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Over the last decade and a half, individual investors in the aggregate have consistently been net sellers of corporate common stocks; simultaneously, the holdings of equities by mutual funds, pension funds, insurance companies, and bank trust funds on behalf of individuals have increased dramatically (Soldofsky 1971; U.S. Securities and Exchange Commission 1971; Board

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Virtually all existing empirical studies of the American capital market deal with the investment performance record of institutions. The present paper offers data on the investment experiences of a large and representative sample of individual investors, based on a 7-year history of actual trading behavior. Those experiences suggest some reasonable skill in security selection, particularly in connection with short-term trading cycles. Transactions costs, however, have a substantial impact on realized net returns, rendering the overall performance results observed similar to those available from passive investment strategies over corresponding calendar periods.

of Governors of the Federal Reserve System 1972; Goldsmith 1973; Klemkosky and Scott 1973; Eilbott 1974; New York Stock Exchange 1976). The reasons for this trend toward indirect, rather than direct, market participation are not yet fully understood, but speculation has centered on two major issues: (1) the convenient and inexpensive diversification offered in institutional portfolios, and (2) the relative investment skills of the individual and the professional money manager (Freund 1974; Murray 1974; Smidt 1974).

Given the prevailing structure of securities transaction costs, the provision of "cheap" diversification indeed seems a strong point in favor of institutional intermediation—particularly in light of the lessons of received capital market doctrine, which suggest that inadequate diversification implies the assumption of avoidable and uncompensated portfolio risks (Sharpe 1964; Lintner 1965; Mossin 1966). The matter of relative investment skill, however, is less clear. There is available a sizable body of data on the portfolio track record of institutions (Sharpe 1966; Jensen 1968, 1969; Lorie et al. 1968; Friend, Blume, and Crockett 1970; Schlarbaum 1974), but virtually none on the corresponding performance of the individual who manages his or her own investments (Friend and DeCani 1966; Blume, Crockett, and Friend 1974). While the hoary "odd-lot theory" conveys a vague message of small-investor ineptitude, most researchers have found precious little evidence of consistent ability on the part of institutions to outperform random security-selection strategies. In the absence, therefore, of hard empirical data on individual-investor portfolio experiences, the comparative expertise question remains open—and it is this gap in knowledge which the present paper seeks at least partially to fill.

The analysis will focus on the actual securities transactions history of a representative sample of some 2,500 individual brokerage house customers over the period January 1964 through December 1970. It will offer evidence as to the rates of return realized by that group from their direct investments in common stocks, both before and after transactions costs. The returns will then be contrasted with those which could have been attained by investing instead in several broad-based market portfolios or a representative collection of mutual funds, as performance benchmarks.

While the findings—perhaps not surprisingly—admit of some discretion in interpretation, they portray a reasonably favorable picture of the security-selection abilities of the individual investor. In the aggregate, pretransactions-costs rates of return better than those available from most passive investment strategies were realized by the sample—although many tend to be concentrated in trades wherein the cycle of purchase and subsequent resale was of short duration. In addition, transactions costs are seen to consume a substantial portion

of the observed gross returns. Hence, the selection of a performance standard has a noticeable impact on the character of the conclusions drawn.

I. The Sample

The data for the study were provided by a large retail brokerage house having a nationwide branch-office network and customer clientele. The firm agreed to make available for the research both a mailing list and a complete daily record of account transaction activity for a sample of that clientele. The sample was selected—by the authors—at random from the roster of all the customers of the firm who had accounts open over the full interval January 1964 to December 1970. That period is bounded, on the early end, by the limit in the firm's files of machine-readable transactions records and, on the later end, by the fact that the investigation was begun in mid-1971. As it happens, the period in question spans a variety of external security market conditions—including two substantial general price declines—and, in total, is one during which common stock values rose only moderately.

The brokerage firm had approximately 30,000 accounts which met the indicated stipulation. From these, a 10% sample was chosen. It was stratified to match the geographical distribution of all U.S. shareholders, as reported by the NYSE (1973). Apart, however, from the requirement of account longevity—designed simply to allow a meaningful secular record of investment performance to be constructed for each account—no other criteria of trading frequency, trading volume, or portfolio size were imposed for eligibility. Thus, a wide variety of individual circumstances and styles are encompassed in the group.

From the list selected, some 500 accounts were eliminated because they were corporate, institutional, foreign, or investment clubs. A questionnaire was sent those who remained, requesting information on investment objectives and decision processes, as well as demographic data. Of the 2,506 questionnaires sent out, 972 usable replies were returned. The profile of the group previously has been reported in detail (Lease, Lewellen, and Schlarbaum 1974) and contrasted therein both with NYSE shareholder-composition survey findings and the respondents to an additional “control group” questionnaire survey of a customer sample selected without regard to account longevity. Those results suggest strongly that the sample is a usefully representative one—representative, certainly, of that segment of the individual-investor population having equity funds under conscious direct personal management during the time period at issue. As such, we believe it a particularly appropriate microcosm for scrutiny.

II. The Transactions and Securities Data

The information on investment activity, provided by the brokerage house, included all securities and commodity transactions appearing in the sampled accounts. Between January 1964 and December 1970, there were nearly 300,000 events of this sort, of which 179,820 were trades in common stocks. The remainder involved bonds, commodities, preferred stocks, options, warrants, and mutual fund shares—none of which are considered in the present analysis. The record for each transaction included: (1) the security involved; (2) the execution date; (3) the market or exchange on which the trade occurred; (4) the number of shares traded; (5) the execution price; (6) the commission paid; (7) the type of trade—that is, cash, margin, or short sale; (8) whether the trade was handled on a principal or agency basis; and (9) whether it was “solicited” (by the account executive) or “unsolicited” (initiated by the customer). These data were then adjusted in two respects. First, the New York State securities-transfer tax was computed and added, where relevant, as a transaction cost. In addition, for odd-lot purchases, the standard odd-lot trade differential was subtracted from the observed price paid and reclassified as a commission charge; in the case of odd-lot sales, the same differential was added to the execution price and also treated as a transaction cost. Accordingly, the complete transaction burdens for all categories of trades are recognized.

To permit the measurement of investment returns, a complementary record of month-end share prices, cash and stock dividend distributions, and stock splits was compiled. That record encompasses all stocks listed on the NYSE and ASE from 1964 to 1970, plus some 1,200 additional securities either listed on a regional exchange or traded over the counter during the period. The latter were felt to be of particular concern, because participation in such markets might well be among the distinguishing features of individual, in contrast with institutional, investment activities.

The major raw material utilized was the Scholes price-relative file prepared from ISL data for the Wells Fargo Bank and supplied to us by the bank. The dividend and split information, and data on regional-exchange and OTC stocks, were obtained from *Standard and Poor's Stock Guide*, *Commercial and Financial Chronicle*, and *Bank and Quotation Record*. For stocks other than those on the NYSE and ASE, the criterion for inclusion in the file was evidence of either at least five trades—or a total of \$20,000 in transaction volume—in the security by the investor sample over the 7-year study interval.¹ The resulting record spans the securities involved in 96% of the transactions exe-

1. Some cut-off point was necessary, given that the data had to be hand compiled. For OTC stocks, bid prices were the ones collected.

cuted by the group; by aggregate dollar volume, the corresponding figure is 99%, since virtually all the omitted securities were traded in very small amounts. The securities information base, therefore, is comprehensive, and the indicated transactions history provides what we believe to be a unique resource for the investigation of individual-investor market experiences.

III. Performance Measurement Methodology

We shall examine those experiences here in the most straightforward possible manner: by computing the actual rates of return *realized* on all the completed common stock investment events which took place in the sampled accounts between 1964 and 1970. The focus, therefore, will be on the observable "round trips" in the securities traded—complete cycles from purchase to eventual resale or, in the case of short positions, from sale to subsequent coverage of the position. For this purpose, the transactions file was sorted chronologically within each account, security by security, and the appropriate matches constructed. Where positions in a particular stock overlapped, a "first-in–first-out" inventory convention was adopted.

There were 75,123 such complete cycles identifiable over the 7-year study interval for the 2,506 individual-investor accounts of concern—a sufficient number of observations, it would seem, as to permit meaningful inferences about performance results. A summary of their major characteristics is contained in table 1. Approximately three-fourths involved round-lot blocks of shares, and the vast majority were "long" positions wherein the trade was handled by the brokerage house on the standard agency commission basis. While trades in NYSE stocks are by far the largest single category, a decent representation of transactions off the major exchanges is also evident.

TABLE 1 **Round-Trip Investment Characteristics by Number of Trades:
Individual-Investor Sample**

Characteristic	%
Round lots	77
Odd lots	23
Long positions	97
Short positions	3
Agency transactions	97
Principal transactions	3
Solicited trades	36
Unsolicited trades	64
Market category:	
NYSE stocks	58
ASE stocks	28
Regional Exchange or OTC	14

For each of the round trips, both a pre- and post-transactions-cost realized internal rate of return were determined by merging the execution-price, commission, and transfer-tax figures from the transactions file with the appropriate dividend and split history from the supplemental securities data base. The rates are those which render the present value of the identified cash dividend receipts and observed terminal sale price equal to the initial purchase price, and were computed in the form of continuously compounded annual rates in order to make possible distortion-free aggregation of the returns.

If, for example, an individual was found to engage in two successive 1-year investment cycles, consisting in the first round of the purchase of a security at \$10 per share and a sale at \$12, followed immediately by the acquisition of another at \$12 and a year-later sale at \$10, it's clear that the net investment return for the full 2-year span is exactly zero. However, if the *single* annual rates of return on the two transactions—respectively, +20% and -16.7%—were averaged, the inference would be that a net positive return was realized. An average of the continuously compounded rates avoids this aberration. For the first round trip, the calculated rate would be $e^r = 1.2$, or $r = \log_n(1.2)$, and for the second, $r = \log_n(0.833)$; the average of these is, in fact, zero, yielding the correct combined 2-year return.

A similar advantage applies to investment cycles of uneven duration. Thus, if a 3-month round trip providing a capital gain from purchase at \$10 to sale at \$12 were succeeded by a 9-month one involving purchase at \$12 and sale at \$10, the net experience would again be a zero rate of return for the year as a whole. A time-weighted average of the two continuous rates would produce that conclusion, whereas an average of the simple rates would not. The continuous-rate variant, therefore, is uniformly superior in portraying overall performance results.

An examination specifically of *realized* returns, of course, is not the only possible approach. Here, investment success will be assayed by comparing each of the observed round-trip rates of return with those which could have been attained over matching periods from passive investments in appropriate benchmark portfolios—that is, from completed “market round trips” correspondingly timed. Alternatively, given the beginning securities balances in the relevant accounts and the subsequent transactions histories, a chronology of cumulative portfolio positions could be established for every account, and the associated periodic returns identified on an accrual basis. The performance standards in that context, then, would be the concurrent sequence of periodic (accrued) returns on benchmark portfolios. Either approach is viable, and, in the long run, similar relative-performance assessments should be obtained—the difference for any particular time span depending largely on the weights of the securities in the underlying portfolios and on the respective turnover rates.

We opted to focus on realized returns as an initial step simply because that analysis has the virtue of being almost entirely assumption free. The dates, prices, and commissions recorded in the transactions file are "hard" data; they represent actual investment activities. As such, they eliminate any need to choose an arbitrary periodic-return measurement interval, to adjust for portfolio changes during that interval, or to allocate transactions costs across intervals by some amortization rule. A realized-return, investment-round-trip orientation, therefore, is persuasively "clean."

Nonetheless, the imputations required for the measurement of periodic total-portfolio returns have primarily short-run effects which should balance out over a longer succession of intervals, and that perspective will be considered in subsequent analyses to test the present findings. As we shall see, the duration of a typical round trip for the individuals in the sample is only a fraction of the 7-year period for which data are available, suggesting fairly rapid portfolio turnover. In addition, the transactions which initiated and terminated the 75,123 investment round trips at issue account for 81% of all the transactions recorded for the sample between 1964 and 1970. Hence, the realized returns we shall report on must in fact encompass the vast majority of the underlying portfolio experiences.²

IV. Trading Patterns

The matter of securities holding periods is a key aspect of behavior. Table 2 portrays the distribution thereof for our collection of completed round trips. The figures suggest a mean investment cycle duration of approximately 8½ months and a median of exactly 4 months—by either standard, a rather brief horizon. There is, however, an inevitable downward bias in the array. Short holding periods will tend to be somewhat overrepresented because relatively long round trips that extend past the boundary dates of the investigation will be "lost" in the compilations—that is, the longer the round trip, the less likely are both ends of it to be detected and thereby included in the sample.

This problem, of course, will be least severe for investment cycles that began in 1964, since none in that group of up to 6 years in duration, and few of up to 7 years, will go undetected—a subset which must surely comprise the bulk of all such events. The second column in the

2. There were 172,447 transactions covered by the securities-price and dividend file in the accounts, of which 138,947 were associated with the indicated round trips. The latter figure is less than twice the number of round trips, since certain of those cycles were jointly created. Thus, 200 shares of a particular security might be purchased as a bloc, but two separate subsequent sales of 100 shares each observed. The extent of total portfolio coverage imbedded in the round trips is actually understated by the 81% figure noted. Of the 33,500 transactions not included in the round trips, some 5,700 involved either sales transactions in the first 6 months of 1964 or purchases during the last 6 months of 1970—in effect, round trips likely to have been "just missed" and implying outstanding portfolio positions during a very minor portion of the 7 years studied.

TABLE 2 Investment Round-Trip Durations:
Individual-Investor Sample (in Days)

	All Round Trips (<i>N</i> = 75,123)	Round Trips Begun in 1964 (<i>N</i> = 11,441)
Distribution—decile boundary points:		
Decile 1	10	14
Decile 2	25	37
Decile 3	48	72
Decile 4	78*	124
Decile 5	123	194
Decile 6	188	290
Decile 7	274	416
Decile 8	410	644
Decile 9	683	1151
Parameters:		
Mean	256	394
Median	123	194
σ	342	496

* 40% of all round trips were 78 days or less in length.

tabulation presents the resulting distribution. The implied typical holding period is unquestionably longer, but still not long: The mean becomes about 13 months, and the median, 6½ months. Whether these 1964-initiated round trips are truly a representative lot—since external market conditions can be expected to have an influence on holding periods—depends essentially on whether the securities-market story that unfolded after 1964 was peculiar in some way that would bias the findings. As was suggested earlier, market movements over the succeeding 6–7 years were cyclical, but not severely so, around a moderate uptrend. There is, on that basis, no reason to believe that the consequent securities holding-period array would not be representative of the era.

Within the investor group, a broad range of trading styles is evident. A ranking of the sample by the number of investment round trips each individual completed between 1964 and 1970 reveals that the most active 10% on the list accounted for 57% of all the round trips identified, whereas the least active 10% generated less than 1% of the total. The breakdown is contained in table 3. The degree of concentration by the number of investment “position days” involved is rather less—since frequent traders tended also to terminate each of their separate commitments more quickly.³ Of the approximately 19.2 million position days of investment experience encompassed by the data (i.e., the product of 75,123 round trips times the duration of each), just 38% are

3. Thus, the duration of a typical round trip among the most active 10% of the investor sample was less than half that observed for the remaining 90%.

TABLE 3 **Distribution of Investment Round-Trip Volume, by Individual-Investor Subjects**

Most Active % of Investor Group	Cumulative Round Trips (<i>N</i>)	Cumulative Percentage of Total	Cumulative Percentage of Total Investment "Position Days"
10	42,744	57	38
20	54,309	72	56
30	61,527	82	68
40	66,275	88	77
50	69,572	93	85
60	71,844	96	91
70	73,375	98	95
80	74,315	99	97
90	74,857	99	99
100	75,123	100	100

associated with the most actively trading 10% of the investor group, as the final column shows. Nonetheless, from either perspective, substantial—and, for our purposes, desirable—heterogeneity is apparent. Account longevity does not, in fact, automatically imply heavy trading activity, and a variety of individual-investment postures are available for scrutiny; the questionnaire data would confirm that view (Lease, Lewellen, and Schlarbaum 1974, 1976; Cohn et al. 1975).

V. Realized Rates of Return

Our major concern with the data, of course, lies in the investment performance record they document. Table 4 summarizes the pre-transaction-cost, and table 5 the post-transaction-cost, realized rate of return experiences of the sample. The figures are, as noted, the continuously compounded annualized internal rates for each round trip identified. In the tabulations, those figures are weighted by the durations of the respective round trips with which they are associated. By that procedure, brief round trips (properly) impact the composite record less than do extended ones—and the resulting averages represent, in effect, the annual rates at which the wealth of a typical individual in the sample would have increased during the 7 years studied, if he or she had engaged in a series of investments whose performances exactly matched those of the round-trip distribution observed for the group as a whole.⁴ The figures are 9.9% per annum before and 5.5% per annum after transaction costs.

4. To illustrate, assume the sample consisted entirely of three completed investment cycles: one of 9 months' duration involving a purchase at \$10 and a sale at \$15; one of 11 months in length, with purchase at \$30 and sale at \$36; and one lasting 4 months, wherein

TABLE 4 Realized Annual Rates of Return on Investment
Round Trips: Before Transactions Costs (%)

All Round Trips (<i>N</i> = 75,123)	By Duration (Days)				
	0-30 (<i>N</i> = 17,199)	31-182 (<i>N</i> = 27,224)	183-365 (<i>N</i> = 13,631)	>365 (<i>N</i> = 17,069)	
Distribution—decile boundary points:					
Decile 1	-39	-227	-87	-55	-26
Decile 2	-15	-102	-43	-28	-10
Decile 3	-4	-20	-16	-11	-3
Decile 4	3	41	4	3	3
Decile 5	8	93	19	13	7
Decile 6	14	144	35	22	12
Decile 7	22*	207	54	33	17
Decile 8	34	292	79	46	25
Decile 9	55	465	125	70	38
Parameters:					
Mean	9.9	122	20.1	9.5	6.1
Median	8.3	93	19.1	12.5	7.0
σ	70	450	96	55	29
Position days	19,213,764	225,114	2,446,735	3,571,356	12,969,959

*70% of all round trips earned rates of return of 22% per annum or less.

TABLE 5 Realized Annual Rates of Return on Investment
Round Trips: After Transactions Costs (%)

All Round Trips	By Duration (Days)				
	0-30	31-182	183-365	>365	
Distribution—decile boundary points:					
Decile 1	-44	-306	-99	-59	-28
Decile 2	-18	-162	-54	-32	-11
Decile 3	-6	-76	-27	-15	-4
Decile 4	1	-9	-6	-2	1
Decile 5	6	40	9	8	6
Decile 6	12	89	25	18	10
Decile 7	19	146	43	29	16
Decile 8	30	225	67	42	23
Decile 9	50	372	110	66	36
Parameters:					
Mean	5.5	45	7.8	5.1	4.5
Median	6.2	40	9.4	8.5	5.7
σ	67	431	96	56	29

the purchase was at \$18 and the sale at \$24. The computed rates of return would be $r_1 = (4/3)[\log_e(1.5)]$, $r_2 = (12/11)[\log_e(1.2)]$, and $r_3 = (3)[\log_e(1.333)]$. Had an individual invested \$1.00 in the first round trip, reinvested the proceeds in the second, and then put those proceeds into the third, that dollar would have grown to $(1.5)(1.2)(1.333)$, or \$2.40 at the end of the 2 years of total investment experience involved. The same outcome would have emerged had the dollar been invested for 2 years at the single continuously compounded rate of return $r_A = (9/24)(r_1) + (11/24)(r_2) + (4/24)(r_3)$. That figure would be reported here as the sample mean; the median would be r_3 .

In the underlying calculations, all transactions are treated as if they had been executed on a cash basis. The listed rates of return, therefore, are prefinancing, “pure” investment yields throughout. That framework seems appropriate, since the actual financing heritage of any given transaction is difficult to trace, whatever its formal designation. An ostensible “cash” purchase of common stock, for example, by an investor who concurrently has an outstanding residential mortgage is arguably a margined acquisition. Moreover, the account transactions file did not identify how *much* leverage was associated with each margin trade or the subsequent pattern of loan balances. Accordingly, our present purposes are as well served by deferring the matter of exploring leverage effects to another discussion.

The breakdown, in tables 4 and 5, of the performance data by round-trip duration categories is especially revealing. There is a strong inverse relationship between the observed length of the trading cycle and the annualized rate of return earned on the investment.⁵ Round trips of 30 days or less duration were highly profitable, yielding fully 122% as an average, and 93% as a median, annual rate of return before transactions costs; even after deducting those costs, the figures were 45% and 40%, respectively. A steady decline in both indices, with investment length, is evident: Realized rates of return fell to the 6%–7% range before, and the 5% range after, transactions costs for round trips lasting longer than a year. The global averages are closer to the long-duration than the short-duration figures, of course, because the former carry much more position-day weight. As table 4 shows, round trips in the 30-day-and-under category account for (17,199/75,123) or 23% of all such events, but only (225,114/19,213,764) or about 1% of the total days of investment experience encompassed in the sample.⁶

A substantial narrowing of the return distributions with investment duration is also apparent, both from the decile arrays and the listed standard deviations. Whereas one-tenth of all post-transaction-cost realized rates of return for round trips completed in less than a month (table 5) turned out to exceed 372%, the corresponding threshold for the upper one-tenth in the over-a-year subset is just 36%. The same phenomenon can be observed at the lower end of the return scale as well and is verified by a pattern of standard deviations that displays more than a 90% drop from the 0–30-day return distribution to the over-365-day one.⁷ The explanation, clearly, lies in the very large

5. Still finer breakdowns by duration classes—e.g., 0–15 days, 16–30 days, 31–60 days, etc.—produced the same declining pattern. Only four intervals are reported here in order to keep the tabulations manageable.

6. If each round trip were weighted equally, the resulting mean pre-transaction-cost rate of return would come to a somewhat startling 73% per annum. Such a figure, however, is very difficult to interpret in any meaningful fashion.

7. Annualized rates of return below –100% on particular trades are possible when

annualized return consequences of small short-run share price movements. A change even of a quarter of a point in a day or two of trading translates into a sizable annual percentage figure for round trips completed within that time span. The longer the holding period, the less impact such small movements will have.

For this reason, the raw returns themselves at the short end of the holding-period distribution may be of some interest. A daily breakdown of the average preannualized percentage returns realized on investment round trips of up to 30 days duration is provided in table 6, along with a record of the number of trades in each category. The figures listed for 10-day round trips, for instance, indicate that the mean

TABLE 6 Raw Rates of Return: Short Round Trips

Round-Trip Duration (Days)	N	Mean Return (%)	
		Before Costs	After Costs
1	1,345*	3.0	.7
2	674	3.8	1.3
3	620	3.3	.4
4	701	5.0	2.0
5	686	4.7	1.6
6	856	5.2	2.4
7	1,033	4.9	2.1
8	801	4.0	1.3
9	527	5.2	2.5
10	510	5.3	2.4
11	502	4.1	1.2
12	555	4.9	2.0
13	676	4.5	1.8
14	807	4.4	1.4
15	539	5.0	2.2
16	385	4.4	1.5
17	386	4.9	1.9
18	439	4.4	1.5
19	371	5.4	2.5
20	549	4.3	1.4
21	665	4.4	1.4
22	459	3.0	.0
23	362	4.1	1.1
24	359	4.3	1.2
25	339	6.2	3.1
26	372	5.1	2.0
27	487	5.9	2.8
28	530	5.1	2.2
29	376	4.0	.9
30	288	3.2	.1

*Includes round trips completed within a single calendar day as well.

those rates are calculated in a continuously compounded form. While such values are, in some sense, a curiosity, they do—as outlined earlier—act in the averaging process properly to offset commensurate large positive rates.

resale prices of the securities traded in cycles of that duration were 5.3% higher than the original purchase prices and that commission charges and fees reduced the average net gain to just 2.4%. A purchase at \$40 and a sale 10 days later at \$42 $\frac{1}{8}$, with total transactions costs of \$1.16 per share, would constitute such an event; any dividends received would, of course, also be included.

The most notable characteristic of the data is the relatively flat time profile revealed. The mean pre-transactions-cost raw return over all 17,199 round trips is 4.5%, and the great majority of the 30 individual-cycle means are within one percentage point of that figure—raising the possibility that a return “target” in this vicinity could well have been the short-term trading goal (sell threshold) of many investors in the sample. In any event, it should be recognized that, while a 5.3%, 10-day trading profit extrapolates to a 190% annualized rate, incredible *absolute* sums of money will be made only if such performances are repeated rapidly and continuously and thereby comprise the bulk of all trades. As tables 4 and 5 show, wherein the various round-trip returns are properly time weighted, this was not the situation.

The tabulations, unsurprisingly, further show that transactions costs have a diminishing effect with increasing investment duration. The relationship is presented in table 7. While commissions and fees consumed an average 44% of the investment returns earned by the sample during the 7 years examined, the levies ranged from only 26% in the case of round trips lasting more than a year to fully 63% for trades completed in a month or less. The pattern for the median realized rates has the same character, although the total “bite” is marginally less severe. By neither standard, however, do the heavier transactions burdens borne by the shorter-duration investments offset their underlying superior gross return record; the after-commission rate-of-return profile remains sharply downward sloping.

TABLE 7 Relationship of Transactions Costs to Investment Duration

	All Round Trips	Duration Categories (Days)			
		0-30	31-182	183-365	>365
Mean rates of return:					
1. Before costs (%)	9.9	122	20.1	9.5	6.1
2. After costs (%)	5.5	45	7.8	5.1	4.5
Ratio of 2/1	.56	.37	.39	.54	.74
Median rates of return:					
1. Before costs (%)	8.3	93	19.1	12.5	7.0
2. After costs (%)	6.2	40	9.4	8.5	5.7
Ratio of 2/1	.75	.43	.49	.68	.81

VI. Performance Benchmarks

The key consideration, of course, is *relative* rather than absolute investment results, and a comparison of the foregoing outcomes with those which could have been obtained from alternative investment strategies must be addressed. The benchmark we shall offer here is the usual one of "passive" market participation: whether the rate of return realized on each of the investment round trips completed by the sample exceeded or fell short of the rate that would have been earned, over exactly the same calendar interval, from investing instead in a "market" portfolio. The criterion, therefore, is matched in every instance to the actual investment cycle observed.

For this purpose, seven different test portfolios were constructed: (1) a value-weighted composite of all NYSE and ASE stocks; (2) a value-weighted portfolio of those same NYSE and ASE securities plus all the OTC and regional-exchange stocks for which, as discussed previously, we collected price and dividend data from 1964 through 1970; (3) an equal-weighted index of some 80 mutual funds; (4) an equal-weighted index of "growth" and "growth-and-income" mutual funds; (5) an equal-weighted NYSE portfolio; (6) an equal-weighted NYSE/ASE portfolio; and (7) an equal-weighted portfolio of the NYSE and ASE securities and our OTC and regional-exchange securities. Their performances over the study period, and the correlations among their respective monthly rates of return, are displayed in table 8. All returns include dividend receipts as well as price changes. The average annualized rates listed are the means of the 84 monthly rates involved, each computed on a continuously compounded basis.⁸ For the value-weighted portfolios, they may be interpreted as the annual rates of return that would have been experienced had those portfolios been bought on January 1, 1964, and held until December 31, 1970, with dividends reinvested as received. In the instance of the equal-weighted portfolios, a monthly reallocation of funds, including dividends, to retain the equal investment in all securities after the preceding month's price changes, is implicit. No transactions costs are deducted in either case.

The relative magnitudes of the tabulated rates provide a succinct summary of the stock market story of the mid- and late 1960s. The more comprehensive the portfolio, the higher the average returns thereon—that is, ASE stocks outperformed those on the NYSE, and OTC securities outperformed both. The higher observed returns across the board on the equal-weighted portfolios attest to a related phenomenon:

8. In the calculations, the dividends on the securities in the portfolios were assumed to have been received at the end of the recorded month of payment, and the portfolio returns were defined as the averages (either equal weighted or value weighted) of the returns on their respective individual components. The value weights were updated each month.

TABLE 8 Performance of Selected Benchmark Portfolios, 1964–70
 A. Average Annual Rates of Return, January 64 through December 70

Portfolio	Annual Percentage Return
NYSE/ASE value-weighted	6.9
NYSE/ASE/OTC value-weighted	7.0
Mutual fund composite	6.8
Growth mutual-fund composite	7.4
NYSE equal-weighted	10.8
NYSE/ASE equal-weighted	13.3
NYSE/ASE/OTC equal-weighted	14.0

B. Simple Correlations among the Monthly Returns:

Portfolio	NYSE/ASE Value-Wtd.	NYSE/ASE/OTC Value-Wtd.	Mutual Funds	Growth Mutual Funds	NYSE Equal-Wtd.	NYSE/ASE Equal-Wtd.	NYSE/ASE/OTC Equal-Wtd.
NYSE/ASE value-weighted	1.000	...	...	...	...	...	...
NYSE/ASE/OTC value-weighted	.998	1.000	...	...	...	...	...
Mutual funds composite	.945	.952	1.000	...	...	...	...
Growth mutual funds composite	.930	.937	.998	1.000	...	...	...
NYSE equal-weighted	.949	.950	.962	.954	1.000	...	...
NYSE/ASE equal-weighted	.892	.894	.932	.930	.982	1.000	...
NYSE/ASE/OTC equal-weighted	.879	.885	.928	.926	.974	.997	1.000

small-company equities outperformed large-company ones during the period. The similarity of the mutual fund and the value-weighted portfolio returns, of course, reflects the well-documented investment emphasis of most funds on the shares of large, listed corporations. Further, mutual funds which sought capital appreciation (having assets invested almost entirely in equities) outperformed the so-called “balanced” and “income” funds during the period—in large part because of the general uptrend in interest rates which depressed the market prices of fixed-income securities in the later years involved.⁹ It is

9. The mutual fund composite benchmarks were developed with the assistance and cooperation of the ICI. They were created by selecting approximately a 20% sample from ICI membership in each of four investment-objective categories: “growth,” “growth-and-income,” “income,” and “balanced” funds. Certain of the funds selected were not in existence as of January 1964 but were added to the benchmark portfolios as they came into being. An equal dollar investment in each fund was assumed in compiling those benchmarks and in computing the returns thereon. There are 80 funds included in the

evident, however, that the within-period movements in all these benchmarks are very highly correlated, suggesting that a comparison of our sample's investment round-trip performances, event by event, with any one standard can be mapped readily into a comparison with the others.

We shall exploit that efficiency by concentrating here specifically on the NYSE/ASE value-weighted portfolio. The securities therein are a common and accepted reference point for the appraisal of market behavior; they comprise the great bulk of the value of all traded securities; and the relevant list is externally—and precisely—defined, requiring no arbitrary judgments on our part about the inclusion or exclusion of individual securities.¹⁰ The NYSE/ASE portfolio has the additional advantage of being a close counterpart—both in average return and in the pattern of intraperiod return variations—of the mutual fund composite portfolios. As convenient practical investment alternatives for individuals, mutual funds clearly merit special attention as performance standards.

The choice between a value-weighted and an equal-weighted benchmark also seems clear to us. If the objective is to compare the investment performance of our sample with the mass of experience accumulated in the market, unquestionably there is a concentration of that experience in the shares of large firms. A value-weighted standard, therefore, is a proper macrorepresentation of available concurrent portfolios. Put differently, were an individual to select randomly from the array of alternative opportunities, large-company opportunities would simply present themselves more frequently; in the aggregate, in fact, it would be impossible for investors to select otherwise. Nonetheless, this viewpoint may not be universally applauded. For that reason, we offer in the comparative-return compilations of table 8 a basis for making the transformation to an equal-weighted investment standard for those who are so inclined.

all-fund composite index. They encompass slightly over half the total assets managed by the full ICI membership; 17 of these funds are in the balanced and income groups, leaving 63 in the indicated growth and growth-and-income composite index. The latter will be the primary focus of our attention for comparisons with individual equity investment results, since the income and balanced funds have a heavy component of instruments other than equities in their portfolios. As a point of reference, the 7.4% annual rate of return listed for the growth-fund benchmark portfolio is identical with that on the Weisenberger growth/growth-and-income fund index between 1964 and 1970. Thus, the Weisenberger figure is 7.7% per annum, but that is a simple annual rate; our 7.4% is precisely the continuously compounded equivalent. Accordingly, the sample of funds employed here appears respectably representative.

10. The latter consideration argues against the use of a portfolio expanded to contain the OTC and regional-exchange shares in our price-and-dividend file, since that group is a distinctive one mandated by the trading activities of the present investor sample rather than by an independent attempt to compile a fully comprehensive OTC data base. The effect, in a value-weighted context, of including such securities is, of course, minor in any case: The NYSE/ASE and NYSE/ASE/OTC portfolios differ in 1964–70 annual return by just 0.1% and have a within-period simple correlation of 0.998 (table 7).

VII. The Relative Performance Record

The distribution of the differences between the rates of return realized, before transactions costs, on each of the investment round trips completed by the investor sample and the rates which could have been achieved by investing in the indicated value-weighted portfolio of NYSE and ASE stocks over the same calendar intervals is displayed in table 9. The mean of those differences across all round trips suggests that the typical security selected for investment outperformed the "market" by 3.2% per annum while it was held: the difference between the 9.9% pre-transactions-cost mean annualized rate of return shown in table 4 for the round trips and an effective 6.7% annualized return on the value-weighted portfolio during corresponding intervals. The latter figure is itself of some interest in relation to the 6.9% average rate recorded in table 8 for the 1964–70 study period as a whole; the message is that the observed round trips took place, on balance, at times of marginally less favorable market moves than the 7-year average. The performance of the investor sample, therefore, does not seem to be attributable to any skill in investment *timing*, but instead to skill in individual security selection.

As it happens, the comparison understates the case because the benchmark employed has a computational bias. Since the natural-logarithm function is concave downward, the calculated continuously compounded rate of return on an index portfolio of securities will exceed the average of the rates calculated for its individual components, unless all have exactly the same return.¹¹ Accordingly, the index performance will tend to be reported as better than that of the mean of the performances of separate investments in each of its constituents—even though those investments collectively *are* the index. We are, of course, making a comparison here with individual round-trip rates of return and would like a benchmark for them which assesses their outcomes against the average of a set of round trips in all the separate securities in the designated market portfolio, rather than in the portfolio as a contrived *composite* security. When continuously compounded return measures are employed, the two figures will not quite match.

The magnitude of the difference depends on the extent of the dispersion in the cross-sectional distribution of returns on the portfolio components. We estimated that difference for the years 1964–70 by com-

11. As an illustration, consider a situation wherein only two securities exist in the market, both having the same initial market value but one of which subsequently rises in price by 20% during a year's span while the other rises by 40%. An index portfolio comprised of the two would show a 26.2% continuously compounded rate of return for the year, i.e., $r = \log_n(1.3)$. If, however, an investor engaged in a round trip in each of the two securities individually—thereby exactly duplicating the "market"—he or she would be reported as having attained an average return equal to $(\frac{1}{2})[\log_n(1.2)] + (\frac{1}{2})[\log_n(1.4)]$, or just 25.6%, and it would appear as though that investment performance was inferior.

TABLE 9 Differences between Realized Rates of Return on Identified Round-Trip Investments and Rates of Return on a Value-Weighted Market Portfolio Held over the Round-Trip Intervals: Before Transactions Costs (%)

	All Round Trips	By Duration (Days)			
		0-30	31-182	183-365	>365
Distribution—decile boundary points:					
Decile 1	-41	-229	-85	-55	-30
Decile 2	-20	-108	-46	-30	-16
Decile 3	-11	-31	-23	-16	-9
Decile 4	-5	26	-6	-5	-5
Decile 5	1	75	8	4	-1
Decile 6	6	127	24	13	4
Decile 7	14	189	42	24	9
Decile 8	25	277	66	36	17
Decile 9	44	450	109	60	30
Parameters:					
Mean	3.2	110	11.6	3.3	-.4
Median	.7	75	8.4	4.1	-.5
σ	67	448	90	50	27

paring the value-weighted average of the natural logarithms of the monthly return relatives of each of the 2,200 individual securities in the market portfolio with the natural logarithms of the full-portfolio return relatives for the same months; a mean difference equivalent to a 2.1% annual rate emerged. The NYSE/ASE portfolio benchmark embedded in table 9, therefore, overstates the returns available from a passive investment strategy by 2.1% per annum, in terms of the proper comparison between the array of individual round trips and simultaneous investments in the array of index-portfolio securities. The fact that the logarithm of an average inevitably is greater than the average of the logarithms of its components accounts for the difference.

The implication is that the securities chosen by the investor group effectively outperformed the general market by an overall average of 5.3 percentage points annually and that the record portrayed in table 9 should be recast as in table 10 to reflect the indicated bias adjustment.

TABLE 10 Adjusted Round Trip Performance Differentials (%)

Round-Trip Category	Pre-Transactions-Cost Annualized Performance Differential	
	Mean	Median
All round trips	5.3	2.8
0-30 days	112	77
31-182 days	13.7	10.5
183-365 days	5.4	6.2
Over 365 days	1.7	1.6

The mean and median return differentials, therefore, are positive across the board; all are statistically significant at the .01 level;¹² and they display the same declining pattern with investment duration that was evident in the raw rate-of-return figures.

While the indicated rates are pre-transactions-cost ones, the kind of allowance for such costs that should be made is debatable. If the individual investor's decision is viewed as one between putting investment funds passively into a market portfolio or actively into a particular smaller set of securities—and that is the choice implicit in the comparison above—transactions costs should be recognized for both alternatives. For any given holding period, there is no doubt that the transactions costs associated with a literal "round trip in the market" are at least as great as those involved in a single-security cycle. Consequently, the tabulated pre-transactions-cost return differentials would be conservative portrayals of the after-cost differentials as well.

One could, however, argue that the parallel should instead be with a longer-term buy-and-hold strategy in a market portfolio, whereby funds are committed and left invested, rather than manipulated in a series of trades of the sort we observe on the part of our sample. By this interpretation, a comparison between the after-transactions-costs realized rates on the identified round trips (table 5) and corresponding-period rates of return on the NYSE/ASE value-weighted portfolio would be more appropriate. In that framework, the results in table 11 emerge. Although the differential returns remain positive throughout—and a particular profit potential in short-term trades continues to be visible—a noticeably less sanguine view of the net payoff from the active management of personal investment moneys is suggested by the figures in table 11. Certainly, the comparison is a stern one since no allowance is made for *any* transactions costs in

TABLE 11 Comparison between the After-Transactions-Costs Realized Rates of Return on Investment Round Trips and Corresponding-Period Rates of Return on NYSE/ASE Value-Weighted Portfolio (%)

Round-Trip Category	Post-Transactions-Cost Annualized Performance Differential	
	Mean	Median
All round trips	.9	.5
0–30 days	35	24
31–182 days	1.4	.3
183–365 days	1.0	2.0
Over 365 days	.1	.2

12. Indeed, for a sample of the size involved here, the mean rates would have to match the market portfolio rates exactly in order to avoid a rejection of the hypothesis that they came from the same populations.

acquiring the market portfolio components. On the other hand, most of those costs could, in fact, be avoided were an individual to invest in a collection of no-load mutual funds as a strategy for acquiring "the market."

Table 8 indicated that the outcome of investing in no-load mutual funds over the time period of our investigation would have been essentially to duplicate the NYSE/ASE value-weighted portfolio returns, if a comprehensive array of all categories of mutual funds was selected.¹³ Presumably, a more logical comparison, however, would be with just the growth and growth-and-income mutual fund categories, whose portfolios are comprised predominantly of common stocks. Since these turned in a one-half percentage point per annum better record than the NYSE/ASE value-weighted composite between 1964 and 1970, the resulting return comparisons are shown in table 12. Except on very short-term trades, therefore, our sample's realized returns differed little from those that would have been attainable from the transactions-efficient indirect investment in equities offered by mutual fund purchases.

Finally, a still less favorable assessment emerges if an equal-weighted market portfolio is used as the standard of performance comparison. The differences between the before-transactions-costs rates of return on the sample's actual investment round trips and those on similarly timed round trips involving an equal dollar investment in all NYSE and ASE securities are given in table 13. On this basis, the sample would be characterized as having underperformed the market in the aggregate and as having done especially poorly on long-duration

TABLE 12 Comparison between the After-Transactions-Costs Realized Rates of Return on Investment Round Trips and Corresponding-Period Rates of Return from the Growth and Growth-and-Income Mutual Fund Categories (%)

Round-Trip Category	Post-Transactions-Cost Annualized Performance Differential (Individuals vs. Mutual Funds)	
	Mean	Median
All round trips	.4	...
0-30 days	.34	.23
31-182 days	1.0	-.2
183-365 days	.5	1.5
Over 365 days	-.4	-.3

13. For long holding periods, of course, even a front-end commission "load" would represent a very modest burden. The mutual fund returns portrayed in table 8 ignore such costs entirely, but fund management fees are automatically reflected in the figures.

TABLE 13 Differences between Before-Transactions-Costs Rates of Return of Actual Investment Round Trips and Similarly Timed Round Trips with Equal Dollar Investments in All NYSE and ASE Securities (%)

Round-Trip Category	Equal-Weighted Index Annualized Performance	
	Mean	Median
All round trips	-1.7	-5.2
0-30 days	100	63
31-182 days	5.3	1.7
183-365 days	-.2	-.2
Over 365 days	-5.1	-6.4

investments.¹⁴ Nonetheless, an equal-weighted benchmark is a peculiar construct. It identifies how the average security performed but not how the average investment in securities did; it would be virtually impossible to duplicate via mutual fund share purchases; and the continual portfolio revisions required to maintain the equal weights directly would necessitate very sizable transactions costs. The differential returns listed in table 13 thus represent the most generous possible interpretation of an equal-weighted passive portfolio strategy. In our view, however, such a comparison is more a curiosity than a meaningful performance criterion.

VIII. Risk Differentials

The foregoing appraisals, of course, are legitimate only if the risk characteristics of the securities in the observed round trips closely match those of the standard securities in the benchmark portfolios. According to received capital market theory, the relevant measure is that of systematic risk, as expressed by the β coefficient of the shares involved, where the β of the market portfolio by definition is equal to unity. While we had anticipated that the average β of the array of some 3,500 different securities in which investments by our sample were identifiable would indeed be very close to unity, the figure comes to approximately 1.38 instead, indicating a predominance of stocks whose periodic returns are more volatile than the market as a whole.¹⁵ A correction for this phenomenon, therefore, is necessary if our performance comparisons are to be entirely appropriate.

Such a correction should be made on a round-trip by round-trip

14. The figures are again adjusted for the computational disparity between the continuously compounded total-portfolio return rate and the average continuously compounded rate on its individual-security constituents.

15. The β values were calculated by regressing the 84 monthly returns for each security, between January 1964 and December 1970, on the corresponding monthly returns of the NYSE/ASE value-weighted market portfolio.

basis, contrasting the observed realized rate of return in each case with that which could have been earned, over the same period, from an equivalent-risk passive investment posture. Although that analysis is still in process, a reasonable estimate of the nature of the likely findings can be assayed. Over the periods of the identified round trips, the mean rate of return on the NYSE/ASE value-weighted market portfolio was 6.7% per annum, as noted earlier; over the entire period 1964–70, the risk-free rate in the market was in the vicinity of 5% per annum, as judged by average 13-week Treasury Bill yields. Accordingly, the benchmark return during those years on a portfolio of securities having a β of 1.38 would, pursuant to the strict capital-asset-pricing-model prescription, $\bar{R}_p = R_F + \beta_p(\bar{R}_M - R_F)$, have been about 7.3% per annum—a return just six-tenths of 1% higher than that imbedded in the performance comparisons above. The difference is slight simply because the ex post risk-return relationship at the time was quite flat.¹⁶ In a similar fashion, since the average β of the 63 common-stock mutual

TABLE 14 Preliminary Risk-Adjusted Performance Differentials on Investment Round Trips

A. Individuals vs. ALL NYSE/ASE Securities

Round-Trip Category	Annualized Return Differential (%)			
	Before Transactions Costs		After Transactions Costs	
	Mean	Median	Mean	Median
All round trips	4.7	2.2	.3	-.1
0–30 days	111	76	34	23
31–182 days	13.1	9.9	.8	-.3
183–365 days	4.8	5.6	.4	1.4
Over 365 days	1.1	1.0	-.5	-.4

B. Individuals vs. Mutual Funds

Round-Trip Category	Annualized Return Differential, After Transactions Costs (%)	
	Mean	Median
All round trips	...	-.4
0–30 days	34	23
31–182 days	.5	-.6
183–365 days	.1	1.1
Over 365 days	-.8	-.7

16. And almost certainly flatter still in terms of the “empirical” rather than the strict CAPM version of the relationship (see Black, Jensen, and Scholes 1972; Blume and Friend 1973; Fama and MacBeth 1973).

funds in our growth and growth-and-income composite index was 1.10, their risk-adjusted net realized return advantage over the NYSE/ASE value-weighted index was approximately 0.3% per annum.

From that perspective, a revised assessment of the performance of the individual investor sample would appear as shown in table 14. While the pre-transactions-cost differential rates of return continue to be positive—implying superior security selection skills—the after-cost rates for all but the shortest trading cycles become quite marginal, in comparison with passive investment strategies of commensurate risk.¹⁷ This set of figures, therefore, might suggest the following characterization: the individual investor did, over the interval studied, generally seem to display some talent in choosing common stocks in which to trade but in the aggregate realized few, if any, excess returns from the trades. We doubt that a full one-on-one, risk-adjusted round-trip performance analysis will alter that conclusion.

IX. Comparative-Sample Evidence

There remains, however, a possible caveat. It is conceivable that there is something peculiar about an investor sample restricted to individuals who maintained an open account with a particular brokerage house for a 7-year period. The demographic data compiled from the questionnaire survey of the group revealed no apparent aberrations (Lease, Lewellen, and Schlarbaum 1974), but there could be some concern that account longevity itself may imply a kind of “success bias” in investment experience—that is, only those individuals who do well stay with the firm; the less successful leave to seek advice elsewhere.

As a test of that possibility, we selected a control-group sample of 1,050 individuals for whom no account-longevity requirement was imposed: 150 each at random from *all* the accounts of the cooperating brokerage house which were open as of January 1 of each year from 1964 through 1970. We then obtained a record covering this period of the transactions in those accounts, most of which were open for only a portion of the interval. The investment round trips for this group were identified, the realized rates of return thereon calculated in the same manner as for the study group, and comparisons made with corresponding-period returns on the NYSE/ASE value-weighted portfolio.

The results merely confirm the findings for the larger study-group sample. The average rates of return on the control-group round trips were actually somewhat better than on those of the study group; the same declining return pattern with round-trip duration was evident; the median round trip was 314 days long; 78% involved round-lot trades;

17. Again, all the differences listed are statistically significant at the .01 level, given the sample sizes involved. Whether they are substantial, of course, is another matter.

98% were agency transactions; and the weighted average β of the traded securities was approximately 1.40. There seems, therefore, to be neither a detectable success bias nor any other visible peculiarities in the equities trading experiences of our main investor sample.

X. Summary and Comments

Those experiences are intriguing in two major respects: They portray an overall picture of quite respectable individual-investor security-selection acumen, and they reveal a particularly impressive record of short-term common stock trading success. Both findings are at odds not only with the folklore of the investment community but also with our own expectations when we began the investigation; apparently we suffered from the standard misapprehensions.

A rationale for such results, on the other hand—regardless of whether one finds them either surprising or gratifying—remains conjectural at this stage. It is possible that individuals are in fact able to engage in prompt trading responses to many temporary securities price disequilibria that emerge in the market, to take positions small enough not to eliminate those disequilibria immediately, and on average to turn a profit before they disappear, whereas large-bloc institutional trading pursuit of the same discrepancies would be self-defeating. This might, in many instances, give the small investor a modest competitive edge. A close examination of within-day and within-week execution price evidence for the sample's transactions, however, would be necessary in order to attempt to address that issue, and the requisite complementary daily securities-price-range comprehensive data base is not yet in place in our files.

Another explanation could be the quality of the research recommendations and trading advice emanating from the brokerage house in question to its customers. While empirical evidence of consistently superior such professional counsel is scarce, to say the least (Logue and Tuttle 1973), the possibility cannot be entirely ruled out (Black 1973). An examination thereof, using the historical record of the firm's released securities recommendations is presently under way, and some interesting early glimmerings of expertise do seem discernible (Groth et al. 1978).

A rather different sort of rationale, both for the aggregate investment results identified and for the inverse relationship between realized returns and round-trip duration must, however, be considered. It could be that what we observe is a psychological rather than an economic phenomenon: a tendency for investors to sell those securities which rise in price and hold the ones which fall, in hopes the latter ultimately

will recover. A favorable short-term price movement, therefore, may lead to quick profit realization, while an unfavorable one induces deferral. If that were the case, our data would merely imply a willingness to take, not a special ability to generate, short-run trading gains. Presumably, one symptom of such a mentality would be a higher proportion of positive rates of return in the short-duration than in the long-duration round trips—but that pattern is not present in the data, as table 15 shows. Thus, a disposition to sell the winners and ride the losers would not seem to account for the observed profit/duration profile.¹⁸ The figures listed, incidentally, are of some intrinsic interest. They indicate that, during a 7-year period of relatively good market conditions and distinctly positive average investment returns, roughly two of every five of the sample's trades still produced losses, net of transactions costs. In fact, of the round trips identified, it happens that only 52% yielded net returns in excess of the mean return available during the period on Treasury Bills.

In any case, whatever face one chooses to put on it, the evidence here provides what we believe to be the first comprehensive look at actual individual-investment experiences. Since any assessment of the data depends heavily on the choice of an appropriate investment performance benchmark, we have provided an array of alternatives to facilitate the reader's interpretation. The picture as we see it, however, is not bleak. Perhaps "churning" a portion of the investment portfolio may not be without some merit for the investor; longer-term equity commitments, on the other hand, would seem as well accomplished by acquiring a collection of mutual funds as by individual analysis and security selection. While the findings are admittedly only a first step,¹⁹ it is our hope that even as they stand they can contribute to an

TABLE 15 **Proportion of Positive Pre-Transaction-Costs Round-Trip Rates of Return**

Round-Trip Category	Proportion of Positive Realized Rates of Return (%)
0–30 days	58
31–182 days	57
183–365 days	59
Over 365 days	61

18. Which should also allay concern that the round trips that were "open" for the investor sample at either end of the 1964–70 study period, and thereby excluded from the analysis here, may have aberrant imbedded profit or loss attributes.

19. The most obvious next steps are to update the data to cover the substantially different market conditions of the 1970s and to examine the full portfolios of the sample in order to treat accrued, as well as realized, investment returns. Both tasks are in progress.

improved appreciation of the processes at work—and also the participants—in the American capital marketplace.

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