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DETERMINING EXCESSIVE TRADING IN OPTION  
ACCOUNTS: A SYNTHETIC VALUATION APPROACH

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## I. INTRODUCTION

As long as there is greed, securities accounts will be churned. Stockbrokers are in reality commission salespersons whose livelihood depends on the volume of sales transactions they generate. Thus, what is in the best interest of the customer is not always in the best interest of the salesperson. It is this conflict between personal gain and professional responsibility that can lead brokers to place their own interests above that of their customers and engage in trading that is unsuitable for the customer.

The prohibitions against “churning” an account are a recognition that some brokers trade stocks and other securities not for the customer’s benefit but for their own. However, traditional tests for churning stock accounts do not necessarily lend themselves to option accounts. The most common test, the annualized turnover rate test, involves measuring the value of gross purchases made in an account. This article will propose a formula by which option contracts can be converted to their equivalent value of the underlying stock for calculating gross purchases. Such a calculation will substantially increase the gross purchases of an account that involves options contracts and will prevent churning by a broker who artificially lowers gross purchases by purchasing an equivalent value of stock through options purchases.

## II. CHURNING

### A. *Churning Defined*

Churning occurs when a broker or investment advisor exercises control over a customer’s account and executes trades for the purpose of generating commissions. [FN1] The trades must be contrary to the customer’s investment objectives, [FN2] and excessive both in size and frequency of trades, in light of a customer’s goals, sophistication, and commissions paid. [FN3] As such, churning has been deemed a manipulative device or scheme to defraud, prohibited by section 10(b) of the Securities Exchange Act of 1934 (“Exchange Act”) as well as rule 10b-5 promulgated thereunder, [FN4] and is also prohibited by various state statutes and the common law. [FN5] Churning is also prohibited by the National Association of Securities Dealers, [FN6] the New York Stock Exchange, [FN7] the American Stock Exchange, [FN8] and the Chicago Board of Options Exchange. [FN9]

### B. *Elements of Churning*

For churning to occur, three elements must exist: (1) the broker must exercise control over the account; (2) the trading must be excessive considering the investment objectives of the customer; and (3) the broker must act with intent to defraud the customer or with willful and reckless disregard for the interests of the customer. [FN10]

#### 1. Control

Control may be either actual or de facto. For control to be actual, the broker must have express discretionary authority to trade the customer’s account. [FN11] Expressly granted discretionary authority, if exercised by the broker, is control as a matter of law. [FN12] If the

broker has not been expressly authorized to trade the customer's account without prior approval, a plaintiff may nonetheless be able to show that the broker exercised de facto control over the account.

The courts have developed several methods to determine if de facto control exists. These tests include whether the customer routinely followed the recommendations of the broker, [FN13] relied on the recommendations, [FN14] or was unable to understand the recommendations or exercise independent thinking. [FN15] Factors considered relevant to control by the broker are the customer's age, [FN16] education, [FN17] investment experience, [FN18] and financial sophistication. [FN19] Even a sophisticated customer, however, can be found to have relinquished control by letting the broker make daily investment decisions. [FN20] Control has been inferred from the broker-customer relationship when the customer "lacks the ability to manage the account and must take the broker's word for what is happening." [FN21] An assertion of broker control will fail if the customer places the orders. [FN22] Additionally, if the customer, although following broker-initiated recommendations, had the financial acumen to understand the risks involved and acquiesced in the trading [FN23] or failed to follow the broker's advice to sell a stock to minimize losses, [FN24] control over the account is retained by the customer. [FN25]

## 2. Excessive Trading

To determine whether there has been excessive trading of a customer's account, courts look to the financial objectives of the account and the financial resources of the customer. The more conservative the account objectives, the easier it is to show that trading was excessive. [FN26] However, even conservative accounts, if traded frequently to increase income, can be found not to have been traded excessively if the customer understood and approved of what was being done. [FN27]

Whether or not trading is excessive is determined by analyzing risk, suitability of the investments compared to other investments, and trading patterns. [FN28] The statistical tests used to measure excessive trading will be discussed infra.

## 3. Scierter

A cause of action for churning under section 10(b) requires that the broker act with intent to defraud or willful disregard of his customer's interest, [FN29] or at least "willfully abuse his customer's confidence for personal gain." [FN30] Scierter is a separate element in an action for churning brought under section 10(b). [FN31] Scierter may be inferred by the fact that churning is, by its very nature, a manipulative device or fraudulent scheme. [FN32]

### III. ANNUALIZED TURNOVER RATE

The annualized turnover rate is the traditional measurement used to determine if trading has been excessive. [FN33] The turnover rate is the gross amount of purchases in the account divided by the average net equity. [FN34] For example, if an account averages \$50,000 per month in equity and \$300,000 per year in purchases, dividing the \$300,000 by \$50,000 yields

six, which is the number of times the portfolio turned over in one year. The turnover rate is then compared to the account objectives to determine if trading was excessive.

Excessive turnover must be decided on a case by case basis, in light of the account objectives, using certain statistical guidelines. Many courts have adopted the standards set forth in an influential law review note which concluded that a turnover rate of six is excessive. [FN35] Other courts have also used an annual turnover rate of six as a benchmark for excessive trading in stock accounts, [FN36] while an annual turnover rate of two or less is usually presumed not to be excessive. [FN37] These benchmarks are not without their critics; two other commentators state that even a turnover rate of two should raise concerns of excessive trading. [FN38] Finding no difference between stock accounts and option accounts regarding churning, courts have applied the benchmark of six to option accounts as well. [FN39]

#### IV. SYNTHETIC TURNOVER RATE ANALYSIS

None of these traditional tests as currently applied properly accounts for the complex nature of options. Although options can be as risky or as safe as an investor wants them to be, one thing is clear: Options have the same effect as purchasing or selling a delta value equivalent of stock. "Delta" is the amount by which an option's price will change for a corresponding change in price in the underlying entity. [FN40] For example, if the underlying stock were to increase by one dollar, a call with a delta of 50 would increase in value by 50 cents, while a put with a delta of -50 would decrease in value by 50 cents. Thus, if the investor wishes to be long 100 shares of stock, the same position can be duplicated by purchasing two options with a delta of 50. [FN41] An option's delta will change relative to the amount of time until expiration and to the price of the underlying stock, [FN42] while stock always has a delta of 100.

By using the delta equivalent of the underlying stock, a broker can churn an option account, yet produce a turnover rate that would not be considered churning using the traditional application of the annualized turnover rate. The following example illustrates the equivalency of a pure stock position and a synthetic position created using the delta value of the stock's underlying options.

##### *A. Synthetic Stock Positions*

A long stock position is synthetically created by selling puts and buying calls, while a short stock position is synthetically created by buying puts and selling calls. Turnover rate can be substantially lower using options to create a synthetic equivalent of a pure stock position.

For example, LAW is trading at \$50 per share. Instead of buying 100 shares of stock, you can buy 1 LAW call with a strike price of \$50 priced at \$3.125 having three months until expiration and a delta of 57, and sell 1 LAW put with a strike price of \$50 priced at \$2.50 having three months until expiration and a delta of 43. The total delta of the position is 100 ( $57 - (-43) = 100$ ). [FN43] This position is synthetically equivalent to 100 shares of LAW stock and will produce similar profits and losses for the position. For example, if when the options expire in three months the stock has risen \$10, to \$60 per share, 100 LAW shares will increase in value \$1,000. The \$50 call will increase in value from \$3.125 to its intrinsic value of \$10 and the

profit will be \$687.50 (\$1,000 - \$312.50). The put will expire worthless to the purchaser, creating a profit to you (the seller) of \$250. The total profit on the options transactions would be \$937.50 (\$687.50 + \$250), virtually the same as if 100 shares of stock were purchased. [FN44] Should the stock drop by \$10 to \$40 per share, the calls would expire worthless resulting in a \$312.50 loss and the puts would be worth \$10 resulting in a loss of \$750 (\$250 received - \$1,000 loss). The total option loss would be \$1,062.50 (\$312.50 + \$750). The stock loss would be \$1000, plus the interest loss discussed in note 44, *supra*, for a total loss of \$1,061.71.

## *B. Turnover Rate*

As shown in the previous section, it is possible to convert a purchase of options to an equivalent amount of stock. The formula for converting options to their synthetic stock equivalent is stock price multiplied by delta of the options and multiplied by the number of options purchased. This will allow a court or an arbitrator to analyze churning in the account as if the stock had been purchased instead of the synthetic equivalent in options.

### 1. Turnover Rate Using Traditional Methodology

Consider the case where a customer has an average monthly net equity of \$50,000. If the customer purchases 5,000 shares of LAW at \$50 per share during a one year period, he has made purchases totaling \$250,000 and the annualized turnover rate would be five (\$250,000 in gross purchases / \$50,000 average monthly equity).

If the customer instead purchases 50 call options of LAW with a strike price of \$40, priced at their intrinsic value of \$10 with a delta of 100, he would have purchased the synthetic equivalent of \$250,000 of the \$50 stock (\$50 stock price x 100 delta x 50 options). However, the amount of the option purchase would only be \$50,000 (50 options x \$10 x 100 shares) and the turnover rate would be one using traditional turnover rate methodology (\$50,000 in gross purchases / \$50,000 average net equity).

### 2. Turnover Rate Using Synthetic Value

Using the synthetic turnover rate, 50 call options with a delta of 100 multiplied by the stock price (\$50) would yield a synthetic position worth \$250,000 (delta (100) x options (50) x stock price (\$50)), the same as if the stock were purchased. [FN45] This is the synthetic equivalent of 5,000 shares of stock (\$250,000 / \$50 per share). The turnover rate is now five (a synthetic position of \$250,000 / \$50,000 of average net equity), the same as it is when the actual stock is purchased. The broker could therefore have artificially reduced the turnover while churning his customer's account by simply using the 50 call options as a surrogate for the 5,000 shares of LAW stock. [FN46] Use of the synthetic value of the options purchased or sold would eliminate this unsavory practice.

## V. CONCLUSION

While account churning is as old as stock trading, churning of stock options is a relatively new phenomenon. The courts have yet to develop a new set of standards to gauge

excessive trading of option contracts. Using the synthetic value of options will allow courts to continue to use the traditional annualized turnover rate test, but also allow the court to take into account the difference between the highly leveraged derivative option contract and the more traditional stock trade. Options can and do represent an equivalent exposure to an equity position in a stock. This is not expressed in the gross purchases of an account unless the synthetic value of the options is used.

By using the synthetic value of options, stocks can be compared to options on a level playing field. Brokers who are savvy to the traditional tests for churning will no longer be able to use options instead of the underlying stock to show artificially low purchases because the option contracts will be converted to their synthetic stock equivalent and an equivalent stock purchase can be calculated. This equivalent synthetic purchase price can then be used along with regular stock purchases, if any, in the account to determine if excessive trading has occurred by using the annualized turnover rate test.

[FN1]. Mr. Desmond, B.A., Rollins College, 1980; M.B.A., Fordham University, 1988; J.D., New York Law School, 1994, is a former options principal member of the American Stock Exchange and a former options trading rights holder of the New York Stock Exchange. He now practices law in West Palm Beach, Florida. Mr. Murray, B.A., University of Notre Dame, 1983; M.A., University of Notre Dame, 1986; J.D., St. John's University School of Law, 1990, is an associate at Rabin & Peckel, L.L.P., New York, New York. Mr. Desmond and Mr. Murray specialize in securities and antitrust litigation.

[FN1]. *Olson v. E.F. Hutton & Co.*, 957 F.2d 622, 628 (8th Cir. 1992); *Armstrong v. McAlpin*, 699 F.2d 79, 90 (2d Cir. 1983); *Miley v. Oppenheimer & Co.*, 637 F.2d 318, 324 (5th Cir. 1981); *McNeal v. Paine, Webber, Jackson & Curtis, Inc.*, 598 F.2d 888, 890 n.1 (5th Cir. 1979); *Mihara v. Dean Witter & Co.*, 619 F.2d 814, 820 (9th Cir. 1980); *Ruiz v. Charles Schwab & Co.*, 736 F. Supp. 461, 463 n.5 (S.D.N.Y. 1990); *Kaufman v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 464 F. Supp. 528, 534 (D. Md. 1978).

[FN2]. *Miley*, 637 F.2d at 324; *Carras v. Burns*, 516 F.2d 251, 258 (4th Cir. 1975); *Jenny v. Shearson, Hammill & Co.*, [1978 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 96,568, at 94,381 (S.D.N.Y. Oct. 6, 1978).

[FN3]. *Fey v. Walston & Co.*, 493 F.2d 1036, 1050 (7th Cir. 1974); *Frota v. Prudential-Bache Sec., Inc.*, 639 F. Supp. 1186, 1191 (S.D.N.Y. 1986); *Polera v. Altorfer, Podesta, Woolard & Co.*, 503 F. Supp. 116, 118 (N.D. Ill. 1980).

[FN4]. *See Miley*, 637 F.2d at 324; *Newburger, Loeb & Co. v. Gross*, 563 F.2d 1057, 1069 (2d Cir. 1977), *cert. denied*, 434 U.S. 1035 (1978); *see also* 17 C.F.R. § 240.15cl-7 (1996):

The term *manipulative, deceptive, or other fraudulent device or contrivance*, as used in section 15(c) of the [Securities Exchange] Act [of 1934], is hereby defined to include any act of any broker, dealer or municipal securities dealer designed to effect with or for any customer's account in respect to which such broker, dealer or municipal securities dealer or his agent or employee is vested with any discretionary power any

transactions or purchase or sale which are excessive in size or frequency in view of the financial resources and character of such account.

*Id.*

[FN5]. See *Davis v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 906 F.2d 1206, 1215 (8th Cir. 1990) (churning is a breach of fiduciary duty); *Miley*, 637 F.2d at 337 (“misconduct [churning] which is a prerequisite of a federal securities law violation will . . . satisfy the standard for finding a breach of fiduciary duty”); *Mihara*, 619 F.2d at 821 (finding churning to be a breach of fiduciary duty under California law); *Komanoff v. Mabon, Nugent & Co.*, [1995 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 98,745, at 92,532-33 (S.D.N.Y. Apr. 27, 1995) (allowing churning claims for breach of contract, negligence, and breach of fiduciary duty).

[FN6]. The NASD Rules of Fair Practice closely track the language in the Code of Federal Regulations, *supra* note 4:

No member shall effect with or for any customer’s account in respect to which such member or his agent or employee is vested with any discretionary power any transactions of purchase or sale which are excessive in size or frequency in view of the financial resources and character of such account.

NAT’L ASS’N SEC. DEALERS MANUAL (CCH) ¶ 2165(a) (1984).

[FN7]. The NYSE Rules state:

No member or allied member or employee of a member organization exercising discretionary power in any customer’s account shall (and no member organization shall permit any member, allied member, or employee thereof exercising discretionary power in any customer’s account to) effect purchases or sales of securities which are excessive in size or frequency in view of the financial resources of such customer.

2 N.Y. STOCK EXCH. GUIDE (CCH) ¶ 2408(c) (1984).

[FN8]. The AMEX has separate rules for stock and option churning, but they are essentially identical. The AMEX rule states:

No member, member firm or member corporation shall execute or cause to be executed on the Exchange purchases or sales of any stock for any account with respect to which such member firm or member corporation is vested with any discretionary power, which purchases or sales are excessive in size or frequency in view of the financial resources in such account.

2 AM. EXCH. GUIDE ¶ 9442 (1984). The options churning clause is virtually the same. *Id.* ¶ 9724.

[FN9]. The CBOE Rule is the same as the NASD Rule. See CHICAGO BD. OF OPTIONS

EXCH. GUIDE (CCH) ¶ 2310(c) (1990).

[FN10]. *Nesbit v. McNeil*, 896 F.2d 380, 382-83 (9th Cir. 1990); *Hotmar v. Lowell H. Listrom & Co.*, 808 F.2d 1384, 1385 (10th Cir. 1987); *M & B Contracting Corp. v. Dale*, 795 F.2d 531, 533 (6th Cir. 1986); *Costello v. Oppenheimer & Co.*, 711 F.2d 1361, 1368 (7th Cir. 1983); *Miley v. Oppenheimer & Co.*, 637 F.2d 318, 324 (5th Cir. 1981); *Sheldon Co. Profit Sharing Plan & Trust v. Smith*, 828 F. Supp. 1262, 1272 (W.D. Mich. 1993); *Cummings v. A.G. Edwards & Sons, Inc.*, 733 F. Supp. 1029, 1030 (M.D. La. 1990); *Smith v. Petrou*, 705 F. Supp. 183, 186 (S.D.N.Y. 1989).

[FN11]. *Costello*, 711 F.2d at 1368 (customer executed a power of attorney giving broker discretion to trade without prior approval by customer). Discretionary authority can be given if the customer executes a limited power of attorney giving the broker discretionary power to initiate trades in the customer's account without the customer's permission. See N.Y. STOCK EXCH. Rule 408(c), 2 N.Y. STOCK EXCH. GUIDE (CCH) ¶ 2408; NAT'L ASS'N SEC. DEALERS MANUAL §2165(a) (1984); 2 AM. EXCH. GUIDE ¶ 9724. Investment discretion is defined in section 3(a)(35) of the Exchange Act:

A person exercises "investment discretion" with respect to an account if, directly or indirectly, such person (A) is authorized to determine what securities or other property shall be purchased or sold by or for the account, (B) makes decisions as to what securities or other property shall be purchased or sold by or for the account even though some other person may have responsibility for such investment decisions, or (C) otherwise exercises such influence with respect to the purchase and sale of the securities or other property by or for the account as the Commission, by rule, determines, in the public interest or for the protection of investors, should be subject to the operation of the provisions of this chapter and the rules and regulations thereunder.

15 U.S.C. § 78c(a)(35) (1994).

[FN12]. *Hotmar*, 808 F.2d at 1385; *Costello*, 711 F.2d at 1368; *Follansbee v. Davis, Skaggs & Co.*, 681 F.2d 673, 676 (9th Cir. 1982); *Jenny v. Shearson, Hammill & Co.*, [1978 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 96,568, at 94,381-82 (S.D.N.Y. Oct. 6, 1978).

[FN13]. *Mihara v. Dean Witter & Co.*, 619 F.2d 814, 821 (9th Cir. 1980) (de facto control present when customer "routinely" followed recommendations of broker); *Cruse v. Equitable Sec. of New York, Inc.*, 678 F. Supp. 1023, 1030-31 (S.D.N.Y. 1987); *Hecht v. Harris, Upham & Co.*, 283 F. Supp. 417, 433 (N.D. Cal. 1968), *modified*, 430 F.2d 1202 (9th Cir. 1970).

[FN14]. *Cruse*, 678 F. Supp. at 1031; *Hecht*, 283 F. Supp. at 433 (noting that control may be inferred from evidence that a customer relied upon broker's recommendations).

[FN15]. *Follansbee*, 681 F.2d at 676-77 (rejecting *Mihara* test in favor of emphasis on customer's ability to evaluate broker's recommendations and use independent judgment).

[FN16]. *Kravitz v. Pressman, Frohlich & Frost, Inc.*, 447 F. Supp. 203, 206 (D. Mass. 1978)

(24-year-old single woman); *Hecht*, 283 F. Supp. at 435 (77-year-old widow); Norman S. Poser, Options Account Fraud: Securities Churning in a New Context, 39 BUS. LAW. 571, 579 (1984).

[FN17]. *Lieb v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 461 F. Supp. 951, 953 (E.D. Mich. 1978) (fact that customer was well-educated and experienced in handling financial affairs of others precluded finding of control), *aff'd*, 647 F.2d 165 (6th Cir. 1981).

[FN18]. *Grove v. Shearson Loeb Rodes, Inc.*, [1982-83 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 99,229, at 95,979 (S.D. Fla.D. May 31, 1983); *Marshak v. Blyth, Eastman, Dillon & Co.*, 413 F. Supp. 377, 381 (N.D. Okla. 1975); Poser, *supra* note 16, at 579.

[FN19]. *Carras v. Burns*, 516 F.2d 251, 258-59 (4th Cir. 1975).

[FN20]. *Petrities v. J.C. Bradford & Co.*, 646 F.2d 1033, 1035 (5th Cir. 1981) (customer was an airline pilot who could not supervise his account on a daily basis); *see also Arceneaux v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 767 F.2d 1498, 1502 (11th Cir. 1985) (a sophisticated investor intimidated by broker was able to show that the broker possessed the necessary de facto control).

[FN21]. *Carras*, 516 F.2d at 258.

[FN22]. *See Horne v. Francis I. duPont & Co.*, 428 F. Supp. 1271, 1274-75 (D.D.C. 1977) (even if trading was excessive, broker lacks control when customer places most of orders).

[FN23]. *See Newburger, Loeb & Co. v. Gross*, 563 F.2d 1057, 1070 (2d Cir. 1977) (if customer has financial acumen and agrees with broker's suggestions, customer retains control), *cert. denied*, 434 U.S. 1035 (1978); *Carras*, 516 F.2d at 258; *Xaphes v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 632 F. Supp. 471, 481-83 (D. Me. 1986) (educated and sophisticated customer with proven financial acumen has ability to determine own best interest).

[FN24]. *Cummings v. A.G. Edwards & Sons, Inc.*, 733 F. Supp. 1029, 1032 (M.D. La. 1990) (customer pursued aggressive investment strategy but did not sell when broker recommended sale to cut losses).

[FN25]. For an extended discussion of the control element, *see Patricia A. O'Hara, The Elusive Concept of Control in Churning Under Federal Securities and Commodities Law*, 75 GEO. L.J. 1875 (1987).

[FN26]. *Costello v. Oppenheimer & Co.*, 711 F.2d 1361, 1368-69 (7th Cir. 1983) (customer's goal was safety of principal and customer was unfamiliar with options market); *Follansbee v. Davis, Skaggs & Co.*, 681 F.2d 673, 676 (9th Cir. 1982) (trading deemed not excessive for investor seeking short term gains through frequent trading).

[FN27]. *Xaphes*, 632 F. Supp. at 486-87.

[FN28]. *See Shad v. Dean Witter Reynolds, Inc.*, 799 F.2d 525, 529 (9th Cir. 1986); *Arceneaux*

*v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 767 F.2d 1498, 1502 (11th Cir. 1985); *Bowley v. Stotler & Co.*, 751 F.2d 641, 646 (3d Cir. 1985); *Hatrock v. Edward D. Jones & Co.*, 750 F.2d 767, 775 (9th Cir. 1984); *Costello*, 711 F.2d at 1368; *Thompson v. Smith Barney, Harris, Upham & Co.*, 709 F.2d 1413, 1416-17 (11th Cir. 1983); *Follansbee*, 681 F.2d at 676; *Mihara v. Dean Witter & Co.*, 619 F.2d 814, 821 (9th Cir. 1980); *Carras v. Burns*, 516 F.2d 251, 258 (4th Cir. 1975); *Fey v. Walston & Co.*, 493 F.2d 1036, 1040 n.1 (7th Cir. 1974). Excessive trading in an account does not constitute churning per se, however, absent a fiduciary relationship between customer and broker, since the element of control will be lacking. *Kaufman v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 464 F. Supp. 528, 534 (D. Md. 1978); *Powers v. Francis I. duPont & Co.*, 344 F. Supp. 429, 432 (E.D. Pa. 1972); *Moscarella v. Stamm*, 288 F. Supp. 453, 457 (E.D.N.Y. 1968); *Stevens v. Abbott, Proctor & Paine*, 288 F. Supp. 836, 845 (E.D. Va. 1968). The fiduciary nature of a broker-customer relationship is an issue for the trier of fact. *Fey*, 493 F.2d at 1049.

[FN29]. *Mihara*, 619 F.2d at 821.

[FN30]. *Davis v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 906 F.2d 1206, 1213 (8th Cir. 1990).

[FN31]. *Miley v. Oppenheimer & Co.*, 637 F.2d 318, 324 (5th Cir. 1981); *Mihara*, 619 F.2d at 821; *Smith v. Sade & Co.*, [1982 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 98,846, at 94,363 (D.D.C. Oct. 27, 1982).

[FN32]. *Armstrong v. McAlpin*, 699 F.2d 79, 91 (2d Cir. 1983) (“Churning, in and of itself may be a deceptive and manipulative device under section 10(b).”); *Franks v. Cavanaugh*, 711 F. Supp. 1186, 1191 (S.D.N.Y. 1989), *modified*, No. 88 Civ-2121, 1989 WL 58085 (S.D.N.Y. May 24, 1989).

[FN33]. Several other tests are also used to measure excessive trading. These include commission to equity ratio, in-and-out trading, and cross-trading. The commission to equity ratio is determined by taking the amount of commissions and markups the broker received and dividing by the average account equity, *i.e.* if the commissions are \$1,000 and the average equity is \$10,000, the ratio is 10%. This “ratio reflects the amount of profit that would have to be earned during a period just to pay for commissions.” *Bowley v. Stotler & Co.*, 751 F.2d 641, 649 (3d Cir. 1985). In this example, the number is \$1,000. One commentator has suggested using commissions as a variable in the turnover rate test instead of purchases. *See David M. Packard, A Test for Churning in Stock Options*, 4 J. CORP. L. 222, 240-43 (1981).

In and out trading is “the sale of all or part of the customer’s portfolio, with the money reinvested in other securities, followed by the sale of the newly acquired securities.” *Costello*, 711 F.2d at 1369 n.9; *see Heller v. L.F. Rothschild*, 631 F. Supp. 1422, 1425 (S.D.N.Y. 1986) (purchase of 12,000 shares followed by its sale on the next day is improper for an account with objective of pursuing safety and eschewing speculation); *McGaughey v. Hogan-Orr, Inc.*, [1980-82 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 21,076, at 24,349-50 (CFTC July 31, 1980) (indicating that “a pattern of short term in- and-out trading which results in negligible trading gains or losses for an account but provides a steady flow of commissions” constitutes churning); *see Hecht v. Harris, Upham & Co.*, 283 F. Supp. 417, 435 (N.D. Cal. 1968)

(excessive trading when 51% of the securities were held for 15 days or less, 61% were held for 30 days or less and 76% for 60 days or less), *modified*, 430 F.2d 1202 (9th Cir. 1970); 1 S. GOLDBERG, FRAUDULENT BROKER-DEALER PRACTICES § 2.9[b][2] at 2-52 (1978) (noting that in-and-out trading is excessive when 75% of a portfolio is held for six months or less, 50% is held for three months or less and 25% for one month or less).

Cross trading is commonly analyzed along with in-and-out trading patterns. It occurs “where a broker arranges for transfers between customers. It is a highly suspect practice unless the dealer can demonstrate that the accounts had different purposes and that the particular securities were suitable for one account but not another.” *Costello*, 711 F.2d at 1369 n.10.

[FN34]. *See Siegel v. Tucker, Anthony & R.L. Day, Inc.*, 658 F. Supp. 550, 554 (S.D.N.Y. 1987). The average equity is calculated by taking the monthly equity amounts and dividing by the number of months in the year that the account was open.

[FN35]. *Mihara v. Dean Witter & Co.*, 619 F.2d 814, 821 (9th Cir. 1980) (following Note, Churning by Securities Dealers, 80 HARV. L. REV. 869 (1967)); *Van Alen v. Dominick & Dominick, Inc.*, 441 F. Supp. 389, 401 (S.D.N.Y. 1976) (following Churning by Securities Dealers, *supra* this note), *aff'd*, 560 F.2d 547 (2d Cir. 1977); *Rolf v. Blyth, Eastman Dillon & Co.*, 424 F. Supp. 1021, 1039 (S.D.N.Y. 1977) (also following Churning by Securities Dealers, *supra* this note), *aff'd in part and modified*, 570 F.2d 38 (2d Cir.), *cert. denied*, 439 U.S. 1039 (1978). Another respected commentator suggests that a turnover rate of between two and four permits an inference of churning, a rate of between four and six creates a rebuttable presumption that churning has occurred, and a rate greater than six is deemed conclusive proof of churning. 1 S. GOLDBERG, *supra* note 33, § 2.9[b][1], at 2- 43 to -50.

[FN36]. *Sheldon Co. Profit Sharing Plan & Trust v. Smith*, 828 F. Supp. 1262, 1273 (W.D. Mich. 1993) (scienter element may be inferred from an annualized turnover rate exceeding six); *Franks v. Cavanaugh*, 711 F. Supp. 1186, 1191 (S.D.N.Y. 1989), *modified*, No. 88 Civ-2121, 1989 WL 58085 (S.D.N.Y. May 24, 1989); *Hecht*, 283 F. Supp. at 436 (turnover rate between eight to eleven for seven years constituted excessive trading); but *see Newburger, Loeb & Co. v. Gross*, 563 F.2d 1057, 1070 (2d Cir. 1977) (where speculative trading account had annualized turnover rate of seven, trading held not excessive), *cert. denied*, 434 U.S. 1035 (1978).

[FN37]. *Craighead v. E.F. Hutton & Co.*, 899 F.2d 485, 491 (6th Cir. 1990) (holding that “an annual turnover rate of 2.00 is simply too low to justify a claim for churning”) (quoting Siegel, 658 F. Supp. at 554); *Woodruff v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, [1990 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 95,386, at 96,894-95 (D. Neb. July 14, 1989) (turnover rate of 2.01 is too low as a matter of law); *Hempel v. Blunt, Ellis & Loewi, Inc.*, 123 F.R.D. 313, 317 (E.D. Wis. 1988) (turnover rate of two is too low); *Grove v. Shearson Loeb Rhoades, Inc.*, [1982-83 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 99,229, at 95,980 (S.D. Fla. May 31, 1983) (turnover rate of 1.87 is too low, even with customer’s conservative investment goals). But *see Jenny v. Shearson, Hammill & Co.*, [1978 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 96,568, at 94,381 (S.D.N.Y. Oct. 6, 1978) (refusing to hold that a turnover rate of 1.84 is not excessive as a matter of law considering the customer’s investment objectives); *Stevens v. Abbott, Proctor & Paine*, 288 F. Supp. 836, 842 (E.D. Va. 1968) (annualized turnover rate of two is excessive for

unsophisticated customer).

[FN38]. *Donald A. Winslow & Seth C. Anderson, A Model for Determining the Excessive Trading Element in Churning Claims*, 68 N.C. L. REV. 327, 361 (1990). Winslow and Anderson base their conclusion on a study of turnover rates for professionally managed mutual funds and conclude that since fund managers are not compensated by the amount of turnovers, they optimize turnover rates. *Id.* at 395. The annual turnover rates varied from a low of .53 for growth-income mutual funds to a high of 1.45 for option-income funds. *Id.* at 350. One court recently used the Winslow and Anderson benchmarks to support a finding of churning where the plaintiff was a trustee and the turnover rate was 2.22. *In re Thomson McKinnon Sec., Inc.*, [1995-96 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 99,104, at 94,662 (Bankr. S.D.N.Y. 1996) (noting that trustees are similar to mutual fund managers in that both manage someone else's money).

[FN39]. *Arceneaux v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 767 F.2d 1498, 1501 (11th Cir. 1985) (turnover of eight deemed excessive); *Rush v. Oppenheimer & Co.*, 592 F. Supp. 1108, 1112 (S.D.N.Y. 1984) (turnover rate often deemed excessive), vacated in part, 596 F. Supp. 1529 (S.D.N.Y. 1989); *Kaufman v. Magid*, 539 F. Supp. 1088, 1095 (D. Mass. 1982) (turnover rate of six is excessive). *But see Smith v. Sade & Co.*, [1982 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 98,846, at 94,364 (D.D.C. Oct. 27, 1982) (turnover rate of 5.34 in nine months in speculative options account held not excessive). This judicially-accepted benchmark has been met with resistance from at least one leading commentator, who believes that by their very nature as short term derivative securities, options should not be subject to the typical turnover rate tests. Poser, *supra* note 16, at 606-08.

[FN40]. "Call options have positive deltas, while put options have negative deltas."  
LAWRENCE G. MCMILLAN, *OPTIONS AS A STRATEGIC INVESTMENT* 643 (2d ed. 1986). Delta can be calculated using the formula:

$$\frac{\ln(p/s) + (r + v^2/2)t}{v \sqrt{t}}$$

where p=stock price, s=strike price, t=time remaining until expiration, expressed as a percent of a year, r=current risk-free interest rate, v=volatility measured by annual standard deviation, and ln=natural logarithm. This is the standard Black-Scholes model. An option's delta can also be determined by accessing the function "OV" on a Bloomberg terminal.

[FN41]. An option is typically for 100 shares of stock.

[FN42]. This change in the delta is referred to as gamma. Gamma is "[t]he sensitivity of an option's delta to a change in the price of the underlying [[stock]." SHELDON NATENBERG, *OPTION VOLATILITY AND PRICING STRATEGIES* 327 (1988).

[FN43]. Conversely, short calls and long puts have a negative delta. LAW is trading at \$50 per share. Instead of selling 100 shares of stock, sell 1 LAW call with a strike price of \$50 at \$3.125 with a delta of -57 and buy 1 LAW put with a strike price of \$50 at \$2.50 with a delta of -43.

The total credit is \$.625 (which represents the risk-free interest rate on selling 100 shares of LAW (\$3.125 - \$2.50)) and the delta of the position is -100 or -100 shares (-57 + (-43) = -100). This position is synthetically equivalent to being short 100 shares of stock and will produce identical profits and losses for the position.

[FN44]. The profit on the pure stock position must be measured against the time value of money saved by purchasing and selling options at a lower net cost. The stockholder has tied up \$5,000 that is not earning interest while the option purchaser has tied up only \$62.50 (the difference between the \$312.50 spent buying the call and the \$250 received from selling the put). The time value of this difference (\$4,937.50) at an annual interest rate of 5% (for three months) equals \$61.72, which should be subtracted from the pure stock purchaser's profit to give a true comparison between the stock and options purchases. The profits are virtually equivalent when this is factored in. The stock profit would be \$938.28 (\$1000 - \$61.72), and the option profit would be \$937.50.

[FN45]. As always, the profit and loss is virtually the same. If the stock rises \$3, the stock purchaser will make \$15,000 profit (\$3 x 5,000 shares), as will the options purchaser (\$3 x 5,000 options). The actual profit between the two positions will vary slightly due to the time value of money discussed in note 44, *supra*. As a practical matter, even though the intrinsic value of the option used in this example is \$10, it will trade at slightly less than that, as traders will factor in the time value of money when setting the bid and ask price for the option.

[FN46]. A broker who churns an account using options, under the scenarios described in this article, may earn less commissions than he otherwise would if he had churned the account using the underlying stock. This distinction goes only to part of the damages suffered by the unfortunate customer, however. See *Davis v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 906 F.2d 1206, 1217 (8th Cir. 1990) (damages in churning case are measured by the excess commissions earned). If the annualized turnover rate is excessive using the synthetic value of the options, the broker will still have churned the account. In the example used herein, using standard large firm non-discount rates, purchasing 5,000 shares of a \$50 stock in a single transaction would generate a commission of \$1,963. Purchasing 50 options at \$10 each would generate a commission of \$853.

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