

## Abstract

The New York Stock Exchange (“NYSE”) is served by seven trading specialist firms that “make markets” for companies whose shares are listed on the exchange. These firms—listed in **Table 1**—match up buyers and sellers. Five of the seven are within the operations of publicly held corporations or are themselves publicly traded.

There has been much recent discussion in the popular press regarding these specialist firms with regard to their practices and disclosures.<sup>1</sup> In addition, there has been significant academic literature analyzing these firms and their operations.<sup>2</sup> However, the research does not include a comparison of NYSE trading specialist profits to any benchmarks. This paper hopes to make a very specific contribution to this literature by:

- Comparing NYSE trading specialist profits with firms in similar industries as well as a cross section of other industries;
- Analyzing the trading specialists’ valuations and the terms of the many acquisitions of trading specialists concluded in the past few years to assess their level of non-routine (intangible) profit being earned; and
- Comparing bid-ask spreads and revenue per share of NYSE and NASDAQ market makers.

Our research found that NYSE trading specialists earn very high operating levels of profitability. Their operating profit margins were consistently higher than those earned by firms in similar industries as well as a broad cross section of other industries. In addition to high operating profit levels, these firms saw higher spreads and revenue per share than their NASDAQ counterparts. Consistent with these findings, trading specialist acquisitions include significant intangible value.

These findings suggest that further research into this area is warranted. Subject to data availability, future profit level comparisons may consider investment (asset) levels. Also subject to data availability, the profits of the privately held trading specialists (and those part of consolidated public companies that do not report their specialist profits) should be examined.

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<sup>1</sup> For example, see “NYSE’s Probe Focuses on Both Deeds and Words,” The Wall Street Journal, May 5, 2003.

<sup>2</sup> For example, see Harris, Larry, “Trading & Exchanges: Market Microstructure for Practitioners,” Oxford University Press, 2003.

## Introduction

### A. The NYSE and NASDAQ

Principally located in U.S. stock and option markets, trading specialists play a dual role in these markets. These roles consist of either matching orders between their clients or filling client orders directly from their own inventory. The largest stock exchange to implement such a specialist trading system is the NYSE. With one specialist per stock, it centralizes the pool of liquidity.<sup>3</sup> The NYSE executes about 85 percent of the volume in its listed securities.<sup>4</sup>

Although the NYSE and NASDAQ dominate equity trading in the United States, there are significant differences in their structures. As stated by Deutsche Bank, “The NYSE and the Nasdaq are fundamentally opposite organizations: the NYSE is a floor-based auction market, the Nasdaq is an electronic dealer-driven market.”<sup>5</sup>

With over 400 market-making firms, the NASDAQ’s market making differs from that of the NYSE. The average NASDAQ stock has over 10 competing market makers. In addition to traditional market makers, the NASDAQ network incorporates other trading systems such as ECNs (Electronic Communications Networks), facilities that match buy and sell orders directly through a computerized system without the intervention of a specialist or market maker.<sup>6</sup> See **Table 2**.<sup>7</sup>

NASDAQ covers a much smaller market capitalization than NYSE. The NYSE lists most companies with large market capitalization.<sup>8</sup> See **Table 3**.

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<sup>3</sup> “The U.S. Exchanges,” Deutsche Bank, June 12, 2002.

<sup>4</sup> By contrast, AMEX trades less than half. On the NASDAQ, no market maker enjoys such a majority. Selway, James, “Five Myths About Listed Trading,” *Transaction Performance*, Spring 2002, pp. 76- 80.

<sup>5</sup> “The U.S. Exchanges,” Deutsche Bank, June 12, 2002.

<sup>6</sup> “Market Mechanics: An Educator’s Guide to U.S. Stock Markets,” in [http://content.nasdaq.com/reference/market\\_mechanics.pdf](http://content.nasdaq.com/reference/market_mechanics.pdf).

<sup>7</sup> “Van der Moolen Holding, NV,” Jefferies & Company, Inc., Update – March 08, 2002.

<sup>8</sup> The NYSE tends to list the larger stocks. As of June 2002, it was listing 87 percent of the S&P 500 as opposed to only 13 percent by NASDAQ. “The U.S. Exchanges,” Deutsche Bank, June 12, 2002.

NASDAQ operations are more computerized/automated than the NYSE. While the NYSE floor receives more than 80 percent of the stock orders on its listed companies,<sup>9</sup> NASDAQ had seen its trading via ECNs increase from approximately 10 percent in 1996<sup>10</sup> to 49 percent by August 2002.<sup>11</sup> See **Table 11**. In addition, with the advent of NASDAQ's SuperMontage, NASDAQ itself operates as an all-electronic automated market in a manner almost identical to ECNs.

## B. Seven NYSE Trading Specialist Firms

The NYSE trading specialist industry is dominated by publicly traded firms. As seen in **Table 4**, five of the NYSE trading specialists firms are operated by publicly traded corporations. The two remaining firms trade much smaller volumes.

The five publicly traded firms running specialist operations perform a variety of other financial services. LaBranche & Co. LLC ("LaBranche") is the "purest play" of the five, as its operations are essentially all in the specialist area. Van der Moolen Specialists USA ("Van der Moolen") has some operations outside of this area, but its specialist activities constituted 76 percent of its 2001 revenues.<sup>12</sup> The other three specialist operations simply represent a minority of the diversified operations of their parent companies. In addition to LaBranche, Van der Moolen and Fleet Specialist, Inc. ("Fleet") provide revenue and profit information for their specialist businesses.

## C. Summary Statistics of NYSE Trading Specialists

The NYSE specialists trade 2,557 listed common stock securities (as of May 5, 2003). As seen in **Table 4**, LaBranche and Spear Leeds & Kellogg Specialists ("Spear Leeds") trade the largest number with the former listing 581 (22.7 percent) and the latter listing 568 (22.2 percent).<sup>13</sup> The two privately held specialists—Performance Specialist Group, LLC ("Performance") and Susquehanna Specialists, Inc. ("Susquehanna")—list significantly fewer stocks than the five publicly traded companies.

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<sup>9</sup> Kelly, Kate and Craig, Susanne, "Fleet Specialist Unit Was Fined Before NYSE Moved on Trader," The Wall Street Journal, April 21, 2003.

<sup>10</sup> "The U.S. Exchanges," Deutsche Bank, June 12, 2002.

<sup>11</sup> See [www.marketdata.nasdaq.com](http://www.marketdata.nasdaq.com).

<sup>12</sup> See [www.cbs.marketwatch.com](http://www.cbs.marketwatch.com).

<sup>13</sup> See [www.nyse.com/pdfs/specialist\\_list.pdf](http://www.nyse.com/pdfs/specialist_list.pdf).

Among the larger and more active stocks, the distribution across the specialists is similar, but more pronounced. As seen in **Table 4**, Performance and Susquehanna only constitute 3.6 percent of the 250 most active securities in total. LaBranche, Spear Leeds, and Fleet make up more than 70 percent of these active stocks. The distribution across the specialists with respect to volume is similar to that seen across the 250 most active stocks. Performance and Susquehanna constitute approximately 2-5 percent of volume by share and dollar. LaBranche, Spear Leeds, and Fleet make up approximately 70 percent of these volume measurements.<sup>14</sup>

When looking at the specialists among firms in specific indexes, the same general trends continue, but there are some differences. Fleet and LaBranche share the lead with nine stocks among the Dow Jones Industrial Average (neither Performance nor Susquehanna lists any stock in this index). Within the S&P 500, Spear Leeds lists slightly more than LaBranche, but LaBranche lists significantly more within the S&P 100 (neither privately held firm lists any stock in the latter index).<sup>15</sup>

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<sup>14</sup> See [www.nyse.com/pdfs/specialist\\_list.pdf](http://www.nyse.com/pdfs/specialist_list.pdf).

<sup>15</sup> See [www.nyse.com/pdfs/specialist\\_list.pdf](http://www.nyse.com/pdfs/specialist_list.pdf).

## Analysis

### A. Traditional Profit Measures

#### 1. Trading Profits Reported Publicly

NYSE specialist firms are reputed to be very profitable.<sup>16</sup> The Wall Street Journal stated last month, “Specialists remain among the most profitable business on Wall Street.”<sup>17</sup> This reputation extends to the price of seats on exchanges (see **Table 12**):

Anyone familiar with the year-in, year-out profitability of specialist firms knows the answer to this riddle [why NYSE seats cost \$2 million]: The floor is a very profitable place to be.<sup>18</sup>

The specialist firms are also reputed to earn profits fairly consistently. As seen in an analyst report on Van der Moolen, “... all trading days have been in the black”<sup>19</sup>

Explicit profits and revenues are publicly reported for approximately 60 percent of NYSE trading specialist operations.<sup>20</sup> That is, LaBranche, Fleet, and Van der Moolen report operating profits on their trading operations, while the profits of the remaining specialist firms are not publicly reported.

- LaBranche is essentially only a trading specialist operation. As such, its consolidated financial results reveal its trading specialist revenues and profits.

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<sup>16</sup> See “The Bid/Ask Spread and Market Making,” [www.investorhome/daytrade/spread.htm](http://www.investorhome/daytrade/spread.htm).

<sup>17</sup> Ip, Greg and Craig, Susanne, “NYSE’s ‘Specialist’ Probe Puts Precious Asset at Risk: Trust,” The Wall Street Journal, April 18, 2003.

<sup>18</sup> Selway, James, “Five Myths About Listed Trading,” *Transaction Performance*, Spring 2002, pp. 76- 80.

<sup>19</sup> “Van der Moolen,” FBS Research Department, June 21, 2002.

<sup>20</sup> 60 percent of the total share volume of trading specialists.

- Fleet and Van der Moolen participate in other lines of business; however, they do report revenue and net income on their trading specialist operations.<sup>21</sup>

As seen in **Table 5**, these specialists earned net income (pre-tax) that is approximately 35-60 percent of their revenues in the most recent full fiscal year, with Van der Moolen at the high end of the range.<sup>22</sup>

## 2. Other Publicly Available Profit Information

Specialist profits have been studied and analyzed in a number of different ways. Research has determined that differences in profits exist across the specialist firms and that large stocks (volume and market capitalization) tend to generate most or all of the profits of the specialists. In fact, the smaller stocks may actually create losses. No systematic difference has been found, however, across specialists in terms of listing profitable or unprofitable securities.<sup>23</sup>

## 3. Comparison of NYSE Specialist Profits to Benchmarks

The use of benchmarking is a standard tool used by financial economists to determine whether prices, royalties, profits, or other economic returns are reasonable. It helps to set prices and value as well as to identify when such prices and values divert significantly from industry norms. Similar to the specialist context with the NYSE, the types of contexts where this is often employed involves financial returns that result from unique market structures (i.e., monopolies) or theoretical transactions necessary for reporting purposes.

Due to the market structure differences described above (i.e., no specific individual or firm holding near monopoly power over the trading of a specific security), there is no perfect NASDAQ benchmark corresponding to the NYSE trading specialists. However, the available data suggest that many of the primary companies involved in this area for NASDAQ are either less profitable than the NYSE trading specialists or not profitable at all.<sup>24</sup>

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<sup>21</sup> A large majority of Van der Moolen's business is in the specialist area. This explains why a number of analysts regard LaBranche as its "... most appropriate publicly traded peer." See "Van der Moolen Holding, NV," Jefferies & Company, Inc., Update – March 08, 2002.

<sup>22</sup> This reflects all of the LaBranche operations, but only the specialist operations of Fleet and Van der Moolen.

<sup>23</sup> See, Corwin, Shane, "Specialist Performance and New Listing Allocations on the NYSE: An Empirical Analysis," *Journal of Financial Markets*, forthcoming.

<sup>24</sup> For example, LaBranche and Van der Moolen analysts compare those companies to Instinet, NASDAQ, and Knight Trading Group. "LaBranche & Co.," Jefferies & Company, Inc., Update

- The NASDAQ Stock Market, Inc. itself<sup>25</sup> reported pre-tax profit margins of 10.5 percent in 2002 (9.2 percent in 2001.)<sup>26</sup>
- In the fourth quarter of 2002, Instinet recorded a pre-tax loss, and Knight Trading Group, Inc. (“Knight Trading”) recorded only a 0.5 percent pre-tax profit margin.<sup>27 28</sup> See **Table 6**.
- In a recent analyst report, the two publicly traded firms with a majority of operations as NYSE specialists (LaBranche and Van der Moolen) reported higher profit margins than all of the other eight companies in the peer group determined by analysts.<sup>29</sup> See **Table 6**.

That is, based on publicly available data, the NYSE trading specialists earn higher operating profit levels than market makers outside of the NYSE.

#### b. Specific SIC Codes

NYSE trading specialists earn higher profit levels than other firms in their industry or related industries. **Table 7** compares the NYSE trading specialist profit levels with those of firms in Standard Industrial Classification Codes (“SIC”) that cover the financial services industry. In comparison to the 35-60 percent pre-tax margins of the NYSE specialists:

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– April 1, 2003 and “Van der Moolen Holding, NV” Jefferies & Company, Inc. Update – March 08, 2003.

<sup>25</sup> An analyst report valuing NASDAQ includes among the seven benchmark companies LaBranche, Van der Moolen, Knight Trading Group and Instinet. “The Nasdaq Stock Market, Inc.,” Jefferies & Company, Inc., Update – March 11, 2003.

<sup>26</sup> See, for example, “The Nasdaq Stock Market, Inc.,” Jefferies & Company, Inc., Update – March 11, 2003.

<sup>27</sup> “LaBranche & Co.,” Jefferies & Company, Inc., Update – April 1, 2003.

<sup>28</sup> Both companies earned negative profits for the full year 2002. [www.moneycentral.msn.com](http://www.moneycentral.msn.com).

<sup>29</sup> Due to their other operations or privately held nature, no other NYSE specialist was included in this grouping. Instinet, NASDAQ, and Knight Trading were part of this peer group. This apparently includes all of Van der Moolen’s operations. Its specialists profit margins were higher. “Knight Trading Group, Inc.” Jefferies & Company, Inc., Update – January 27, 2003.

- The total pre-tax margin earned in SIC 6211 (Security Brokers, Dealers, and Flotation Companies) was 9.7 percent in the year ended March 2002.<sup>30</sup>
- Firms in SIC 6282 (Investment Advice) earned pre-tax margins of 14.5 percent in the year ended March 2002.<sup>31</sup>
- Each of the SIC codes classified as “Finance and Insurance” earned pre-tax margins below those of the NYSE trading specialists.<sup>32</sup>

c. All SIC Codes

The NYSE trading specialists earn higher profits than companies in other businesses—manufacturing and distribution.

- The median and mean pre-tax profit margin of manufacturing operations (SIC 2000-3999, etc.) during the past five years was approximately 2-5 percent. See **Table 8**.<sup>33</sup>
- The median and mean pre-tax profit margin of distribution operations (SIC 5000-5199) was always less than 3 percent during the past five years. See **Table 9**.<sup>34</sup>

B. Profitability Reflected in Acquisitions and Market Values

1. Profits Generated by Intangible and Tangible Assets

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<sup>30</sup> “Annual Statement Studies, 2002-2003,” The Risk Management Association, Philadelphia, 2002.

<sup>31</sup> “Annual Statement Studies, 2002-2003,” The Risk Management Association, Philadelphia, 2002.

<sup>32</sup> This included 20 SIC Codes. “Annual Statement Studies, 2002-2003,” The Risk Management Association, Philadelphia, 2002.

<sup>33</sup> This includes the years ended March 1998-2002. “Annual Statement Studies, 2002-2003,” The Risk Management Association, Philadelphia, 2002.

<sup>34</sup> “Annual Statement Studies, 2002-2003,” The Risk Management Association, Philadelphia, 2002.

Companies earn profits as a result of their tangible and intangible assets. As summarized above, “tangible assets” generally provide a relatively modest profit margin. Higher profit margins are generally associated with the ownership of valuable intangible assets (*e.g.*, market position, intellectual property, etc.).

## 2. Evidence of non-routine (intangible) profits/assets

The above analysis suggests that the NYSE specialists are generally earning profits far in excess of routine levels that would be indicative of holding no valuable intangible assets. This is corroborated by the dearth of tangible assets and the market value of the one firm that is the truest “pure play” specialist. As of April 1, 2003; only approximately 5 percent of LaBranche’s book value was made up of tangible assets.<sup>35 36</sup>

In general, the acquired specialist firms have reported significant levels of intangible assets. In fact, they typically constitute a majority of the acquired assets.

- The Goldman Sachs Group, Inc. (“Goldman Sachs”) purchased Spear, Leeds & Kellogg, L.P. for \$6.5 billion in 2000. This included approximately \$5 billion worth of intangible assets.<sup>37</sup>
- From late 1999 through 2001, eleven specialists were acquired by LaBranche, Van der Moolen, Goldman Sachs, and Bear Sterns. As seen in **Table 10**, the majority of such acquisition prices were made up of intangible assets.<sup>38</sup>

## C. Spreads and Other Proxies for Profit

### 1. NASDAQ and NYSE Spreads

Recent reports suggest that NASDAQ trades more efficiently than the NYSE. Its effective spread of 1.5 cents is reported to be 40 percent lower than the NYSE. Similarly, it is reported to execute 81 percent of trades at the quoted price vs. only 60 percent for the NYSE.<sup>39</sup>

<sup>35</sup> At that time, its book value was reported to be \$15.60 per share, with only \$0.85 in tangible assets, “The Nasdaq Stock Market, Inc.,” Jefferies & Company, Inc., Update – March 11, 2003.

<sup>36</sup> LaBranche has been acquiring a number of specialist firms since 1999. See “LaBranche & Co.,” Raymond James & Associates, Inc., January 17, 2003.

<sup>37</sup> “Spear, Leeds & Kellogg Joins With Goldman Sachs,” Monday September 11, 2000. See [www.gs.com](http://www.gs.com).

<sup>38</sup> “Van der Moolen Holding, NV,” Jefferies & Company, Inc., Update – December 07, 2001.

<sup>39</sup> See “Trading Probe The Least of NYSE Worries,” April 24, 2003, [www.forbes.com](http://www.forbes.com).

NASDAQ itself reports similar—slightly more favorable—numbers on S&P 500 stocks: (a) spreads that are 62 percent lower than NYSE and (b) transaction costs that are 56 percent lower than NYSE.<sup>40</sup>

## 2. Revenue Per Share

Publicly available information suggests that the market makers of NYSE (specialists) derive more revenue per traded share than the corresponding revenue for the NASDAQ market makers. In focusing on the operations that are exclusively/majority in market making, a reasonable comparison is between LaBranche/Van der Moolen and Knight Trading. For the full year 2001, Knight's revenue captured per share was .3 cents.<sup>41</sup> By contrast, Van der Moolen's and LaBranche's principal trading revenues per share were approximately 2.4 and 1.3 cents, respectively in 2001. See **Table 2**.<sup>42</sup>

## D. Future Research

Publicly available data suggests that NYSE trading specialists earn higher operating profit levels than NASDAQ market makers. With this research restricted to public data, further research is warranted. Subject to data availability, future profit level comparisons may consider investment (asset) levels. Also subject to data availability, the profits of the privately held trading specialists (and those part of consolidated public companies that do not report their specialist profits) should be examined.

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<sup>40</sup> It reports similar favorable comparisons with mid-cap stocks and companies 101-500 within the S&P 500. [www.nasdaq.com](http://www.nasdaq.com).

<sup>41</sup> "Knight Trading Group, Inc." Bear, Stearns & Co., Inc., January 23, 2003.

<sup>42</sup> "Van der Moolen Holding, NV," Jefferies & Company, Inc., Update – March 08, 2002.

Profitability Analysis of NYSE

Trading Specialists

by

Brian C. Becker, Ph.D.\*

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\*President; Precision Economics, LLC ([www.precisionecon.com](http://www.precisionecon.com)); Washington, D.C. I would like to thank Andrew Parsons and Landon Zee of Precision Economics, LLC for their editorial assistance as well as Instinet Corporation for its financial assistance.

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