance Adjusted for Effects of Initial Premium

According to the fourth hypothesis presented earlier, the price performance of new issues after excluding the effects of the initial premium should exceed that of seasoned issues, because of the generally greater risk of new issues. Table 5 shows the unadjusted and adjusted appreciation percentages for the various new issue classifications, calculated using the first closing bid price in the secondary market as the denominator. Every category that shows a final period adjusted gain in Table 4 does so in Table 5, although most gains are roughly cut in half. Natural resources issues again lead the list in price appreciation. By April, 1980, they recorded an average adjusted gain from the first market price of 226%.

Though the tremendous price gains of the natural resources stocks undoubtedly accounted for a substantial portion of the overall adjusted gains following the initial premium, it does not appear that they provided the only support. For example, the aggregate adjusted appreciation increased steadily after the one month quote even though the natural resources issues lost ground for the first three months.

One interesting aspect of Table 5 is the apparent support it provides to a main conclusion of the Simmons report: that the relatively high incidence of extra compensation for underwriters of best efforts issues results in an artificially high initial premium for these issues. The extra compensation--in the form of warrants and options--is usually exercisable within one year of registration. As can be seen by comparing Tables 3 and 5, the initial premium represents over 80% of the price appreciation on best efforts

Table 5

Unadjusted and Adjusted Average Price Appreciation

Percentages From First Market Price by Selected Criteria

(Unadjusted/Adjusted)

	1 Month Quotation	3 Month Quotation	6 Month Quotation	Nov. 30 '79 Quotation	Apr. 8 '80 Quotation
ALL ISSUES	0.28/-.04	7.00/4.96	22.20/18.22	36.19/22.57	47.91/40.74
UNDERWRITING METHOD					
Best Efforts	0.88/-0.32	0.97/-1.87	9.50/7.48	33.88/20.23	74.01/65.75
Firm	-0.04/-1.25	10.12/ 8.50	28.80/23.79	37.38/23.79	34.39/27.78
REVENUES AT REGISTRATION					
Startup	-2.20/-3.25	21.54/19.33	54.63/51.58	51.64/35.62	77.55/68.42
Up to $1 MM	1.83/-2.99	-5.23/-11.46	20.80/9.41	0.26/-13.12	30.36/18.68
$1 to $10 MM	6.96/ 5.77	-6.36/-5.59	-2.34/-4.07	5.67/-2.42	25.50/21.66
$10 to $20 MM	-2.93/-3.14	2.16/1.80	4.89/2.83	42.99/30.82	51.40/46.51
$20 to $50 MM	-1.66/-2.84	3.21/-0.41	19.00/11.76	41.08/25.51	28.75/21.49
Over $50 MM	4.72/ 3.95	4.41/2.50	-5.87/-7.70	38.22/25.45	34.81/28.81
LINE OF BUSINESS					
Retail	-3.44/-3.53	-6.31/-8.33	-9.90/-13.55	-2.67/-11.24	-30.34/-32.22
Service	3.40/0.45	31.50/28.38	41.28/34.72	21.15/8.24	23.52/16.61
Manufacturing	2.44/2.23	2.37/1.57	20.36/17.43	36.45/23.48	28.51/23.10
Natural Resources	-12.70/-15.20	-16.82/-21.68	13.67/10.63	99.28/77.33	245.72/226.31
VALUATION OF ISSUE					
P/E over 10, pos. NI	0.50/0.84	-5.46/-5.80	8.73/5.15	40.93/27.84	43.54/37.65
P/E under 10, pos. NI	4.34/1.75	18.30/14.50	19.24/14.02	37.58/23.90	37.43/30.91
No Earnings /Share	-2.00/-4.17	14.58/11.62	38.01/34.21	30.44/16.31	57.81/48.95
Equity /Share under 10	2.73/2.24	1.77/0.04	9.22/5.49	42.25/28.82	46.93/40.57
Equity /Share over 10	-2.30/-4.27	12.49/10.12	38.84/31.57	29.83/16.02	48.95/40.93

issues through the sixth month, while it represents about 50% of the appreciation of firmly underwritten issues over the same period. Simmons explains that the high initial premium results from underwriters' tendency to underprice best efforts issues, and attributes their subsequent poor performance over the medium term to the liquidation of "extras" on a relatively thin market by the underwriters. Table 5 shows the aftermarket appreciation of best efforts issues to lag that of the firmly underwritten issues by a considerable margin until the November 30, 1979 quotation. Beginning with that point-- after most of the warrants and options have probably been exercised--the appreciation of the best efforts issues comes to equal and then exceed that of the firmly underwritten issues.

VII. Conclusion

The aftermarket price performance of the 1978 initial public offerings has been considerably better than that of the overall market, even after excluding the initial premium, as would be expected in an efficient market. In addition, a disaggregation of new issues characteristics supports the hypothesis that the rates of price appreciation are greater on the higher risk issues. These results must be tempered by the dismal findings of the Simmons report, but not entirely discounted by the earlier report. A number of factors may account for the differences between the two surveys:

1) The new issues market has changed. Underwriters are more cautious and are less willing to risk their capital on highly speculative issues. This is evidenced by the reduction in initial public offerings in 1978 (41 vs. 170 in 1971) and by the doubling of the initial premium, or risk factor, in the later underwritings.
2) The economic conditions facing the companies going public in 1971 were more severe than those facing the 1978 group. It will be interesting to see if the current well-advertised recession is as debilitating as the one earlier in the decade: the new issues seem to indicate that it will not be; but if it is, more support will be given to the contention that the 1978 new issues are superior to those in 1971.

In short, the "fairly serious dilemma for new issues markets," which Simmons concluded was a result of the 1971 group's poor performance, seems to have been mitigated by the promising results of the 1978 survey. It remains to be seen whether this improvement in new issues performance will prove to be long term, or fleeting.