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Stock brokers are entrepreneurs who incur switching costs when the change brokerage houses. We use Helsinki Stock Exchange data to investigate these costs by examining whether investors are loyal to their brokers when brokers move. We find that investors who have extant relationships with the new house are more likely to switch with them. New houses that are less active in a particular stock are more likely to attract the investors from the old houses, and savvy (knowledgeable) investors are more likely to stay with their broker.

I.   Introduction

Important players in the secondary market for stocks are the brokers. These individuals are entrepreneurs who facilitate stock trading in the upstairs and downstairs markets. Because a competent support staff and technologically advanced facilities are necessary to execute trades in modern markets, brokers join brokerage houses that are able to provide these needed trading services. Nevertheless, brokers act independently, assume business risks, and develop networks with other brokers within their own house as well as with brokers associated with other houses. Importantly, they develop strong relationships with their clients in order to ensure repeat business. Brokers sometimes change houses to increase the profitability of their businesses, and it is not uncommon for them to encourage their current clients to follow them to the new houses. If the clients follow their brokers, they incur what Klemperer (1995) refers to as switching costs. Because of these costs not all clients will switch. Thus, similar to most start-up ventures, the brokers will need to attract new clients to replace the ones that they lost. Brokers, then, also incur switching costs.

In this paper, we investigate switching costs in the stock brokerage industry by analyzing the loyalty that investors exhibit to their brokers. We ask why customers follow their brokers when brokers move to other brokerage houses. We posit that switching costs exist because investors need to communicate their trading and investment preferences to their brokers. If they decide to switch brokers, they will have to educate their new brokers, which can be costly in terms of time and convenience. These costs may be especially burdensome for investors who routinely use the upstairs market, because, as Grossman (1992) points out, upstairs market brokers keep track of their customers' trading and investment needs and preferences, with liquidity often being an important consideration. To answer our research question, we use the Helsinki Stock Exchange (HSE) as our laboratory and capitalize on its stock ownership and transaction databases. Because of public data availability our analysis is limited to 1996-7.

II.   Environment and Data

The HSE consists of downstairs and upstairs markets. Investors either choose the market where they transact or leave the decision to the broker who has the responsibility of obtaining the "best" price. The downstairs market uses an open electronic limit order book that mandates price and time priority. The upstairs market consists of a network of brokers and brokerage houses (25 at year end 1997). If the upstairs market is used, upon receiving customer orders, brokers search for counterparties, finding them either among their own customers or among the clientele of other brokers either in the same or different brokerage houses. Sometimes both the upstairs and downstairs markets are used if the order to be executed is especially large and needs to be broken down in order to "work" it through the system. The two markets are electronically linked, making all trades and related information available to brokers on their montage. Execution may occur either in the client's or brokerage

house's name. If the latter, a "fictitious" trade is made in the aftermarket by the broker to put stocks in the client's name. Booth et al. (2002) show that the two markets are economically linked, the downstairs market providing the price discovery function.

The HSE provides a rich source of stock transaction and ownership data. For each stock transaction, the HSE Automatic Trading and Information System (HETI) records price, volume, time, venue, broker, and brokerage house. The Book Entry System (BES), which is maintained by the Finnish Central Securities Depository (FCSD), contains each investor's initial shareholdings of HSE listed companies as of January 1, 1995, and all the daily changes in individual stock ownership occurring since then. Specific information includes the number of shares and average price as well as codes that uniquely identify the Finnish investor, type of share, and type of ownership. Using HETI data, we identify 11 instances of a broker switching firms. We then combine the HETI and BES data using the following algorithm. For each trading day and stock, one or more buyers are paired with one or more sellers, such that the buyers' total shares traded and average price, the sellers' corresponding quantity and price, and the share volume and price of a transaction reported in the HETI are equal. We discard BES entries that cannot be unambiguously matched with counterparts in the HETI. Similar to Grinblatt and Keloharju (2000), we treat the share classes as separate stocks. On average we match approximately 50% of the transactions, resulting in over 420,000 matches involving 85 share classes of 67 firms. Trades of less active stocks are more likely to be successfully matched.

III.   Reasons and Results

When brokers move from one brokerage house to another, their customers face three primary choices as to who they will use for future transactions. First, they can stay at the broker's old house and use another broker. Second, they can continue to do business with their broker but at his new house. Finally, they can select a new broker at a different house. Anecdotal evidence suggests that Finnish brokerage houses attempt to exploit the second possibility by hiring individual brokers away from other houses to increase their market share, a practice permitted by Finnish law during our study period.

Our focus is on the first two choices and we conjecture that there are two main reasons why investors continue to do business with their current brokers. First, investors may have developed a strong business and, perhaps, even personal relationships with their brokers, especially if the investors are active in the upstairs market and require special expertise in brokering large transactions. While the investors' sophistication (savviness) may influence the amount of expertise they need, the implication for the broker relationships required is unclear. Some savvy investors may follow their brokers to their new houses because their complicated investment preferences may necessitate close relationships. Other savvy investors, wanting to keep sensitive investment information private, may purposely have weaker relationships with their brokers. These investors may prefer to find a different broker at their extant houses. Observationally, the first group of savvy investors behaves similar to naïve investors who rely heavily on personal relationships and want to continue patronizing familiar brokers. Second, certain brokers and brokerage houses may specialize in a particular stock, leading investors to maintain their existing relationships to ensure continued access to liquidity. A competing explanation is that less dominant houses may have incentives to provide better customer service and prices in order to attract business.

We formally explore these conjectures using multivariate regression models. We measure the impact of broker switching using two dependent variables. First, Δ*(Prop.-Trading-Old-House)* is the proportion of the trading volume of an investor's total trading volume in a particular stock that is executed through the old brokerage house in month *t+1* less the same metric in month *t–1*. Second, Δ*(Prop.-Trading-New-House)* is the analogous metric for the new brokerage house. Each observation represents a trade by a specific investor of a particular stock that is executed in the upstairs or downstairs market. Following Tucker (1964), our explanatory variables are behavioral and not attitudinal. *Prop.-Investor-Trading-New-House* is the proportion of the value of investor trading in a stock executed by the new brokerage house. *Upstairs-Market* is a dummy variable equaling one if the trade is in the upstairs market, otherwise zero. *Old-House-Market-Share*, *Switching-Broker-Market-Share,* and *New-House-Market-Share* are the markka volume market shares of the stock for the old brokerage house (excluding the switching broker), the switching broker, and the new brokerage house, respectively. Following Grinblatt and Keloharju (2000, 2001) we define *Savvy-Investor* to be a dummy variable equaling one if the investor is a financial institution or non-financial corporation or zero if a governmental or non-profit institution or a household. Control variables used, for which statistics are not reported, are the logarithm of total value traded in a stock, a binary dummy variable indicating a buy as opposed to a sell transaction, binary dummy variables for all but one switching event, and binary dummy variables for each stock but one.

Table 1 provides our Ordinary Least Squares (OLS) regression results. Because the two dependent variables, namely, the decrease in an investor's proportion of trading at the old brokerage house and the corresponding contemporaneous increase in the proportion at the new brokerage house are likely to be related, OLS estimation may yield inconsistent coefficients. We address this issue by using Seemingly Unrelated Regressions (SUR) to estimate both models, and the results are similar to those reported in the paper. According to the old brokerage house regression, the coefficients for *Prop.-Investor-Trading-New-House* and the *New-House-Market-Share* are statistically significant at least at the 5% level, while the former is negative and the latter is positive. The same coefficients are significant for the new brokerage house regression but the signs are reversed. Also positive and significant in this regression is the *Savvy-Investor* coefficient.

Our results indicate that investors having stronger prior trading relationships with the new brokerage house are more likely to reduce trading with their extant brokerage house and switch their business to the new house. Moreover, new brokerage houses less active in a particular stock are more likely to attract the investors from the switching broker's old house. However, switching brokers with a greater share of the market for trading a stock do not attract investors from the old brokerage house. Finally, savvy investors shift more of their trading to the new brokerage house than naïve investors after the broker switches to the new house. These findings are consistent with savvy investors having more complicated trading preferences and investment needs and naïve investors relying more on their current brokerage houses than on their brokers for trades.

IV.   Conclusions

Brokers routinely engage in entrepreneurial activities. For example, brokers that change brokerage houses must develop new business as well as retain their existing clientele. We find evidence indicating not only that investors who have pre-existing relationships with

the new brokerage house are more likely to follow the broker to the new house but also that the new house activity in a particular stock and investor savviness play important roles. Thus, we contribute to the sparse but growing financial economics literature that maintains that human capital (Zingales, 2000; Rajan and Zingales, 2000), relationships (Baker, 1984; Booth, Dalgic and Kallunki, 2006) and perceptions (Grinblatt and Keoharju, 2001; Frieder and Subrahmanyan, 2005) are important to our understanding of how markets work.

REFERENCES

Baker, W.E., 1984, The social structure of a national securities market, *American Journal of Sociology* 89, 775–811.

Booth, G.G., O.M. Dalgic, J.-P. Kallunki, 2006, Cultural networks in an upstairs financial market, in W. Bessler, ed.: *Banken, Börsen, Kapitalmärkte: Festschrift für Hartmut Schmidt zum 65 Geburtstag,* pp. 187–294 (Duncker & Humblot GmbH, Berlin).

Booth, G.G., J.-C. Lin, T. Martikainen, and Y. Tse, 2002, Trading and pricing in upstairs and downstairs stock markets, *Review of Financial Studies* 15, 1111–1135.

Frieder, L., and A. Subrahmanyan, 2005, Brand perceptions and the market for common stock, *Journal of Financial and Quantitative Analysis* 40, 57–85.

Grinblatt, M. and M. Keloharju, 2000, The investment behavior and performance of various investor types: A study of Finland's unique data set, *Journal of Financial Economics* 55, 43–67.

Grinblatt, M. and M. Keloharju, 2001, How distance, language, and culture influence stockholdings and trades, *Journal of Finance* 56, 1053–1074.

Grossman, S.J., 1992, The informational role of upstairs and downstairs trading, *Journal of Business* 65, 509–528.

Klemperer, P.D., 1995, Competition when consumers have switching costs: An overview with applications to industrial organization, macroeconomics and international trade, *Review of Economic Studies* 62, 515–539.

Ranjan, R. and L. Zingales, 2000, The governance of the new enterprise, in X. Vives, ed.: *Corporate Governance: Theoretical and Empirical Perspectives,* pp. 201 - 227 (Cambridge University Press, New York City).

Tucker, W.T., 1964, The development of brand loyalty, *Journal of Marketing Research* 1, 32–35.

Zingales, L., 2000, In search of new foundations, *Journal of Finance* 55, 1623–1653.

Table I
Regression Results

Independent Variables	Dependent Variables	
	Δ *(Prop.-Trading-Old-House)*	Δ *(Prop.-Trading-New-House)*
Prop.-Investor-Trading-New-House	-0.200 (0.004)	0.172 (0.004)
Upstairs-Market	-0.007 (0.341)	0.020 (0.082)
Old-House-Market-Share	-0.073 (0.393)	-0.025 (0.288)
Switching-Broker-Market-Share	-0.041 (0.741)	0.044 (0.671)
New-House-Market-Share	0.937 (0.003)	-1.550 (0.000)
Savvy-Investor	0.046 (0.199)	0.149 (0.000)
Adjusted R-squared	0.004	0.204
No. of Observations	267	267

Notes: P-values for t-tests are given in parentheses, with a value of 0.000 signifying a value of less than 0.0005. The p-values in the first two (next four) rows are for one (two)-tailed tests.