Table 1 Demographic and Financial Characteristics

|  | Distribution Channel Used |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bank | Broker | Pension | Direct | Ins. Co. | Other | Total |
| A. Number of Respondents |  |  |  |  |  |  |  |
|  | 294 | 638 | 1,118 | 569 | 521 | 92 | 2,000 |
| B. Demographic Characteristics |  |  |  |  |  |  |  |
| Male | 50.0\% | 62.5\% | 62.3\% | 69.4\% | 54.9\% | 57.6\% | 58.6\% |
| Median Age | 45* | 47* | 41* | 44* | 44 | 44 | 43 |
| Median Income | \$55,200 | \$67,600* | \$62,100* | \$67,000* | \$59,200* | \$58,400 | \$58,800 |
| College Grad. | 49.3* | 62.8* | 57.5\% | 68.5* | 55.3 | 52.2 | 54.6 |
| C. Financial Characteristics |  |  |  |  |  |  |  |
| Seasoned investor ${ }^{1}$ | 85.2\% | 91.1\%* | 85.0\% | 89.7\%* | 90.5\%* | 83.5\% | 85.2\% |
| Individual stocks | 44.6\%* | 72.6\%* | 51.8\% | 58.4\% | 47.4\% | 42.4\% | 50.8\% |
| Individual bonds | 34.4 | 39.0* | 30.4 | 33.4 | 34.4 | 29.4 | 31.1 |
| CDS | 47.6* | 41.7* | 30.8* | 34.3 | 36.3 | 28.3 | 34.9 |
| MMDAs | 50.7* | 46.2* | 36.5* | 37.3 | 36.3 | 38.0 | 38.3 |
| Annuities | 31.0 | 31.0* | 25.1 | 25.0 | 45.5* | 25.0 | 26.7 |
| Primary residence | 77.6 | 88.6* | 81.0 | 82.1 | 84.6* | 71.7* | 80.9 |

${ }^{1}$ Purchased mutual fund prior to 1993.
Because the distribution channels are not mutually exclusive, a chi-squared statistic is used to test for significant differences in the percentages between bank and non-bank purchasers, broker and non-broker purchasers, pension and non-pension purchasers, and so on. To save space, the cell values corresponding to non-bank purchasers, non-broker purchasers, nonpension purchasers and so on are not reported in the table. The complete set of results is available from the authors upon request. A "*" denotes a cell value that is statistically significantly different at the 5 percent level from the corresponding value for all other purchasers not using the particular distribution channel being examined. Nonparametric tests for differences in the percentage values yield similar results and are not reported. A nonparametric test for median values is used to test for significant differences in the median age between bank and non-bank purchasers, broker and non-broker purchasers, pension and non-pension purchasers, and so on.

Table 2 Ownership Attributes

| A. Type of Fund Owned | Distribution Channel Used: |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bank | Broker | Pension | Direct | Ins. Co. | Other |  |
| Stock | 64.8\%* | 82.3\%* | 80.1\%* | 85.3\%* | 58.5\%* | 75.9\% | 72.9\% |
| Bond | 40.3 | 45.6* | 39.3* | 39.7* | 41.0* | 34.5 | 36.1 |
| Money | 44.6* | 39.4 | 39.1 | 38.8 | 65.5* | 32.8 | 39.2 |
| Other | 15.5 | 19.1 | 12.4* | 21.8* | 28.6* | 20.7 | 14.6 |
| Median Number of Channels Used | 2* | 2* | 2* | 2* | 2* | 1 | 1 |
| B. Number of Funds Owned |  |  |  |  |  |  |  |
| One | 22.9\% | 12.5\%* | 18.3\%* | 13.4\%* | 18.9\%* | 32.1\%* | 23.3\% |
| Two | 20.6 | 15.7* | 20.3 | 17.2* | 22.3 | 10.7* | 21.0 |
| Three | 19.8 | 14.9 | 17.0 | 12.5* | 15.2 | 16.7 | 16.1 |
| Four or more | 36.8 | 56.9* | 44.4* | 57.0* | 43.6* | 40.5 | 39.6 |
| Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| Median Number of Funds Owned | 3 | 4+* | 3* | 4+* | 3 | 3 | 3 |
| C. Type of Largest Fund Owned |  |  |  |  |  |  |  |
| Stock | 49.8\%* | 69.7\%* | 68.0\%* | 73.9\%* | 59.5\%* | 59.3\% | 63.8\% |
| Bond | 14.7* | 11.6 | 8.1* | 7.9* | 9.0 | 20.4* | 10.6 |
| Money | 25.3* | 11.6* | 14.1* | 9.7* | 20.1* | 13.0 | 16.3 |
| Other | 10.2 | 7.3* | 9.8 | 8.5 | 11.3 | 7.4 | 9.3 |

See notes to table 1. Fund owners with four or more funds are represented by $4+$ since the exact number of funds, if over three, was not requested in the survey.

Table 3 Information Sources Used in Purchasing Most Recent Mutual Fund

| A. Information Sources | Distribution Channel Used |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bank | Broker | Pension | Direct | Ins. Co. | Other |  |
| Prospectus | 51.2\%* | 56.5\% | 60.8\%* | 74.0\%* | 59.1\% | 49.4\% | 57.7\% |
| Broker | 27.4 | 61.6* | 24.8* | 29.6 | 31.7 | 31.8 | 31.0 |
| Family or friends | 40.4 | 34.3* | 33.6* | 30.5* | 42.4* | 36.5 | 37.6 |
| Financial publications | 41.4 | 49.8* | 41.3 | 67.9* | 39.7 | 34.1 | 42.0 |
| Banker | 41.1* | 6.9* | 7.0* | 4.3* | 10.5 | 4.7 | 10.3 |
| Insurance company | 0.0* | 0.6* | 0.6* | 0.5* | 6.0* | 0.0 | 1.6 |
| Fund company | 0.0 | 0.2 | 0.3 | 0.7* | 0.0 | 0.0 | 0.3 |
| Employer | 34.4* | 23.3* | 65.0* | 25.9* | 35.6* | 35.3 | 44.5 |
| Meeting/presentation | 23.9* | 18.3* | 46.6* | 17.1* | 31.1 | 27.1 | 33.5 |
| Other | 4.6 | 4.8* | 3.5 | 5.9* | 3.5 | 5.9 | 3.5 |
| B. Best Source of Information |  |  |  |  |  |  |  |
| Prospectus | 13.9\% | 13.0\% | 16.8\%* | 20.5\%* | 17.4\% | 13.4\% | 15.2\% |
| Broker | 11.0* | 39.0* | 11.7* | 14.9 | 16.0 | 22.0 | 16.9 |
| Family or friends | 20.9* | 13.3* | 10.9* | 12.6* | 20.4* | 24.4* | 16.3 |
| Financial publications | 13.6 | 21.6* | 16.6 | 36.7* | 12.6* | 14.6 | 17.1 |
| Banker | 19.4* | 2.0* | 1.9* | 0.9* | 4.4 | 1.2 | 4.2 |
| Insurance company | 0.0 | 0.3 | 0.1* | 0.0 | 1.6* | 0.0 | 0.4 |
| Fund company | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Employer | 18.7* | 9.1* | 39.3* | 10.9* | 21.4* | 23.2 | 26.7 |
| Meeting/presentation | 0.4 | 0.2 | 0.7 | 0.2 | 0.8 | 0.0 | 0.6 |
| Other | 2.2 | 1.6 | 2.0 | 3.3 | 5.2* | 1.2 | 2.6 |

See notes to table 1.

Table 4 Investor Knowledge of Risk Associated with Mutual Funds

| A. Is It Possible to Lose Money In This Type of Fund? |  |  |  | ribution | Channel U |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Bank | Broker | Pension | Direct | Ins. Co. | Other |  |
| Stock <br> Fund | Yes | 93.9\% | 96.9\%* | 94.6\% | 97.9\%* | 92.3\% | 92.4\% | 94.0\% |
|  | No | 2.7 | 0.9* | 1.5 | 0.5* | 2.5 | 2.2 | 2.0 |
|  | DK/Refused | 3.4 | 2.2* | 3.9 | 1.6* | 5.2 | 5.4 | 4.1 |
|  | Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| Bond Fund | Yes | 72.8\% | 79.5\%* | 73.6\%* | 85.6\%* | 68.7\% | 67.4\% | 71.8\% |
|  | No | 13.3 | 8.2* | 12.1 | 6.2* | 13.2 | 18.5 | 12.3 |
|  | DK/Refused | 14.0 | 12.4* | 14.3* | 8.3* | 18.0 | 14.1 | 16.0 |
|  | Total |  |  | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| Money Market Fund | Yes | 64.0\% | 63.0\% | 64.9\% | 67.5\%* | 66.8\% | 64.1\% | 63.9\% |
|  | No | 20.1 | 23.0 | 20.3 | 21.8* | 20.0 | 19.6 | 20.5 |
|  | DK/Refused | 16.0 | 14.0 | 14.9 | 10.7* | 13.2 | 16.3 | 15.7 |
|  | Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| B. Cross-Fund Differences |  |  |  |  |  |  |  |  |
| Stock vs. <br> Bond <br> Funds | Stock Funds | 93.9\% | 96.9\% | 94.6\% | 97.9\% | 92.3\% | 92.4\% | 94.0\% |
|  | Bond Funds | 72.8 | 79.5 | 73.6 | 85.6 | 68.7 | 67.4 | 71.8 |
|  | Difference | 21.1 | 17.4 | 21.0 | $12.3$ | 23.6 | 25.0 | 22.2 |
|  | (t-statistic) | $\left(8.0^{*}\right)$ | (10.7*) | (15.8*) | $\left(8.6^{*}\right)$ | $\left(11.7^{*}\right)$ | $\left(4.7^{*}\right)$ |  |
| Bond vs. <br> Money Market Funds | Bond Funds | 72.8\% | 79.5\% | 73.6\% | 85.6\% | 68.7\% | 67.4\% | 71.8\% |
|  | Money Mkt Funds | 64.0 | 63.0 | 64.9 | 67.5 | 66.8 | 64.1 | 63.9 |
|  | Difference | 8.8 | 16.5 | 8.8 | 18.1 | 1.9 | 3.3 | 7.9 |
|  | (t-statistic) | (2.6*) | (7.3*) | $\left(5.1^{*}\right)$ | (7.9*) | (0.74) | (0.55) | (6.1*) |

For panel A, see notes to table 1; DK denotes "don't know." For panel B, * signifies statistical significance at the 5 percent level; a paired t-test was used in testing the difference between stock and bond funds and between bond and money market funds.

Table 5 Knowledge and Beliefs About Annual Expenses

| A. Knowledge of Largest Funds' Expenses | Distribution Channel Used |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bank | Broker | Pension | Direct | Ins. Co. | Other |  |
| Yes | 15.3\% | 23.0\%* | 19.8\% | 35.0\%* | 20.7\% | 17.4\% | 18.9\% |
| No | 84.7 | 77.0 | 80.2 | 65.0 | 79.3 | 82.6 | 81.2 |
| Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| B. Knowledge of Expenses at Time of Purchase |  |  |  |  |  |  |  |
| Yes | 46.1\% | 49.5\%* | 40.5\%* | 59.7\%* | 47.8\%* | 28.0* | 43.0\% |
| No | 53.9 | 50.5* | 59.5* | 40.3* | 52.2* | 71.9* | 57.1 |
| Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| C. Expected Performance of Fund with Higher than Average Expenses |  |  |  |  |  |  |  |
| Above average | 23.8\% | 19.3\% | 19.7\% | 16.6\% | 22.9\% | 20.3\% | 19.9\% |
| About average | 66.5 | 63.3 | 64.4 | 62.9 | 63.6 | 56.3 | 64.4 |
| Below average | 9.7* | 17.4 | 15.9 | 20.6* | 13.5 | 23.4 | 15.7 |
| Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| D. Expected Performance of Fund with Good Performance in the Previous Year |  |  |  |  |  |  |  |
| Above average | 19.5\% | 24.9\% | 25.3\% | 29.8\%* | 27.3 | 23.6\% | 24.1\% |
| About average | 75.6 | 68.0 | 68.8 | 62.2* | 69.1 | 69.4 | 70.6 |
| Below average | 4.9 | 7.1* | 5.9 | 8.0* | 3.6 | 6.9 | 5.3 |
| Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |

See notes to table 1.

Table 6 Investor Knowledge of Rate of Return: Stock Market vs. U.S. Treasury Bills

| A. Type of Fund Owned | Stock <br> (non-stock) | Bond <br> (non-bond) | Money <br> (non-money) |
| :--- | :---: | :---: | :---: |
| Number of investors purchasing fund type | $\mathrm{n}=1119$ <br> $(\mathrm{n}=598)$ | $\mathrm{n}=553$ <br> $(\mathrm{n}=1164)$ | $\mathrm{n}=607$ <br> $(\mathrm{n}=1110)$ |
| Percent who know on average that stock <br> market return is higher | $81 \% *$ <br> $(63 \%)$ | $79 \%^{*}$ <br> $(73 \%)$ | $76 \%$ <br> $(74 \%)$ |
| B. Largest Type of Fund Owned |  |  |  |
| Number of investors with largest fund type | $\mathrm{n}=879$ <br> $(\mathrm{n}=483)$ | $\mathrm{n}=140$ <br> $(\mathrm{n}=1222)$ | $\mathrm{n}=217$ <br> $(\mathrm{n}=1145)$ |
| Percent who know on average that stock | $82 \% *$ <br> market return is higher | $66 \% *$ <br> $(78 \%)$ | $65 \% *$ <br> $(79 \%)$ |

[^0]Table 7 Mean and Variance of the Quiz Score by Distribution Channel

| A. Distribution <br> Channel | Purchased <br> yes/no | Mean | Std. Dev. | Difference <br> (t-statistic) |
| :--- | :--- | :---: | :---: | :---: |
| Bank | Yes | 4.77 | 2.09 | -.31 |
|  | No | 5.08 | 2.16 | $\left(-2.10^{*}\right)$ |
| Broker | Yes | 5.48 | 2.06 | .67 |
|  | No | 4.81 | 2.17 | $\left(6.21^{*}\right)$ |
| Direct | Yes | 6.26 | 1.88 | 1.76 |
|  | No | 4.50 | 2.04 | $\left(17.44^{*}\right)$ |
| Pension | Yes | 5.14 | 2.17 | .25 |
|  | No | 4.89 | 2.13 | $\left(2.39^{*}\right)$ |
| Other | No | 4.82 | 2.09 | -.29 |
|  | Yes | 5.11 | 2.17 | $\left(-2.38^{*}\right)$ |
| Total | No | 4.92 | 2.11 | -.12 |
|  |  | 5.04 | 2.16 | $(-.42)$ |
| B. Multiple Channels | Number of | 5.03 | 2.16 |  |
|  | Channels Used | Mean | Std. Dev. | Difference |
|  | Multiple | 5.21 | 2.03 | 1.28 |
| Broker | Single | 3.93 | 1.96 | $\left(4.82^{*}\right)$ |
|  | Multiple | 5.81 | 1.97 | 1.20 |
|  | Single | 4.61 | 2.06 | $\left(6.37^{*}\right)$ |
| Pension | Multiple | 6.38 | 1.87 | .46 |
|  | Single | 5.92 | 1.90 | $\left(2.41^{*}\right)$ |
| Insurance company | Multiple | 5.78 | 2.05 | 1.57 |
|  | Single | 4.21 | 2.01 | $\left(11.83^{*}\right)$ |
| Total | Multiple | 5.17 | 2.02 | 1.40 |
|  | Single | 3.77 | 1.91 | $\left(6.37^{*}\right)$ |
|  | Multiple | 5.80 | 2.17 | 1.90 |
|  | Single | 3.90 | 1.52 | $\left(4.03^{*}\right)$ |
|  | Multiple | 5.70 | 2.05 | 1.26 |
|  | Single | 4.44 | 2.07 | $\left(12.69^{*}\right)$ |

* Signifies statistical significance at the 5 percent level. A difference in means test is used to test for significant differences in quiz scores that adjusts for unequal variances when necessary. The absolute value of the $t$-statistic is reported.

Table 8 Differences in Quiz Score by Other Demographic/Financial Variables

| Characteristics | Category | Mean <br> Quiz <br> Score | Standard <br> Deviation | Difference <br> (t-statistic) |
| :--- | :--- | :---: | :---: | :---: |
| Gender | Male | 5.54 | 2.08 | 1.29 <br> Female |
|  | Yes | 4.25 | 2.03 | $\left(12.67^{*}\right)$ |
| Employment | Ever full-time | 5.28 | 2.31 | 1.34 |
|  | Not full time | 4.39 | 2.28 | $\left(6.69^{*}\right)$ |
| Owns CDS | Yes | 4.96 | 2.10 | .65 |
|  | No | 5.07 | 2.19 | $(.11$ |
| Owns MMDA | Yes | 5.10 | 2.18 | $(.98)$ |
|  | No | 4.99 | 2.14 | $(1.01)$ |
| Owns stocks | No | 4.95 | 2.11 | -.11 |
|  | Yes | 5.06 | 2.17 | $(.94)$ |
| Owns bonds | Yo | 5.42 | 2.14 | .80 |
|  | No | 4.62 | 2.10 | $\left(7.83^{*}\right)$ |
| Owns real estate | Yes | 5.12 | 2.24 | .12 |
|  | No | 5.00 | 2.12 | 1.07 |
| Owns residence | Yes | 5.24 | 2.19 | $.29 *$ |
|  | No | 4.95 | 2.14 | $\left(2.56^{*}\right)$ |

[^1]Table 9 Quiz Score by Best Source of Information

| Source of Information | Best Source <br> (yes/no) | Mean | Std. Dev. | Difference <br> (t-statistic) |
| :--- | :--- | :---: | :---: | :---: |
| Prospectus | Yes | 5.74 | 1.99 | .83 |
|  | No | 4.91 | 2.16 | $\left(5.77^{*}\right)$ |
| Broker | Yes | 5.00 | 2.07 | -.05 |
|  | No | 5.05 | 2.17 | $(-.38)$ |
| Family or friends | Yes | 4.31 | 1.98 | -.87 |
|  | No | 5.18 | 2.16 | $\left(-5.96^{*}\right)$ |
| Financial publications | Yes | 6.40 | 1.83 | 1.66 |
|  | No | 4.74 | 2.11 | $\left(13.68^{*}\right)$ |
| Banker | Yes | 4.20 | 1.87 | -.88 |
|  | No | 5.08 | 2.16 | $\left(-3.19^{*}\right)$ |
| Employer | Yes | 4.27 | 2.05 | -1.05 |
|  | No | 5.32 | 2.13 | $\left(-8.85^{*}\right)$ |
| Meetings/ Presentations | Yes | 4.14 | 1.21 | -.91 |
|  | No | 5.05 | 2.16 | $(-1.11)$ |
| Insurance company | Yes | 3.29 | 1.80 | -1.76 |
|  | No | 5.05 | 2.16 | $\left(-2.16^{*}\right)$ |
| Other | Yes | 5.45 | 2.35 | .42 |
|  | No | 5.03 | 2.15 | $(1.28)$ |

* Signifies statistical significance at the 5 percent level. A difference in means test is used to test for significant differences in quiz score that adjusts for unequal variances when necessary. The absolute value of the $t$-stat is reported.

Table 10 Multivariate Logit Estimation of Determinants of Quiz Score

| Variable | Coefficient <br> Estimate | t-statistic |
| :--- | :---: | :---: |
| MALE | 0.8320 | $6.75^{*}$ |
| COLLEGE_GRAD | 0.6753 | $5.54^{*}$ |
| WORK_FIN_INST | 1.1758 | $5.00^{*}$ |
| AGE | 0.1618 | 1.34 |
| NUM_FUNDS | 0.2530 | $2.08^{*}$ |
| INCOME | 0.5370 | $4.20^{*}$ |
| SEASONED | 0.3609 | 1.54 |
| PUBLICATIONS | 0.9376 | $3.82^{*}$ |
| PROSPECTUS | 0.5981 | $2.45^{*}$ |
| BROKER | 0.0707 | 0.29 |
| BANKER | -0.3925 | -1.03 |
| EMPLOYER | -0.4336 | -1.85 |
| FAMILY | -0.3051 | -1.20 |
| Chi-Squared Statistic <br> (p-value) |  | 302.5 |
| Proportion Predicted Correctly | $(0.000)$ |  |
| Number of Observations | 0.701 |  |

Note: The dummy variables MALE, COLLEGE_GRAD, WORK_FIN_INST, AGE, NUM_FUNDS, INCOME, and SEASONED take on a value of 1 ( 0 otherwise) if the respondent is a male, a college graduate, works at a financial institution, older than 43 years of age, owns three of more funds, has household income greater than $\$ 75,000$, and purchased a mutual fund prior to 1993 , respectively. Also included are dummy variables for the best source of information used in the respondents' most recent mutual fund purchases. The dummy variables PUBLICATIONS, PROSPECTUS, BROKER, BANKER, EMPLOYER, and FAMILY take on a value of 1 ( 0 otherwise) if the best source of information is financial publications, the mutual fund prospectus, broker, banker, employer-provided printed materials, and family or friends, respectively.


[^0]:    * Signifies statistical significance at the 5 percent level. Comparison values are reported in parentheses. The effective sample size is given by $n$.

[^1]:    * Signifies statistical significance at the 5 percent level. A difference in means test is used to test for significant differences in quiz score that adjusts for unequal variances when necessary. The absolute value of the $t$-statistic is reported.

