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Swimming against the tides: The case of Aeroflex move from NYSE to Nasdaq ☆

Avner Kalay[a,b,*], Evgenia Portniaguina[b]

[a] *Tel-Aviv University, Ramat Aviv, Tel-Aiv, Israel*
[b] *David Eccles School of Business, University of Utah, Salt Lake City, UT 84112, USA*

Abstract

We investigate the effects of the first voluntary shift of a NYSE firm (Aeroflex) to Nasdaq. The switch announcement has resulted in a significant positive abnormal return, in subsequent narrowing of the daily bid–ask spread, and in significant increase of the daily volume. We fail to find evidence that the switch is responsible for making Aeroflex' stock behave more like a "Nasdaq stock". © 2001 Elsevier Science B.V. All rights reserved.

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1. Introduction

Aeroflex, Inc., a small high technology company, announced on February 17, 2000 at 8:31 am Eastern Time, that it would be the first publicly traded company to shift its equities from the New York Stock Exchange to the

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*Corresponding author. Tel.: +1801-581-5457; fax: +1-801-581-7214.

E-mail addresses: finak@business.utah.edu (A. Kalay).

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Nasdaq.[1] The shift was to be effective as of March 21, 2000. Business media paid much attention to the announcement calling it an unprecedented move as "no company has ever left the Big Board for the Nasdaq" (*The Wall Street Journal*, February 18, 2000). In the company press release on February 17, Michael Gorin, President of Aeroflex, Inc., said that the decision to shift is believed to "help position Aeroflex among its peer group of other high technology companies". In addition, *AP Business* quoted Gorin saying that the shift was made to capture the extraordinary valuations afforded many Nasdaq listed tech companies and to boost Aeroflex' exposure.

An extensive literature has studied the effects of listing on stock's liquidity. While many studies show evidence of wider spreads and higher transaction costs on Nasdaq than on NYSE (see, for example, Sanger and McConnell, 1986; Sanger and Peterson, 1990; Christie and Schultz, 1994; Huang and Stoll, 1996), the general conclusion is that NYSE does not strictly dominate Nasdaq. For example, Chan and Lakonishok (1997) find that the execution costs of institutional investors trading relatively smaller firms are lower on Nasdaq. Affleck-Graves et al. (1994) compare different components of the bid–ask spread between two trading mechanisms: NYSE/AMEX and Nasdaq. They find that inventory holding component is larger on NYSE. More recently, Clyde et al. (1997) examine firms that voluntarily left AMEX for Nasdaq. Surprisingly, they find positive price effect in spite of the significant increase in spreads following the listing on Nasdaq.

In this paper, we study the first voluntary move from the NYSE to Nasdaq. In our study, we follow the scope of the previous literature and look at the price effect of the shift announcement as well as its effect on bid–ask spreads and daily volume of trade. In addition, we check whether the shift has made Aeroflex a more Nasdaq-like stock, as its management had anticipated. The rest of the paper is organized as follows. Section 2 describes the data and the time period around the switch. Section 3 presents the evidence, and Section 4 concludes.

2. Data

The study uses the daily volume, price data, including high, low, and close, obtained from the *Yahoo! Finance* database (http:// finance.yahoo.com). The data covers the time period December 31, 1998 through May 15, 2000. We compute price volatility for each day in the sample as the difference between

[1]This is the first public announcement. As of June 1999, board of directors of NYSE firms can decide to move to other exchanges. Firms are no longer required to have a general stockholder vote on the matter.

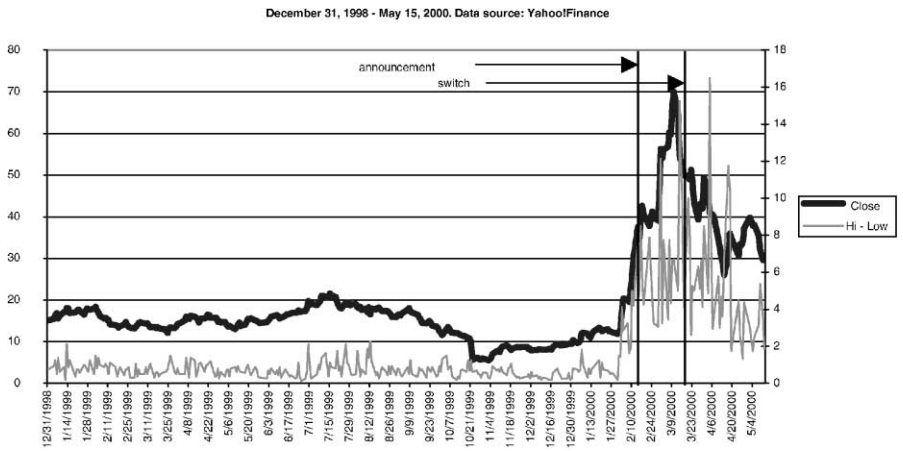

Fig. 1. Daily price (left scale) and price volatility (right scale), in dollars. Price volatility is measured as daily high minus daily low.

daily high and daily low. Data on the daily bid and ask prices over the same period came from the *Bloomberg History* database. The database reports bid and ask at the close of the markets on each trading day. Comparing the data we obtained with the data available on the CRSP tape (for 1999), we find very few minor deviations. We eliminate one daily observation (October 22) in which the reported bid-ask spread at the close is equal to \$29 which seems unlikely given that the stock price was \$5 at the time.

The shift announcement came amidst a turbulent period for Aeroflex. Since Aeroflex was downgraded to "Accumulate" by a brokerage firm on October 22, 1999, its stock was down, with price volatility relatively low. However, around the beginning of February, the company was upgraded back to "Buy". Following that Aeroflex issued a surprisingly good quarterly report on February 11, and announced a new fiber optics contract on February 15. The stock price, therefore, was on its way up when Aeroflex announced its decision to switch to Nasdaq on February 17. Fig. 1 shows the increase in stock price and the corresponding increase in price volatility, measured as daily high minus daily low, around that time.

At the time of the announcement, the market value of Aeroflex' equity was \$750 million compared to the NYSE mean of 4.8 billion. The firm fit well with Nasdaq companies that have a mean market value of equity of \$1.2 billion.[2] If the switch to Nasdaq was caused partly by the desire to "capture the extraordinary valuations" of Nasdaq stocks, Aeroflex' management must have

[2] Insiders currently hold 20% of Aeroflex' stocks, the top 15 institutions hold 47%, and small institutions and the public hold the rest.

believed that listing on Nasdaq would make Aeroflex' stock move closer with Nasdaq than it had before the switch. To address this point, we looked at the behavior of Aeroflex' stock relative to three index benchmarks: Nasdaq 100, NYSE Industrials, and S&P 500. For control, we looked at the sample of Aeroflex' competitors that were listed on Nasdaq all along, as well as the sample of competitors listed on NYSE all along. "Competitors" were selected based on business profile as identified in the *Yahoo! Finance* database. The two samples included 14 NYSE stocks and 39 Nasdaq stocks that belong to the same industry group as Aeroflex (semiconductors and miscellaneous electrical equipment). For Nasdaq firms, we selected only the firms with market capitalization comparable to that of Aeroflex (between $200 million and $1 billion). For NYSE firms, average capitalization is much higher. All data on daily prices for all sample stocks and index benchmarks came from the *Yahoo! Finance* database.

3. Evidence

3.1. Price effect

We needed to isolate the effect of the switch announcement from the other announcements made around the same time. We calculated abnormal returns on the day of the announcement (0), using the estimation window from January 4, 1999 until January 31, 2000 (days −284 through −13). As mentioned above, October 22, 1999 was eliminated from the sample. The market regression coefficients were estimated using S&P 500 returns as a benchmark. We found significantly positive abnormal returns on day 0 (t-statistics is 2.12, see Table 1). Similar results obtained using market-adjusted

Table 1
Price effect of the switch announcement[a]

Abnormal returns were estimated using market model regression over days −284 through −13. October 22, 1999 was excluded from the estimation window.

Day	AR	t	CAR	t
−1	0.13	3.44	0.13	3.44
0	0.08	2.12	0.21	3.93
1	(0.03)	(0.68)	0.19	2.82
2	(0.08)	(2.02)	0.11	1.43

[a] Beta from market regression over the estimation period was 0.74. S&P 500 is used in the regression.

Table 2
t-test for changes in mean daily spreads and volumes

Sub-period I (before switch): January 1999–March 20, 2000.
Sub-period II (after switch): March 21, 2000–May 15, 2000.

	I	*II*
Panel A. Spreads[a]: *Daily spreads at the close taken from the Bloomberg History database*		
Mean	1.04	0.31
Observations	298	35
t-statistic	**12.50**	
Panel B. Volumes[b]: *Daily volumes taken from the Yahoo! Finance database*		
Mean	251,835.41	385, 882.86
Observations	305	35
t-statistic	**2.33**	

[a] Eight out of 341 observations in the upper 3% of the distribution are taken out as potential data errors. Including these observations does not affect the results.

[b] This test includes all sample data except October 22, 1999. Including October 22 does not affect the results.

returns are not reported here. We detect no contemporaneous change in either stock price level or volatility around the switch date.

3.2. Effects on spreads and daily volume

The bid–ask spread at the close is estimated before the switch (January 1999 to March 20, 2000) and following the switch (March 21, 2000 to May 15, 2000). We observe significant reduction in the mean spread at the close from \$1.04 before the shift to \$0.31 after the shift (the *t*-test for differences in mean spreads is 12.5, see panel A of Table 2). Panel B of Table 2 details a significant increase in the volume of trade following the shift to Nasdaq. The mean daily volume increased from 251,835 shares before the shift to 385,882 after the switch (*t* value of 2.33).[3] The tests for spread and volume involved 341 observations for which both spread and volume data were available.

3.3. Correlation with Nasdaq

To address the final question of our study, we compared Aeroflex' return correlations with the major indexes before and after the switch. We did the

[3] The tests assume unequal variances. Both *t*-statistics reported indicate significance at conventional levels. Repeating the tests assuming equal variances does not affect the results.

Table 3
Correlations with major index benchmarks around the time of switch[a]

Data: Yahoo! Finance database.

	Aeroflex	NYSE sample	NASDAQ sample
Panel A. January 1, 2000 through March 20, 2000			
NASDAQ 100	0.17	0.47	0.32
NYSE Industrials	0.04	0.25	0.13
S&P 500	0.08	0.32	0.18
Panel B. March 21, 2000 through May 15, 2000			
NASDAQ 100	0.68	0.69	0.60
NYSE Industrials	0.40	0.47	0.42
S&P 500	0.53	0.57	0.52

[a] The correlation of Aeroflex with its competitors listed on both NYSE and Nasdaq increased after the switch: with NYSE sample from 0.15 to 0.51; with Nasdaq sample from 0.22 to 0.46.

same for its peer firms in both control samples. As Table 3 shows, it is hard to find support for the reasoning of Aeroflex' management. While Aeroflex' correlation with Nasdaq 100 did increase after the switch, the same happened to the other firms in both control samples. In addition, Aeroflex' correlation with NYSE Industrials index also increased after the switch. Thus, it is hard to conjecture that the switch caused the increase in correlation with Nasdaq. Most likely, the switch simply happened around the time when all tech stocks were moving closer together.

4. Conclusion

Given the scope of the literature comparing different trading mechanisms in terms of their effect on liquidity, it was natural to ask whether the first voluntary shift from NYSE to Nasdaq has affected Aeroflex' liquidity and/or stock price. The empirical results are quite surprising. We find that the switch announcement has resulted in a significant positive abnormal return, in a significant narrowing of daily bid–ask spreads at the close, and in a significant increase in the daily volume of trade. The most likely explanation for the re-evaluation of Aeroflex' stock price is its improved liquidity.[4] In addition, we fail to find evidence that the switch is responsible for making Aeroflex' stock behave more like a "Nasdaq stock". One should be careful in generalizing our

[4] The move did not involve the inclusion of Aeroflex in an index.

results, however, since this study includes only one firm, and the switch could have been its optimal choice.

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