

Churning: Excessive Trading in Retail Securities Accounts

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Churning involves excessive trading by stockbrokers in order to generate commissions. Current practice uses the turnover ratio to detect excessive trading. The turnover ratio is a flawed indicator of the actual harm of excessive trading which is commissions. This paper examines the intersection of law and financial analysis in the retail securities arena. A unique set of data from 23 actual churning cases is used to argue that the turnover ratio should be replaced by a more direct measure of the trading costs: the commission to equity ratio. An appropriate benchmark related to the return on common stocks is suggested to gauge excessive trading in a commission context.

I. INTRODUCTION

Individual investors sometimes invest through retail brokerage firms. One advantage of this approach is that the investor gains the counsel of a stockbroker who has expertise in matters relating to investments. Unfortunately, investor's experiences with brokerage firms are sometimes unsatisfactory, and there has been an explosion of lawsuits against stockbrokers in the last 15 years. Two types of cases constitute the majority of such claims: suitability claims and churning claims. Suitability cases involve allegations that the broker made recommendations of unsuitable securities. Churning cases involve allegations that the broker over-traded the account in order to generate commissions and not to benefit the client.

The genesis of claims against stockbrokers for wrongful conduct is the anti-fraud rule, Rule (10b-5), under the Securities Exchange Act of 1934. This rule is supplemented by rules promulgated by self regulatory organizations (SROs), such as the New York Stock Exchange and the National Association of Securities Dealers. For a stockbroker to become registered with the SEC, or become a member of a SRO, he or she must agree to follow "just and equitable principles of trade."

Churning claims arise out of the inherent conflict of interest involved in the normal procedure used to compensate stockbrokers. Because stockbroker compensation is typically based upon the volume, size, and type of transactions, customers suffer higher costs and lower returns when unnecessary transactions take place in the account. Churning

claims involve allegations that a broker abused his or her position by trading too often in order to generate commissions. Churning is essentially an agency/conflict of interest issue (Anderson, Heacock, & Hill, 1987).

The purpose of this paper is two fold. First, current legal practice uses a flawed financial ratio, the turnover ratio, to detect excessive trading. This paper will critique the turnover ratio and develop a better metric of excessive trading: the commission to equity ratio. Second, the paper introduces academics and practitioners who deal with individual investor issues to the concept of churning and how to detect excessive trading. Most academics are familiar with the general concept but may have little practical knowledge. The paper will present the important issues in sufficient depth that an interested reader will be better informed in the classroom and in other academic and practical arenas.

Although dealing peripherally with legal issues, this paper is not a legal paper. Attorneys may find the paper of interest, however, there will be a minimum of legal references. Interested readers are referred to Goldberg (1991), Jensen (1991), Loss and Seligman (1989), and Winslow and Anderson (1990) for voluminous case citations.

II. ELEMENTS OF CHURNING CASES

One definition of churning is as follows: "Churning occurs when a securities broker engages in excessive trading in disregard of his customer's investment objectives for the purpose of generating commission business," (Loss & Seligman, 1989, p. 3874). There are three elements of a churning case: control, excessive trading, and scienter (fraudulent intent).

A. Control

If a stockbroker is to be found liable for churning an account, the finder of fact (judge, jury, or arbitration panel) must first determine that the broker was in control of the account. Typically, control is the most hotly contested element in churning cases. There are two types of control: express and implied.

The best example of express control over a brokerage account is when there is a written discretionary trading authorization. In such an account, the stockbroker receives blanket permission by the customer to execute trades at the stockbroker's discretion. Control is typically established with little contest when there is a written discretionary trading authorization present. However, this is rarely the case.

In the absence of express control, implied or "de facto" control must be demonstrated by credible evidence in the form of written and oral testimony. The finder of fact must make a determination about who is ultimately in control of trading or who is "calling the shots."

There are certain factors and customer characteristics which the finder of fact usually considers in determining whether the stockbroker had sufficient control to call the shots for an account (Goldberg, 1991). These factors include the customer's sophistication, prior securities experience, and the amount of trust and confidence placed in the stockbroker. It is also relevant to examine whether the client conducted independent research, read current financial publications, and whether the client was provided with totally truthful informa-

tion. In examining the trading that took place, if a high percentage of transactions were recommended by the broker and the client usually acquiesced, then the broker may have been in control of the account. The fact that the client occasionally executed a trade or refused a broker's recommendation does not establish that the client was in control.

B. Excessive Trading

It is well established in case law that excessive trading may only be gauged in light of the nature of the account, the dominant element of which is the investment objective of the client. In determining the investment objective, it is sometimes useful to examine new account forms for indicated investment objectives. Unfortunately, there is little standardization among firms, and categories vary widely. Common categories include safety, conservation of principal, income, safety and income, growth, growth and income, aggressive income, aggressive growth, trading, speculation, and long term growth. The problem is compounded by the frequent occurrence that more than one category is checked and these are often conflicting.

It is often more fruitful to look at the financial situation of the client. For instance, on one end of the spectrum, an elderly client with a retirement account investing irreplaceable funds should have conservative investment objectives. On the other end of the spectrum, a young executive with a good income, investing a small percentage of his or her wealth, could well have more speculative investment objectives. Another consideration is the sophistication and knowledge of the client. More sophisticated and knowledgeable clients can generally tolerate higher levels of risk.

Ultimately, a determination of the appropriate level of risk tolerance in the account must be made in order to determine if the account has been excessively traded. The degree of tolerance of risk among clients is obviously a seamless spectrum; nonetheless, for legal purposes, case law seems to have coalesced around three general categories, as follows:

1. **Conservative—Low Risk.** Accounts of this type generally require safety and conservation of principal. Common investment objectives include conservation of principal, income, and perhaps growth and income. Such accounts can ill afford excessive trading costs and low risk securities are generally appropriate.
2. **Investment—Medium Risk.** Such accounts are ordinary investment accounts. Although not classified as speculators, this type of investor is willing to assume some degree of investment risk. Common investment objectives include growth and long term growth. A buy and hold strategy is appropriate although such accounts can afford some trading and medium risk securities are generally appropriate.
3. **Speculative—High Risk.** These accounts are the most aggressive. Common investment objectives include trading, aggressive growth, and speculation. Substantial trading is suitable in such accounts and high risk securities are generally not unsuitable.

Once a determination of the risk tolerance and general nature of the account is made, a quantitative analysis of the trading in the account is conducted. The analysis typically includes a calculation of the turnover ratio in the account and other, more direct measures

of trading costs. It is also common to examine the holding periods of the securities in the account. Case law has developed certain standards for gauging the excessiveness of trading in relation to the nature of the account. These measures and standards of excessive trading will be examined below.

C. Scierter

The final element of a churning claim is scierter or "evil intent." Once it has been determined that the broker controlled the account and that the account was excessively traded, it must also be established that the stockbroker traded the account with the intent to defraud, or at least with reckless disregard of the best interests of the client. Most courts simply infer this element when the first two have been established (Goldberg, 1991).

III. MEASURES AND LEGAL STANDARDS OF EXCESSIVE TRADING

A. The Turnover Ratio

Until recently, most courts have dealt with the issue of excessive trading by examining the turnover ratio, which generally represents the number of times the equity in the account is liquidated and reinvested in a given period. Typically, turnover ratios are calculated on an annual basis. For instance, a nonmargined account would experience an annual turnover rate of one if all the investments in the account were sold and the proceeds reinvested during the same year. Turnover may be calculated using periods other than exactly one year by using the following formula:

$$\text{Turnover Ratio} = \frac{\text{Total Purchases} \times 12}{\text{Average Equity} \times N} \quad (1)$$

The turnover ratio divides total purchases over the period in question by the average account equity. This number, which represents total turnover, is then annualized by dividing by the total number of months (N) in the period in question and multiplying by 12.

The period of analysis is normally in months for retail securities accounts since statements are typically produced monthly. The ratio can be annualized using the number of days in the analysis and 365 in the numerator.

The turnover ratio normally looks at purchases in the account and ignores sales. The ratio may be calculated with the average of purchases and sales in the numerator or with the smaller of purchases and sales. In addition, in an institutional context, adjustments are commonly made for increases or decreases in funds in the account (Schreiner, 1980). Under normal circumstances these adjustment result in only minor changes in the calculated turnover ratio. The formula presented is consistent with current case law.

Account equity is the amount the client would realize if all securities in the account were liquidated and margin loans repaid. Conceptually, average account equity is the amount of money available to the stockbroker to turnover the account and thus to generate commissions.

B. Legal Standards for Determining Excessive Trading

In gauging whether or not the trading in a particular account is excessive, certain standards have been established in case law. Goldberg (1991) suggests that an annualized turnover ratio in excess of two times is indicative of active trading, a ratio of four or greater raises the presumption of excessive trading, and when the turnover ratio is greater than six the presumption becomes conclusive. This has become known as the 2-4-6 formulation.

Several early cases, including SEC cases, found excessive trading in accounts with conservative investment objectives that had turnover ratios in the neighborhood of two times on an annual basis. Other cases find excessive trading in normal investment accounts with turnover ratios in the neighborhood of four times, and turnover ratios in excess of about six times are typically sufficient to infer excessive trading even for accounts with speculative investment objectives. This position is buttressed by the seminal law review article entitled "Churning by Securities Dealers," in the *Harvard Law Review* (1967, p. 876) which contains the statement:

The turnover rates found to be excessive vary widely ... While few cases involved turnovers as frequent as one per month, turnovers averaging once every other month have occurred more frequently. Since the amount of activity permissible will vary with individual circumstances, these figures cannot be a firm guide; smaller turnovers may be objectionable in some cases and larger ones permissible in others. Nonetheless, it is possible to generalize from the SEC cases that a complete turnover more than once every two months is likely to be labeled excessive, and this conclusion appears reasonable.

This passage appears to be the genesis of much subsequent case law. It follows that a turnover of six is indicative of excessive trading even for accounts with very aggressive investment objectives. It is common for excessive trading to be found in accounts with turnover ratios of less than six but also with more conservative investment objectives. Thus, a turnover ratio of two might be excessive in the account of a customer with conservative investment objectives but not excessive in the account of a customer with speculative objectives.

The argument has been made that the turnover standards are out of date. Winslow and Anderson (1990) argue in favor of a different standard for judging whether an account has been excessively traded. They suggest that the proper standard of comparison is the average turnover ratio of a group of mutual funds with investment objectives similar to the customer in question.

The argument is that the turnover in accounts managed by professionals such as mutual fund managers is driven solely by professional judgment and not the desire for commissions. Brokers hold themselves out as financial experts with skill in managing money, and brokers also earn commissions when securities are traded. Thus, it is relevant to compare trading activity generated by brokers to the trading activity generated by professionals who have no conflict of interest. Table 1 summarizes the Winslow and Anderson mutual fund turnover results.

Average turnover rates range from 0.53 for the most conservative group of funds to 1.18 for aggressive growth funds. The average of the average turnover rates in their sample is 0.8 times on an annual basis. Mutual funds with different investment objectives exhibit substantially different average turnover ratios. For instance, the three fund categories that could be characterized as conservative (Income, Balanced, and Equity Income) had an

TABLE 1
Fund Category and Turnover Statistics

<i>Fund Category</i>	<i>Mean Turnover Rate</i>	<i>SD</i>	<i>Mean Plus 2 SD</i>
Aggressive Growth	1.18	0.72	2.62
Balanced	0.66	0.58	1.81
Equity Income	0.70	0.53	1.76
Growth	0.98	0.61	2.19
Growth-Income	0.53	0.55	1.64
International	0.55	0.42	1.38
Option-Income	1.45	0.74	2.93
Small Company	0.54	0.39	1.32
Income	0.58	0.40	1.39
Average	0.80		

Source: Winslow & Anderson (1990).

average turnover ratio of 0.65 times. Given the standard deviations around these means, essentially all of the more conservative funds were turned over less than two times. Funds with more aggressive investment objectives (Growth-Income, Growth, and Aggressive Growth) had an average turnover of 0.9 times, and standard deviations indicate that essentially all of these funds had turnover ratios less than three times. The standard deviation numbers should be interpreted with some caution since it is unlikely that the distribution of turnover ratios is normal. The turnover ratio is bounded on the downside by zero, and thus the distribution is likely to have a positive skew.

Given that professional money managers turn over their portfolios an average of less than one time per year, case law standards, that is, the 2-4-6 formulation appears overly generous to brokers. This is especially true when it is noted that retail securities customers pay much higher commissions than institutions such as mutual funds. Winslow and Anderson (1990, p. 357) conclude that a lower hurdle to demonstrate excessive trading is warranted:

We believe that some use of a weaker form of presumption would be helpful to the courts. Depending to some extent on the specific investment objectives as reflected in the mutual fund data ... an appropriate annual turnover rate should be seen as lying in the neighborhood of one; rates increasing beyond that should be viewed with skepticism. As the rate increases much beyond one, the broker should bear the burden of explaining the higher than normal rate. Once rates rise to about three, there should be little room for argument about the excessive trading element of the claim, in the absence of an investment motive or strategy that is not accounted for in our data.

A recent supreme court decision (McMahon v. Shearson Lehman, 1987) forced most securities cases into arbitration and, with few exceptions, case law is frozen in essentially the same place it was in 1987. Thus, the Winslow and Anderson argument has not been factored into case law.

C. Problems With the Turnover Measure

The turnover ratio is an indirect measure of trading activity and trading costs. The harm of excessive trading is not transactions volume per se but the unnecessary trading costs imposed on an account. Moreover, the motivation for excessive trading is commissions which accrue to the stockbroker and the brokerage firm. If commission rates were

fixed, as they were during the period when case law standards evolved, then the turnover ratio would have a fixed relationship with trading costs, and there would be no problem in using turnover ratios to gauge excessive trading. However, commission rates are now competitive, and there has been a proliferation of other types of securities traded in brokerage accounts, many of which carry higher commission rates than listed equities.

For instance, it is not unusual to see mutual funds carried in retail brokerage accounts. Such instruments carry front end or back end loads, typically in the range of 4-8%. Thus, a complete turnover (purchase and sale) of mutual funds could cost perhaps 8% while a complete turnover in listed equities might cost 3% if one-way commissions are 1.5%. Thus, similar trading volume in listed equities and mutual funds would generate similar turnover ratios with much different trading costs.

It has become common place to see exchange traded options in retail securities accounts. Commission rates on options are typically in the range of 3-7% of the transaction amount (see Appendix). For certain types of options strategies, the turnover ratio may dramatically understate the level of trading activity. For instance, if the strategy used is to sell calls and allow them to expire or be exercised, then the turnover rate associated with options trading would be zero since no purchases would occur. This problem has been recognized, (SEC Special Options Study, 1968).

Another potential problem with using turnover to measure excessive trading occurs when principal trades on OTC stocks take place in the account. Such trades carry no explicit commissions, but there are trading costs, and stockbrokers are compensated in the form of sharing a part of the markup on the security. The National Association of Securities Dealers has a policy which suggests that profits on principal transactions should normally not exceed 5%. The policy was adopted after a survey of mark-ups charged by NASD members in retail transactions indicated that 47% of the transactions were marked up less than 3%, another 24% were marked up between 3 and 5% and the remainder were marked-up more than 5% (NASD, 1944). Commission on pink sheet stocks sometimes run as high as 15-20% per trade.

In summary, many securities that are commonly traded today carry different and generally higher commission rates than the commission rates on listed equities. The turnover ratio and associated case law standards may have worked well in a simpler era when listed equities constituted the vast bulk of trading in retail securities accounts. This is no longer the case, and as a result, the turnover ratio is a flawed measure of the degree of excessive trading in retail securities accounts. What is needed is a direct measure of trading costs in retail securities accounts. The next section presents such a measure.

D. A Better Measure of Excessive Trading—The Commission to Equity Ratio

The 1968 SEC Special Options Study suggests the commission to equity (C/E) ratio as an alternative to the turnover ratio. The suggestion was made in the context of options trading but is equally applicable to all securities trading. It has the advantage of measuring trading costs directly.

The C/E ratio is calculated by dividing the total commissions in the account by the average equity in the account and then annualizing the number, that is:

$$\text{C/E Ratio} = \frac{\text{Total Commissions} \times 12}{\text{Average Equity} \times N} \quad (2)$$

The interpretation of the *C/E* ratio is both interesting and useful. The *C/E* ratio represents the minimum annual rate of return on the account equity that would have to be earned to break even and cover commissions paid. If the *C/E* ratio is 16%, then the account would have to earn 16% annually just to cover commissions and leave the account equity intact. The *C/E* ratio is a better measure of trading activity than the turnover ratio because it looks at trading costs directly and includes commissions on both purchases and sales. The turnover ratio includes only purchases in the account.

The total cost to equity (*TC/E*) ratio is a variant of the *C/E* ratio which provides further useful information. The *TC/E* ratio is calculated in the same manner as the *C/E* ratio but includes margin interest and fees in the numerator. The *TC/E* ratio is interpreted as the minimum annual return necessary to break even and cover total account costs. The *TC/E* ratio is always greater than or equal to the *C/E* ratio. It will be equal to the *C/E* ratio if there is no margin interest or fees.

The *TC/E* ratio must be interpreted with caution. The argument can be made that it is a biased measure of trading activity in the sense that it is possible to have a margin balance and pay margin interest when there is no trading activity at all. It is a valid measure of the return necessary to break even but includes some costs that are not actual trading costs. Often, the *TC/E* ratio is presented in conjunction with the *C/E* ratio and is useful as an indication of the costs imposed on the account by trading on margin. Since margin trading and the resultant risks are suitability issues, the *TC/E* is useful in those cases where both churning and suitability are issues.

Cost ratios are finding their way into administrative case law. In a recent SEC case against brokers accused of churning several retail accounts, the administrative law judge explicitly accepted the *C/E* ratio "as a valid indicator of excessive trading," (Johnson, 1992). The decision is useful in validating trading costs as an indicator of excessive trading. Unfortunately, the decision offered no guidelines to gauge excessive trading, only that the return necessary to break even and cover trading costs is a valid indicator. What is needed is a reasonable benchmark against which to gauge the excessiveness of the *C/E* ratio.

E. Turnover and Commission Costs

The relationship between turnover and trading costs is intuitive. Consider two accounts; both have a turnover ratio of four, but in one account commissions are charged at institutional rates of about 40 basis points per turnover (20 basis points one way). A turnover of four would be associated with trading costs of 1.6%, probably too high but not excessive enough to charge a stockbroker with fraudulent behavior. The other account might have trading costs of 3% per turnover (see Appendix) and would have trading costs of 12% which might well be excessive and fraudulent.

Total commission costs in an account over a period of analysis must be equal to the total transaction volume times the average commission rate per transaction during the same period. If *C* is total commissions paid over a period, *TV* is the total volume of transactions (both purchases and sales), and *ACR* is the average commission rate on the securities traded, then:

$$C = TV \times ACR. \quad (3)$$

Commission costs can vary because of transactions volume and commission rates. If we know the total volume of transactions and total commissions, the average commission rate may be calculated as:

$$ACR = C/TV. \quad (4)$$

Recalling that total transaction volume is the sum of total purchases and total sales, if purchases are equal to sales, then total volume may be represented by two times purchases (P). Substituting $2P$ for TV in Equation 3 and rearranging yields:

$$2ACR = C/P. \quad (5)$$

Total commissions C and purchases P are numbers that are normally calculated in an analysis of excessive trading. It is of interest to interpret these numbers in a C/E and turnover context. Dividing the C/E ratio by the turnover ratio may be interpreted as the average cost per turnover, where one turnover is both a purchase and a sale of all of the securities in the account:

$$\text{Cost Per Turnover} = C/E \text{ Ratio} / \text{Turnover Ratio}. \quad (6)$$

Since a turnover is the equivalent of a purchase and a sale of account equity, the cost per turnover will be twice the average commission rate, exactly the result of Equation 5. This is not surprising since the only difference between the turnover ratio and the C/E ratio is that the former has purchases in the numerator, and the latter has commissions in the numerator. The remaining terms (average equity, N and 12) cancel, leaving C/P .

IV. CHURNING CASES

This section presents summary numbers for 23 actual churning cases. Of the 23, 20 were civil cases, and 3 were administrative law cases (2 SEC and 1 state). In 21 of the 23 cases, the stockbroker suffered some penalty in the form of an arbitration award, administrative sanction, or monetary settlement. Seventeen of the cases were against a total of 6 major brokerage firms, 6 were against regional firms. In all the cases there were allegations of unsuitable trading as well as churning. Twenty of the 23 were traded on margin, and 15 traded options in some form and amount.

Listed equities comprised slightly more than half of the trading in these accounts. Option trading and unlisted equities accounted for about 20% each, and the remainder of the trading was a mixture of bonds, mutual funds, preferred stock, warrants, and small amounts of limited partnerships. On balance, these cases constitute a wide cross-section of garden variety churning and suitability cases. Trading in these accounts took place from the early 1980s through early 1994.

A. Overview of "Churned" Accounts

Table 2 presents some summary numbers for the 23 churning cases listed chronologically. Column averages are presented at the bottom of the table.

TABLE 2
Summary Analysis for 23 Churning Cases

Case #	Period	Month in Analysis	Average Equity	Total Purchases	Total Margin Interest	Total Commissions	Turnover Ratio	C/E Ratio (%)	TC/E Ratio (%)	Cost per Turnover (%)
1	9/82-12/84	28	14,737	261,647	10,591	19,284	7.6	56.1	86.9	7.4
2	9/82-1/87	53	49,146	1,301,088	11,117	54,580	6.0	25.1	30.3	4.2
3	9/84-7/86	23	29,751	314,503		21,973	5.5	38.5	28.5	7.0
4	9/85-12/91	76	112,797	3,693,473	69,433	76,836	5.2	10.8	20.5	2.1
5	4/86-3/90	48	238,648	2,441,888	25,099	105,781	2.6	11.1	13.7	4.3
6	6/86-10/90	53	77,802	760,818	39,583	33,892	2.2	9.9	21.4	4.5
7	7/86-3/88	21	60,531	1,037,145	9,759	53,482	9.8	50.5	59.7	5.2
8	9/86-7/88	22	48,192	558,589	2,636	30,238	6.3	34.2	37.2	5.4
9	1/87-1/90	37	33,166	681,446	4,828	25,469	6.7	24.9	29.6	3.7
10	1/87-10/87	10	691,293	3,794,514	3,554	132,282	6.6	23.0	23.6	3.5
11	4/87-6/89	27	253,551	3,433,822	15,148	99,084	6.0	17.4	20.0	2.9
12	4/87-7/89	28	44,336	782,037	2,019	25,547	7.6	24.7	26.6	3.3
13	8/87-12/91	53	89,205	879,559		44,992	2.2	11.4	11.4	5.1
14	3/89-4/94	62	46,700	2,933,803	21,787	82,592	12.2	34.2	43.3	2.8
15	6/89-8/90	14	113,913	2,120,003	19,302	41,920	16.0	31.5	46.1	2.0
16	7/89-9/94	51	62,216	1,477,881	21,231	62,541	5.6	23.7	31.7	4.2
17	2/91-9/92	20	9,533	219,836	1,254	10,831	13.8	68.2	76.1	4.9
18	4/91-9/92	17	84,734	1,538,423	9,209	63,971	12.8	53.3	61.0	4.2
19	10/91-6/92	9	493,978	5,979,233		156,527	16.1	42.2	42.2	2.6
20	6/92-1/94	20	113,800	2,226,337	1,278	60,534	11.7	31.9	35.8	2.7
21	11/92-6/94	20	62,293	491,549	7,206	17,987	4.7	17.3	24.3	3.7
22	1/93-4/94	16	73,524	934,553	5,413	46,904	9.5	47.8	53.4	5.0
23	11/93-1/95	15	137,980	952,074	14,853	23,844	5.5	13.8	22.4	2.5
	Averages		127,905	1,687,575	15,065	56,134	7.9	30.5	37.2	4.0

On average, the owners of these accounts alleged excessive trading over about a 2.5 year period (31 months). The range was from 9 to 76 months. In general, the time period of analysis corresponds to the period the account was under the control of the stockbroker in question. The average annual turnover ratio for these cases is 7.9 times. The range of turnover ratios is from 2.2 to 16.1. Only 3 of the 23 cases had turnover ratios less than four, 4 had turnover ratios less than five, and 8 (35%) of the cases had turnover ratios less than six. Thus, the majority of cases had an indication of conclusive excessive trading (turnover greater than six) regardless of the investment objectives of the client.

The average annual C/E ratio was 30.5% for these cases, an indication that these accounts had to earn that annual rate to cover trading costs. The range is from 9.9% for Case 6 to 68.2% for Case 17. The average annual TC/E ratio was 37.2% with a range from 11.4% for Case 13 to 86.9% for Case 1.

B. Determinants of Trading Costs

In Section III-E the relationship between turnover and trading costs was developed; total commissions are the product of trading volume times the average commission rate, and the C/E ratio is the product of the turnover ratio times the cost per turnover. The cost per turnover will be approximately twice the average commission rate. Since the C/E and turnover ratios are normally calculated in churning cases, the average cost per turnover may also be calculated.

The last column of Table 2 presents the associated cost per turnover for each case. There is a strong relationship between the two activity measures; the cases with the highest turnover ratios also have the highest C/E ratios. The 12 cases with the lowest turnover ratios (average 4.9) have an average C/E ratio of 19.7%. The 11 cases with the highest turnover ratios (average 11.3) have an average C/E ratio of 42.3%.

The standard deviation of average cost per turnover is 1.4%, an indication of considerable commission rate variation in these accounts. Variation in account commission costs can be attributed both to transaction volume (turnover) and commission rate variation (cost per turnover).

A simple linear regression of C/E's on turnover indicates that turnover explains only about half of the variance of trading costs (C/E ratios) in this sample of retail securities accounts. The remainder of the variance is explained by differences in average commission rates (cost per turnover). The range of cost per turnover is from 2.0 to 7.4%. Thus a turnover ratio of four could be associated with a C/E ratio as low as 8% or as high as 29.6%. This potential variability in trading costs for the same level of turnover reinforces the notion that the turnover ratio is a flawed and incomplete indicator of excessive trading.

The variability of cost per turnover or, equivalently, average commission rates can be explained by different instruments being traded and the associated commissions rates charged. The Appendix presents an analysis of commission rates on listed equities and options traded in these accounts. The weighted average one-way commission cost on listed equities was about 1.5%. This translates to a cost per turnover of about 3%. However, 15 of the 23 accounts traded options, and the weighted average one-way option commissions in these accounts was 3.7%. This translates into a 7.4% cost per turnover for an account which traded only options. Indeed, in Case 1, which had a cost per turnover of 7.4%, more than 80% of the commission costs (\$15,671) were commissions on options transactions.

V. C/E EXCESSIVE TRADING GUIDELINE

The Commission/Equity Ratio is superior to turnover because it measures trading costs directly and has the useful interpretation that it is the minimum annual rate of return on the securities in the account necessary to break even and cover trading costs. Unfortunately, there are no case law precedents to guide courts and arbitration panels in determining what level of commission costs should constitute excessive trading. A reasonable guideline or benchmark would thus be useful to the courts, as well as to academics and practitioners who deal with individual investor issues.

One approach to the solution of this problem is to relate the maximum allowable C/E ratio to average market rate of return on securities. If there is little likelihood that the account can consistently earn a positive rate of return because of the costs imposed, then trading is excessive. It is well known that the long run average annual rate of return on common stocks is about 12% (Ibbotson Associates, 1996). Common stocks are the most prevalent investment vehicle in brokerage accounts. If an account can be generally labeled an investment account, and if trading costs are imposed in excess of about 12%, then there is no reasonable expectation that the account will consistently earn a positive rate of return. In such instances, trading costs are excessive, and a broker in control of such an account should be viewed as having traded the account excessively.

This approach is a simple and elegant solution that takes into account market realities. Moreover, the levels of trading which appear excessive are roughly congruent with existing case law and the Winslow and Anderson results for mutual funds.

Winslow and Anderson argue that turnover in excess of three times should be viewed as conclusively excessive. Since the average cost per turnover for the 23 accounts reviewed here was 4%, a turnover ratio of three with a cost per turnover of 4% corresponds to a C/E ratio of 12%, exactly the guideline suggested.

If only listed equities were traded in an investment account, then a turnover ratio of three coupled with a cost per turnover of 3% (see Appendix for average equity trading costs) translates to a C/E ratio of 9%. Thus, suggesting that a 12% C/E ratio is excessive is generous to stockbrokers.

It is useful to put this benchmark into context. Consider the average mutual fund with normal investment objectives. In the Winslow and Anderson sample these correspond roughly to investment objectives of Growth-Income, Growth, and Aggressive Growth. The mean annual turnover rate for these funds is 0.9 times.

It is well known that trading costs in an institutional context are in the range of 3 to 7 cents a share with a mean of about 5 cents. In the Appendix, it is shown that commissions averaged 43 cents per share and 150 basis points. A 5 cent institutional commission translates to about 40 basis points per turnover. Thus, the typical mutual fund manager with normal investment objectives and no personal gain from trading has a turnover of about 0.9 with a cost of 0.4% per turnover. This imposes annual trading costs (C/E) of about 0.36%.

The 12% guideline suggested as excessive is more than 30 times the average costs imposed in an institutional context. Since the majority of mutual fund managers cannot consistently earn a risk adjusted return in excess of a simple buy and hold strategy after costs (Jensen, 1968; Malkial, 1995), it is not unreasonable to suggest that a stockbroker who imposes costs in excess of 30 times institutional costs is trading the account excessively.

The 12% guideline/benchmark should not be viewed as a bright line test. Rather the unique circumstances of each case should be considered. For instance, accounts with more

conservative investment objectives should reasonably tolerate lower levels of trading than investment or speculative accounts. Accounts with aggressive investment objectives might tolerate slightly higher rates depending on the nature of the securities traded.

VI. SUMMARY

The detection of excessive trading in retail securities accounts is not a settled issue. The legal profession has relied on the turnover ratio as the principal metric of excessive trading, and case law standards have evolved around that measure. This paper explores the concept of churning and excessive trading in retail securities accounts. Data from 23 actual churning cases are used to demonstrate that the commission to equity ratio is a superior measure of excessive trading.

APPENDIX

Commission Costs

An analysis was conducted of the commission costs of the trading conducted in the 23 accounts analyzed in the paper. Agency commission costs on listed equities and options are readily available from monthly statements and confirmation slips. Mark-ups on unlisted equities and bonds are typically not available, although this information can occasionally be obtained through the legal discovery process.

Table A-1 presents the results of the analysis of commissions for listed equities and listed options. These costs are one-way commission costs, and no distinction is made between purchases and sales. For listed equities, the weighted average one-way commission costs on 2,316 round lots trades was 1.5%, and the weighted average commission cost per share was \$0.43. Odd lot trades cost 2.7% one way and \$1.31 per share in these accounts. Trades of just 100 shares cost 1.8% one way and \$0.90 per share. In all cases the weights used are the trade size divided by the total trade value in a category.

The weighted average one-way commission costs on 2,220 listed option trades was 3.7% and \$12.83 per contract. The commission costs are weighted by trade size.

TABLE A-1
Commissions on Listed Equities vs. Commissions on Options

Trade Size	Number of Trades	Weighted Averages		Trade Size	Number of Trades	Weighted Averages	
		Cost/Share	Percent Commissions			Cost/Share	Percent Commissions
Odd Lot Trades	2,328	\$1.31	2.7%	1 Contract	2,102	\$31.06	7.8%
Round Lot Trades 100 Shares	2,612	\$0.90	1.8%	5 Contracts	2,568	\$14.81	4.7%
1000 Shares	2,403	\$0.37	1.5%	10 Contracts	2,590	\$13.85	3.6%
> 1000 Shares	2,404	\$0.21	1.5%	20 to 50 Contracts	2,307	\$10.82	3.3%
Overall Round Lot	2,316	\$0.43	1.5%	Overall	2,220	\$12.83	3.7%

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