

# A Trading Strategy for New Listings on the NYSE

An examination of the stock prices of 319 companies that moved from the over-the-counter markets to the New York Stock Exchange over the period January 1966 through December 1977 (that is, both before and after the introduction of the National Association of Securities Dealers' automated quotation system) reveals a definite pattern in stock price performance. Typically, stocks performed exceptionally well over the one year prior to the date the company filed an application to list. Stocks continued to perform well over the interval between the application date and the date on which actual listing occurred, after which price tended to decline over the next four to six weeks before stabilizing.

This apparently predictable pattern of security returns suggests a potentially profitable investment strategy based on publicly available information. The strategy involves buying a stock when it is announced that a company has filed a formal application to list on the NYSE, liquidating the long position and simultaneously selling the stock short once it has actually become listed, and liquidating the short position six weeks after listing. Over the 1971-77 period, such a strategy would have resulted in an annualized, market-adjusted return, net of trading costs, of 5.75 per cent.

**E**ACH YEAR, 50 to 60 corporations move from the over-the-counter (OTC) markets to the New York Stock Exchange (NYSE) or the American Stock Exchange (AMEX). Presumably, a switch to one of the major exchanges represents a signal of management's confidence in its company's future prospects. For potential investors (whether individual or professional), the question is whether the move signals future price appreciation in the company's stock. That is, does the act of listing, *per se*, mean that a stock is a "good buy"?

Since the introduction in February 1971 of the National Association of Securities Dealers' automated quotation system, the answer to this question may have changed. By allowing the immediate communication of quoted prices to geographically dispersed broker-dealers, NASDAQ has imparted many of the qualities of a centralized market to the OTC. For example, NASDAQ publishes a "National List" of the most actively traded OTC stocks, whose price

quotations are reported identically to those of stocks listed on the organized exchanges. It is possible that NASDAQ has reduced the traditional benefits associated with a listing on the major exchanges, perhaps to the point where these benefits no longer outweigh the costs—in entry and annual exchange fees and in reporting requirements—of a national exchange listing. We analyzed the stock prices of companies that moved from the OTC to the NYSE over the period January 1966 through December 1977 to determine whether such a move represents a profit opportunity for investors.

## The Study

Before a company's stock can be listed on the NYSE, the company must file a formal application with the exchange. It takes the exchange

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approximately two to four weeks to approve or reject the application. More than 99 per cent of all companies that file a formal application are approved; this is because virtually all companies that apply for listing have undergone a preliminary confidential review by the exchange, and only companies that pass this review are urged to apply formally for listing. Once accepted, a company establishes, with the exchange, a mutually agreeable date on which trading in the stock will begin.

Most companies announce their intention to list on the NYSE when they file the formal application. Additionally, the *Weekly Bulletin*—published every Friday by the NYSE and received by subscribers early in the following week—reports all companies that have formally applied for listing during the week.<sup>1</sup> Thus, some time during the application week or early the following week, investors become aware of a company's intention to list on the exchange. Shortly thereafter, the *Weekly Bulletin* announces whether the company has been officially approved for listing and indicates the date on which trading is to commence. Typically, then, investors know of a company's intention to list several weeks before it actually takes place.

To analyze stock price movements around the time of listing, we selected from all the 440 OTC firms that applied for listing on the NYSE over the period January 1966 through December 1977 a sample of 319 companies, 153 of which listed in the pre-NASDAQ era and 166 of which listed in the post-NASDAQ era.<sup>2</sup> For each company's stock, we collected bid and ask quotations for each Friday of the 52 weeks prior to the week in which the company filed a formal application for listing and for each following Friday through the week before listing occurred.<sup>3</sup> We computed for each of these stocks weekly rates of return prior to listing, using the average of the bid and ask quotations as representative market prices and adjusting for cash dividends, stock dividends and stock splits. For the 52 weeks following the week of listing, we obtained weekly rates of return from the Center for Research in Security Prices at the University of Chicago. And, for a benchmark against which to compare these returns, we computed weekly rates of return for the Standard & Poor's (S&P) 500 Stock Index over the entire period 1965 through 1978.

We adjusted each stock's weekly rates of

return for overall market movements during the corresponding calendar weeks. We refer to these market-adjusted weekly rates of return as "excess returns." They are excess returns in the sense that they are the returns that remain after adjusting for changes in the S&P 500.<sup>4</sup> We analyzed these excess returns over three time intervals—(1) the 53-week period beginning 51 weeks prior to the week in which an application to list was filed and ending the week in which the *Weekly Bulletin* announcing the filing of a formal listing application reached investors (weeks -52 to zero); (2) the period beginning the week after the *Weekly Bulletin* reached investors and continuing through the week in which the stock actually became listed on the exchange;<sup>5</sup> and (3) the period beginning the first week after listing occurred (week +1) and continuing through the fifty-second week after listing (week +52).

## Results

Table I summarizes the results of our analysis. Column 1 identifies the week in question. Columns 2 and 4 present, for the pre and post-NASDAQ periods, respectively, the average weekly excess returns for the two years surrounding the listing process. Columns 3 and 5 report the cumulative excess returns (CER) from week -52 through week +52. The CER in any given week is merely the summation of the average weekly excess returns beginning with week -52 and ending in that week (as indicated in Column 1).

The results indicate that, in both the pre and post-NASDAQ periods, the stocks studied performed exceptionally well in comparison with the S&P 500 over the one year prior to listing. By the application week (week -1), in both time periods, the CER reached a level of approximately 20 per cent. Apparently most companies decide to list following a time period in which their stock has performed exceptionally well.<sup>6</sup>

In the application week itself (week -1), and in the following week (week 0), the excess returns were 1.04 and 0.88 per cent, respectively, in the pre-NASDAQ era and 0.38 and 0.25 per cent, respectively, in the post-NASDAQ era. Thus, in both time periods, there was a positive market reaction associated with the initial news that a company had decided to list on the NYSE, but the reaction was far more dramatic, by a margin of about three to one, before the introduction of NASDAQ than after.

1. Footnotes appear at end of article.

**Table I** Market-Adjusted Returns of OTC Common Stocks That Listed on the NYSE Over the Period 1966-1977

	Week	Pre-NASDAQ Period (1966-1970)		Post-NASDAQ Period (1971-1977)	
		Average Excess Return (per cent)	Cumulative Excess Return (per cent)	Average Excess Return (per cent)	Cumulative Excess Return (per cent)
	-52	0.66	0.66	0.42	0.42
	-40	0.55	4.97	-0.06	6.06
	-30	0.35	6.85	0.57	10.09
	-20	0.74*	11.53	0.63	12.63
	-10	-0.50	15.31	0.13	16.32
	-9	1.08*	16.39	0.38	16.70
	-8	0.87*	17.25	0.75	17.45
	-7	0.79*	18.04	0.73*	18.18
	-6	0.79*	18.83	-0.52	17.66
	-5	-0.18	18.65	0.04	17.70
	-4	0.60	19.25	-0.16	17.54
	-3	0.03	19.28	0.80	18.34
	-2	0.56	19.84	0.60	18.94
Application Week	-1	1.04*	20.88	0.38	19.32
Weekly Bulletin Week	-0	0.88*	21.76	0.25	19.57
Interval from Week after Weekly Bulletin through Listing Week		5.75*	27.51	3.81*	23.38
Week after Listing Week	+1	-1.65*	25.86	-2.00*	21.38
	+2	-0.58	25.28	-1.26*	20.12
	+3	-0.68*	24.60	0.95	21.07
	+4	0.66	25.26	-0.09	20.98
	+5	-0.50	24.76	-0.53	20.45
	+6	-0.15	24.61	-0.68	19.77
	+7	0.29	24.90	0.20	19.97
	+8	-0.17	24.73	0.07	20.04
	+9	0.01	24.74	0.06	20.10
	+10	0.00	24.74	0.10	20.20
	+20	-0.22	24.39	-0.89*	18.12
	+30	0.12	24.89	0.74	20.29
	+40	-0.23	24.97	0.05	21.57
	+52	-0.53	26.28	-0.51	19.99

\*Statistically significant at 0.05 level.

Stock prices continued to react favorably over the interval beginning with the week following the publication of the *Weekly Bulletin* through the listing week. In the pre-NASDAQ period, the average excess return over this interval was 5.75 per cent; in the post-NASDAQ period, the excess return was 3.81 per cent. Again, the pre-NASDAQ increase was appreciably greater than the post-NASDAQ increase.

Another way to see this same result is to compute the increase in the CERs over the period. In the pre-NASDAQ era, the CER increased by 7.67 per cent; in the post-NASDAQ era, the increase was 4.04 per cent.

Thus far, our analysis implies that securities that are soon to be listed on the NYSE are "good buys." However, a peculiar phenomenon occurs immediately after these securities become

listed. They tend to decline in price. In both the pre and post-NASDAQ periods, the average excess return was negative in five of the first six weeks after listing. In the pre-NASDAQ period, the CER decreased by 2.90 per cent over the first six weeks after listing; in the post-NASDAQ period, the CER decreased by 3.61 per cent over the same interval. However, both before and after NASDAQ, stock prices tended to stabilize six weeks after listing. In the pre-NASDAQ era, the CER at week +52 stood at 26.28 per cent, little different from its level of 24.61 per cent at week +6; in the post-NASDAQ era, the CER in week +52 was 19.99 per cent, versus 19.77 per cent in week +6.

### A Profitable Investment Strategy

The analysis suggests that investors who are

considering taking a position in stocks that are newly listed on the exchange should not do so until the stock has been listed for at least six weeks. An even better strategy would be to buy stocks as soon as an application for listing is filed; hold the stocks until they actually become listed; liquidate the long position in the stocks when they become listed and, simultaneously, sell the stocks short; and, finally, liquidate the short position six weeks after listing.

We simulated the results that would have been achieved with this strategy in both the pre and post-NASDAQ periods. We assumed that each security could have been purchased at the ask price on the Friday after the application week and that we could have sold (and sold short) each stock at the closing price on the Friday of the listing week. Finally, we assumed that we could have liquidated the short position at the closing price on Friday of the sixth week following listing.

We computed trading profits in two ways—first, assuming zero transaction costs and, second, assuming a 1 per cent commission is paid for each separate transaction (a total of four transactions for each security). In all cases, we defined trading profit as the return that could have been earned in excess of the return on an investment in the S & P 500. We assumed an equal dollar amount was initially invested in each security.

The results of this trading strategy, reported in Table II, are impressive. In the pre-NASDAQ period, ignoring transaction costs, the suggested trading strategy produced an average excess profit per security of 7.54 per cent over an average holding period (both long and short positions) of 14.03 weeks. This translates into an annualized excess return of 30.92 per cent. Even after deducting commissions of 1 per cent per transaction, an average trading profit of 3.31 per cent was generated over the holding period, for an annualized trading profit of 12.83 per cent.

In the post-NASDAQ period, as would be expected from our previous results, potential trading profits were somewhat diminished, but they were still impressive. Before considering transaction costs, an average trading profit per security of 5.53 per cent could have been earned over an average holding period of 12.66 weeks. This translates into an annualized excess return of 24.74 per cent. After deducting trading commissions, an average trading profit of 1.37 per cent was earned over the holding period, for an

**Table II** Trading Strategy Profits Over the Period 1966–1977

	Average Trading Profit*	Average Number of Weeks in Trading Strategy	Average Annualized Trading Profit
<b>Pre-NASDAQ Period (1966–1970)</b>			
No commissions	7.54%	14.03 weeks	30.92%**
1% commissions	3.31%	14.03 weeks	12.83%
<b>Post-NASDAQ Period (1971–1977)</b>			
No commissions	5.53%	12.66 weeks	24.74%
1% commissions	1.37%	12.66 weeks	5.75%

\*Computed trading profits assume equal initial investments in all securities and represent averages over 153 pre-NASDAQ and 166 post-NASDAQ listing stocks.

\*\* $(1 + 0.07545)^{52/14.03} - 1 = 30.92\%$ .

annualized excess return of 5.75 per cent. Thus, despite the diminished returns in the post-NASDAQ period, investors could have applied the trading strategy suggested above to earn excess returns, after trading costs, over the entire period 1966 through 1977.

### Risk Considerations

It is possible that obtaining a major stock exchange listing occurs in conjunction with (or even partially causes) changes in the relative riskiness of a company's stock. The potential effects of listing upon risk are of interest both to individual investors as well as to portfolio managers attempting to hit target portfolio risk levels. Of course, any change in common stock risk is also of interest to the managers of listing firms, because of the direct link between that risk and the firm's cost of capital.

We computed measures of total risk (i.e., standard deviation of return) and of systematic risk (i.e., "beta" risk) before and after firms became listed on the NYSE. Table III presents average total and systematic risk measures before and after listing as well as the number of firms that experienced statistically significant changes in risk.

Table III suggests that, on average, risk did not change significantly around the time of listing. Average risk appears to be relatively stable whether measured by total risk or systematic risk. Specifically, in the pre-NASDAQ period, average beta is 1.08 prior to listing and 1.09 after listing. In the post-NASDAQ period, average beta is 1.15 before listing and 1.08 after

**Table III** Common Stock Risk

	Average Total Risk—Standard Deviation of Return (%)			
	Before Listing	After Listing	Number of Significant Increases*	Number of Significant Decreases*
Pre-NASDAQ Period (153 stocks)	5.03%	5.10%	4	5
Post-NASDAQ Period (166 stocks)	5.49%	5.82%	14	13
	Average Systematic Risk—Beta			
	Before Listing	After Listing	Number of Significant Increases*	Number of Significant Decreases*
Pre-NASDAQ Period (153 stocks)	1.08	1.09	5	6
Post-NASDAQ Period (166 stocks)	1.15	1.08	13	15

\*Number of increases or decreases significant at the 0.05 level.

listing. Similarly, in the pre-NASDAQ period, average standard deviation is 5.03 per cent before listing and 5.10 per cent after listing. In the post-NASDAQ period, average standard deviation is 5.49 per cent before listing and 5.82 per cent after listing.

In the pre-NASDAQ period, fewer than 5 per cent of all firms studied experienced significant increases or decreases in either measure of risk. In the post-NASDAQ period, fewer than 10 per

cent of all firms showed any significant risk changes. Finally, in both time periods, approximately equal numbers of firms experienced increases and decreases in risk. It appears that exchange listings have neither dramatic nor systematic effects upon stock risk. For purposes of portfolio risk management or cost of capital estimation, listing on the NYSE appears to be a non-event. ■

### Footnotes

1. Reports of listing applications also appear in the *Wall Street Journal*, *Standard & Poor's Security Owners' Stock Guide* and other financial publications. Such reports appear after the actual application date, however.
2. To be included in the final sample, bid and ask quotations had to be available for a particular stock for at least 26 weeks prior to the week in which an application was filed.
3. In those cases in which Friday was a holiday, Thursday's bid and ask quotations were substituted.
4. The specific procedure used to compute the returns is available from the authors on request; it also appears in their article, "Stock Exchange Listings, Firm Value, and Security Market Efficiency: The Impact of NASDAQ" (Ohio State University Working Paper, 1983).
5. The number of weeks included in this interval varied depending upon the length of time between application and approval and between approval and listing. In the pre-NASDAQ period, the interval averaged 10; in the post-NASDAQ period, the average was eight.
6. A possible explanation of this phenomenon may lie in the fact that two NYSE listing requirements involve total market value and profitability. Companies that have performed well are more likely to meet these criteria.

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