

9

Personal Investment Literacy Among College Students: A Survey

Ronald P. Volpe, Haiyang Chen, and Joseph J. Pavlicko

This study examines college students' knowledge of personal investment and the relationship between the level of investment literacy and gender, academic discipline, and experience. The findings suggest that college students have inadequate knowledge of personal investment. The problem spreads across a broad spectrum of college students of both genders, various academic disciplines, and experience groups. Consistent with previous studies, the results have shown that female students are less knowledgeable about investing than male students. Non-business majors are less knowledgeable than business majors. Within the business majors, non-finance/accounting majors are less knowledgeable than finance/accounting majors. The differences between these groups are statistically significant. The findings suggest that illiteracy of personal investment exists among college students and the issue needs to be addressed.

■ The importance of personal investment decisions cannot be overemphasized because they have a direct impact on people's quality of life. Such decisions include accumulating funds for a down payment for a home or an automobile, a child's education, personal goals/dreams, and retirement. According to recent national surveys conducted by the National Endowment for Financial Education, personal investment advice is the most frequent request made by the public. From 1991 to 1995, about 70 to 80% of the surveyed financial planners responded that they provided investment advice to their clients and the demand for such advice has increased steadily (NEFE, 1993, 1994, and 1995).

Take retirement funding for example. Companies have been switching their defined benefit pensions to defined contribution plans, which are primary firm-sponsored vehicles for retirement. This change makes employees' retirement benefits depend on their investment decisions. Not properly informed, many Americans have made costly mistakes such as investing too conservatively for their retirement accounts (Anand, 1994; Christine, 1992; and

Ronald P. Volpe and Haiyang Chen are Professors of Finance in the Williamson College of Business Administration at Youngstown State University, Youngstown, OH 44555. Joseph J. Pavlicko is a Business Analyst for Blue Cross of Western Pennsylvania, Pittsburgh, PA 15222.

We thank Raj Aggarwal, the Editor, and two anonymous referees for their helpful comments on earlier versions of this paper.

Philip and Cardona, 1994), being victimized by scams or unscrupulous brokers (Schultz, 1992; Simon, 1992; and Spiro and Schroeder, 1992), not contributing to their retirement plans (Philip and Cardona, 1994 and Schultz, 1992), and spending lump-sum distributions of retirement funds elsewhere (Schultz, 1995 and Willette, 1995). Realizing the importance of personal investing, more people are seeking help from financial planners. Many companies have started offering investment education to employees (Berstein, 1992; Fuentes, 1992; Knapp, 1991; Winn, 1992; and Wysocki, 1995), because their worries about personal finances have affected their productivity (CHRG, 1995). Further, finance literacy among employees impact efforts to educate employees about 401(k) plans (see, for example, Brenner, 1996).

Poor investment knowledge is one of the main reasons Americans have failed to manage their personal finances (ICFP, 1993). Inadequate knowledge is caused by lack of a sound financial education (Connor, 1992; Hira, 1993; HSR, 1993; and O'Neill, 1993). A literature review has shown repeatedly that high school students have not received adequate financial education and have poor knowledge of finance (Bakken, 1967; CFA/AMEX, 1991; HSR, 1993; Langrehr, 1979; and NAEP, 1979). Except for Danes and Hira (1987), studies on college students' knowledge of finance are curiously missing from the published literature. This study examines whether a

Exhibit 1. Personal Investment Literacy Survey and Testing Results for the Total Sample

Panel A. Number and Percentage of Correct Responses for Each Question

	A Risk	B Diversi- fication	C Financial Advisor Qualif.	D Tax Planning	E Stock Market Valuation	F Business Math	G Measurement of Bond Performance	H Global Investing	I Measurement of Mutual Fund Performance	J Impact of Interest Rate Change
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Number	218	254	270	79	150	238	241	171	254	129
Percentage	48%	56%	59%	17%	33%	52%	53%	38%	56%	28%

Total Participants: 454

Panel B. Summary Statistics of Individual Participant's Investment IQ Score

Percentiles of IQ Score	Participants IQ Scores
10	20
20	30
30	30
40	40
50	40
60	50
70	50
80	60
90	70
100	100
Mean IQ Score for Total Sample	44

college education enhances the level of personal investment literacy among college students and the relationship between the level of literacy and gender, academic discipline, and experience.

Early studies have shown that high school students had poor knowledge about personal loans, credit, insurance, and investments (Bakken, 1967; Langrehr, 1979; and NAEP, 1979). Additionally, male students scored significantly higher on borrowing money and using credit than female students (Bakken, 1967). Students with previous business education scored better than those without the education (Bakken, 1967 and Langrehr, 1979). More recent surveys suggested that high school students' knowledge about money and investment could be described as average at best (CFA/AMEX, 1991 and HSR, 1993). For example, the results of the HSR survey showed that about 80% of surveyed students did not

know what a mutual fund was. Only 39% of them know that an investor is more likely to make money in the stock market over a 20-year period, and 32% knew that one could make more money in stock markets than in bond markets and CDs. Only 20% of the students considered themselves very knowledgeable about money and investments. The CFA/AMEX study reported that high school seniors' understanding of consumer credit, checking/savings, and automobile insurance was poor. On average, they answered no more than 40% of these financial services related questions correctly.

Danes and Hira (1987) focused on college students' money management knowledge, and found that college students had a low level of knowledge about insurance, credit cards, and overall financial management. Male students knew more about insurance and personal loans, but female students knew more about overall financial management.

I. Methodology

This study examines the following questions: What is college students' knowledge of personal investment? In what areas is investment illiteracy most evident among college students? What is the relationship between illiteracy and gender, academic discipline, and experience?

"What's Your Investing IQ?" from the Money Forecast Issue of *Money* magazine (1993) was used as our survey questionnaire. The questionnaire was developed with the help of John Markese, president of the American Association of Individual Investors, to test one's investment knowledge. It covers a variety of personal investment topics such as risk, diversification, financial advisor qualifications, tax planning, business math, impact of interest rate change, stock, bond, and mutual fund valuation, and global investing. Each question is worth 10 points. Anyone knowledgeable about the basics of personal investment should receive an IQ score of 70 or higher. A failing score is 40 or lower. A copy of the survey is attached in the Appendix for interested readers.

The sample of the study was drawn in 1994-95 academic

Exhibit 2. Personal Investment Literacy Survey and Testing Results for the Subsamples of Female and Male Participants

Panel A. Number and Percentage of Correct Responses for Each Question

	<i>d</i> Risk	<i>B</i> Diversi- fication	<i>C</i> Financial Advisor Qualif.	<i>D</i> Tax Planning	<i>E</i> Stock Market Valuation	<i>F</i> Business Math	<i>G</i> Measurement of Bond Performance	<i>H</i> Global Investing	Measurement of Mutual Fund Performance	Impact of Interest Rate Change
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Total Female Participants: 194										
Number	89	113	101	33	56	93	109	56	113	54
Percentage	46%	58%	52%	17%	29%	48%	56%	29%	58%	28%
Total Male Participants: 260										
Number	127	151	156	44	109	159	153	130	179	70
Percentage	49%	58%	60%	17%	42%	61%	59%	50%	69%	27%

Panel B. Summary of Statistics of Investment IQ Scores for Individual Participants in Each Subsample

Percentiles of IQ Score	IQ Scores of Female Participants	IQ Scores of Male Participants
10	20	30
20	30	30
30	30	40
40	40	40
50	40	50
60	50	50
70	50	60
80	50	60
90	60	70
100	80	100
Mean IQ Scores for Each Subsample	42	49

A two-tailed median test was conducted to determine the differences of investment literacy between the subsamples. The chi-square statistic is 5.31, which is significant at the 0.05 level.

year from students at a mid-sized metropolitan university where the authors teach. The survey was conducted in class where students were asked to answer survey questions and others such as their gender, academic discipline, and experience. The final sample of 454 students consists of 42.7% women and 57.3% men; 70.6% students majoring in business, 29.4% in non-business fields; and 44.4% students with prior investment experience and 55.6% without. About 55.8% of

participants are in the 18-25 age group, 24.5% in 26-35 group, and 19.7% in the over 35 group. The final sample size varies from 437 to 454 for analysis because of missing observations.

The results were tabulated to show the sample's average investment IQ scores and the percentage of correct responses to each question. The entire sample was then partitioned into separate subsamples by students' gender, academic discipline, and experience. These subsamples' scores were analyzed to determine if there were differences in the level of investment knowledge among the groups using two-tailed median tests. The significance level of 0.05 was used to determine if the differences were statistically significant. The test results are reported in the corresponding exhibits.

II. Results

Results in Panel A of Exhibit 1 indicate that on average the survey participants' knowledge of personal investment is grossly inadequate. The overall mean of the IQ scores of the 454 participating college students is only 44. As low as this score may seem, it is actually overstated by use of the mean, which is affected by extreme values. Panel B displays percentiles of the participants' scores, and it shows that the median IQ score of the participants is only 40. A perfect IQ score is 100. The next best scores are between 70 and 90, indicating one has mastered the investment basics. A score between 50 and 60 suggests that one must bone up before making any big investment. The worst score is 40 or lower. The average IQ scores of the participants fall into this category.

An examination of the participants' responses to each question reveals that the illiteracy is spread across a broad range of topics on personal investment basics.

Exhibit 3. Personal Investment Literacy Survey and Testing Results for the Subsamples of Business Majors and Non-Business Majors

Panel A. Number and Percentage of Correct Responses for Each Question

	Risk	Diversification	Financial Advisor Qualif.	Tax Planning	Stock Market Valuation	Business Math	Measurement of Bond Performance	Global Investing	Measurement of Municipal Fund Performance	Impact of Interest Rate Change
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Total Participants of Business Administration Majors: 314										
Number	155	169	173	49	114	178	188	130	198	82
Percentage	49%	54%	55%	16%	36%	57%	60%	41%	63%	26%
Total Participants of Non-Business Administration Majors: 131										
Number	61	78	91	30	33	56	48	37	51	43
Percentage	47%	60%	69%	23%	25%	43%	37%	28%	39%	33%

Panel B. Summary of Statistics of Investment IQ Scores for Individual Participants in Each Subsample

Percentiles of IQ Score	IQ of Participants of Business Majors	IQ of Participants of Non-Business Majors
10	20	20
20	30	30
30	40	30
40	40	40
50	50	40
60	50	40
70	50	50
80	60	50
90	70	60
100	100	80
Mean IQ Scores for Each Subsample	46	40

A two-tailed median test was conducted to determine the differences of investment literacy between the subsamples. The chi-square statistic is 6.196, which is significant at the 0.02 level.

Only 59% of the participants correctly answered the question about financial advisor qualifications, which is the best score earned by the participants. Only 56% of the participants answered correctly on diversification, 56% on mutual fund performance, 53% on bond performance and 52% on business math. Larger gaps

were found in knowledge about risk, global investing, stock market valuation, impact of interest rate changes, and tax planning, with correct answers from only 48%, 38%, 33%, 28%, and 17% of the participants, respectively. If one constructs an IQ score for each question, none of the participants' mean IQ scores is close to an acceptable range of 70-90. Half of them are in the 50-60 range, indicating a need to learn the basics, and the other half in the 40 or lower range, clearly suggesting incompetency in personal investment.

The relationship between investment illiteracy and gender, academic discipline, and experience is examined in the following sections. Literature has shown that women experience more problems in managing their finances than men (Genasci, 1995, Lewin, 1995, and Martinez, 1994), and female students are less knowledgeable in some areas of personal finances (Bakken, 1967, Danes and Hira, 1987, and HSR, 1993). This study provides further evidence on the difference between male and female participants' knowledge about investment basics.

As shown in Panel A of Exhibit 2, the percentages of correct answers from female participants are lower than those from male participants for nine out of ten questions. The difference is most evident in the areas of stock valuation, mutual fund performance, business math, and global investing. Panel B shows that the average female participants' scores are lower than those of male participants. The median score of female participants is only 40 compared with 50 for male participants. The mean IQ score for female participants is 42, whereas for male participants it is 49. A median test was performed to determine if the difference is statistically significant. The null hypothesis is that there is no difference in the median

Exhibit 4. Personal Investment Literacy Survey and Testing Results for the Subsamples of Finance/Accounting Majors and Non-Finance/Accounting Majors

Panel A. Number and Percentage of Correct Responses for Each Question

	Risk	Diversi- fication	Financial Advisor Qualif.	Tax Planning	Stock Market Valuation	Business Math	Measurement of Bond Performance	Global Investing	Measurement of Municipal Fund Performance	Impact of Interest Rate Change
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Total Participants of Finance/Accounting Majors: 223										
Number	117	116	121	37	87	130	146	92	144	58
Percentage	52%	52%	54%	17%	39%	58%	65%	41%	65%	26%
Total Participants of Non-Finance/Accounting Majors: 91										
Number	38	53	52	12	27	48	42	38	54	24
Percentage	42%	58%	57%	13%	30%	53%	46%	42%	59%	26%

Panel B. Summary of Statistics of Investment IQ Scores for Individual Participants in Each Subsample

Percentiles of IQ Score	IQ of Participants in Accounting/Finance Majors	IQ of Participants in Non-Accounting/ Finance Majors
10	30	20
20	30	30
30	40	30
40	40	40
50	50	40
60	50	50
70	60	50
80	60	60
90	70	60
100	90	100
Mean IQ Scores for Each Subsample	47	43

A two-tailed median test was conducted to determine the differences of investment literacy between the subsamples. The chi-square statistic is 4.086, which is significant at the 0.05 level.

investment IQ scores of male and female participants, whereas the alternative hypothesis is that there is a difference. The test results indicate that the difference in the IQ scores of male and female participants is statistically significant at the 0.05 level for a two-tailed test. The findings that female students are less knowledgeable about personal investing are consistent with those of previous studies.

The literature has also shown that financial education or the lack of it has a significant impact on one's knowledge about financial basics (Bakken, 1967; Connor, 1992; Hira, 1993; HSR, 1993; Langrehr, 1979; and O'Neill, 1993). This study attempts to provide new evidence about whether a college education in various academic disciplines makes a difference in terms of the participants' level of investment literacy. The sample was partitioned into subsamples of business and non-business majors. It is expected that the former would be more knowledgeable about investment basics than the latter because of additional business training received. The business majors were further split into finance/accounting majors and non-finance/accounting majors. Again, it is expected that the former would perform better than the latter because finance/accounting majors receive more education specifically related to investments. Survey and testing results of business and non-business majors are reported in Exhibit 3 and those of finance/accounting and non-finance/accounting majors in Exhibit 4. On average, business majors have higher IQ scores than those of non-business majors. The median score for the non-business majors is only 40, which is lower than 50 scored by the business majors. The testing results indicate that the difference in the median IQ scores is significant at the 0.02 level. Results in Exhibit 4 indicate that finance/accounting majors scored higher than marketing and management majors. The median IQ score of marketing and management majors is 40, whereas that of finance/accounting majors is 50. The difference is again statistically significant at the 0.05 level. The findings seem to suggest that more education in the field of business, particularly in finance/accounting, would help college students improve their knowledge of investment fundamentals. The findings are consistent with those of Bakken (1967) and Langrehr (1979).

Exhibit 5. Personal Investment Literacy Survey and Testing Results for the Subsamples With and Without Previous Investment Experience

Panel A. Number and Percentage of Correct Responses for Each Question

	<i>1</i> Risk	<i>3</i> Diversification	<i>C</i> Financial Advisor Qualif.	<i>D</i> Tax Planning	<i>E</i> Stock Market Valuation	<i>F</i> Business Math	<i>G</i> Measurement of Bond Performance	<i>H</i> Global Investing	<i>I</i> Measurement of Municipal Fund Performance	<i>J</i> Impact of Interest Rate Change
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Total Participants with Previous Investment Experience: 201										
Number	105	115	123	28	68	105	108	81	112	56
Percentage	52%	57%	61%	14%	34%	52%	54%	40%	56%	28%
Total Participants without Previous Investment Experience: 252										
Number	113	138	146	51	82	132	133	90	141	73
Percentage	45%	55%	58%	20%	33%	52%	53%	36%	56%	29%

Panel B. Summary of Statistics of Investment IQ Scores for Individual Participants in Each Subsample

Percentiles of IQ Scores	IQ Scores of Participants With Investment Exp.	IQ Scores of Participants Without Investment Exp.
10	20	20
20	30	30
30	30	30
40	40	40
50	40	40
60	50	50
70	60	50
80	60	60
90	70	60
100	100	90
Mean IQ Score for Each Subsample	45	44

A two-tailed median test was conducted to determine the differences of investment literacy between the subsamples. The chi-square statistic is 0.068, which is not significant.

This study has also investigated if there are differences in IQ scores among students with different levels of experience in terms of their prior investments and age, which is used as a proxy for experience. Students who made investments in stocks, bonds, and mutual funds

before participating in the survey were classified as having prior investment experience. Otherwise, they were classified as not having experience. Exhibit 5 shows survey and testing results for the two subsamples. The median IQ scores are 40 for both groups, with mean scores of about 44 to 45. To examine the age effect, the sample was partitioned into three age groups: 18-25, 26-35, and above 35. Results are reported in Exhibit 6. Again, there are no differences in their respective IQ scores. Medians of IQ scores among all groups are 40 and the means around 44 to 45. The findings of overall low IQ scores suggest that investment illiteracy exists across all age groups with or without prior investment experience.

A recent survey conducted by *Money* and the Vanguard Group found that 1,467 fund investors they surveyed did not perform well in a 20-question quiz about mutual fund fundamentals (Updegrave, 1996). The average score is 49 out of 100 and only 16% of the participants scored 70. Their findings also suggest that male participants did better than female participants, seasoned fund investors better than the inexperienced, and stock investors better than bond investors. Their conclusion is that most of the surveyed participants need more investment education. Although their sample and survey content differ from our survey, their findings are consistent with ours indicating that people know little about personal investments and they need help to improve their investment literacy. It is interesting to note that about 1,500 people took the same quiz online and achieved significantly higher scores. Their average score is 73 compared to 49 received by the group of 1,476 fund investors. It seems to suggest that people who use Internet and are interested in investment topics know more about mutual fund basics.

Exhibit 6. Personal Investment Literacy Survey and Testing Results for the Subsamples by Participant's Age

<i>Panel A. Number and Percentage of Correct Responses for Each Question</i>										
	Risk	Diversification	Financial Advisor Qualif.	Tax Planning	Stock Market Valuation	Business Math	Measurement of Bond Performance	Global Investing	Measurement of Municipal Fund Performance	Impact of Interest Rate Change
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Total Participants Age 18-25: 252										
Number	113	141	143	45	91	124	139	95	146	66
Percentage	45%	56%	57%	18%	36%	49%	55%	38%	58%	26%
Total Participants Age 26-35: 111										
Number	56	61	65	21	35	65	56	42	59	39
Percentage	50%	55%	59%	19%	32%	59%	50%	38%	53%	35%
Total Participants Over Age 35: 89										
Number	49	50	60	13	24	47	45	33	48	24
Percentage	55%	56%	67%	15%	27%	53%	51%	37%	54%	27%

Panel B. Summary of Statistics of Investment IQ Scores for Individual Participants in Each Subsample

Percentiles of IQ Score	IQ Scores of Participants Age 18-25	IQ Scores of Participants Age 26-35	IQ Scores of Participants Over Age 35
10	20	20	20
20	30	30	30
30	30	40	30
40	40	40	40
50	40	40	40
60	50	50	50
70	50	50	60
80	60	60	60
90	70	70	60
100	90	100	80
Mean IQ Scores for Each Subsample	44	45	44

A two-tailed median test was conducted to determine the differences of investment literacy between the subsamples. The chi-square statistic is 0.545, which is not significant.

III. Conclusion

The objectives of this study are to assess college students' knowledge of personal investment and the relationship between investment literacy and gender, academic discipline, and experience. The results suggest that college students have inadequate knowledge of personal investment basics. The problem cuts across a broad spectrum of the participating students with women and non-business majors earning the lowest scores. The findings suggest that the investment illiteracy among college students must be addressed.

Caution should be exercised when generalizing the results because the sample was drawn from one university. Although many important topics of personal investments are covered in the questionnaire and we have achieved modest objectives of detecting investment illiteracy among college students, more questions may help to provide additional information. In spite of the limitations, the study is the first to examine college students' personal investment literacy and provides evidence that an investment illiteracy problem exists. Future studies may use ours as a basis for extending work to gain a better understanding of Americans' knowledge, attitudes, and behavior in personal investment. Further research should also be done on how investor education, especially those offered by companies and plan sponsors to retirement participants, improve their knowledge and investment performance. ■

References

- Anand, Vineeta, 1994, "DOL, SEC to Study 401(k) Education Efforts," *Pensions and Investments*, (May 30), 24.
- Bakken, Melvin R., 1967, "Money Management Understandings of Tenth Grade Students," *National Business Education Quarterly*, 36, 6.
- Bernstein, Nancy, 1992, "Investment Education: A Winning Strategy for 401(k) Plans," *Corporate Controller*, (May/June), 53-56.
- Brenner, Lynn, 1996, "Crossing the Line: Despite Liability Concerns, the Line Between 401(k) Investment Education and Advice is Blurring Daily," *CFO*, (October), 61-74.
- Cambridge Human Resource Group Inc. (CHRG), 1995, *Latest Workplace Issues Survey*, Chicago, IL.
- Christine, Brian, 1992, "Helping Direct Self-Directed Plans," *Risk Management*, (September), 78, 80.
- Connor, Jeff, 1992, "Financial Education for Consumers," *Credit World*, (January/February), 21-24.
- Consumer Federation of America and American Express Company (CFA/AMEX), 1991, *Student Consumer Knowledge: Results of a National Test*, Washington, D.C.
- Danes, Sharon M., and Tahira K. Hira, 1987, "Money Management Knowledge of College Students," *The Journal of Student Financial Aid*, 17:1 (Winter), 4-16.
- Fuentes, Joseph J., 1992, "How Adolph Coors Helps Employees with Retirement Planning," *Journal of Compensation and Benefits*, (July/August), 56-58.
- Genasci, Lisa, 1995, "Woman and Retirement: An Unpleasant Surprise: You're Retired and Broke," *The Vindicator*, (September 18), B5.
- Harris/Scholastic Research (HSR), 1993, *Liberty Financial Young Investor Survey*, New York, NY.
- Hira, Tahira, 1993, "Financial Management Knowledge and Practices: Implications for Financial Health," presented at the Personal Economic Summit '93, Washington, D.C.
- The Institute of Certified Financial Planners (ICFP), 1993, *'Financial Illiteracy' Plagues Americans*, (Survey Report), Denver, CO.
- Knapp, Richard J., 1991, "Win-Win Educating Employees about Investments," *Financial Executive*, (September/October), 47-50.
- Langrehr, Frederick W., 1979, "Consumer Education: Does It Change Students' Competencies and Attitudes?" *The Journal of Consumer Affairs*, 13, 41-53.
- Lewin, Tamar, 1995, "Income Gap For Sexes Is Seen Wider In Retirement," *The New York Times*, (April 20), A19.
- Martinez, Michelle Neely, 1994, "Why Women Should Save and Plan More," *HRMagazine* (November), 104-5.
- Money Forecast Issue, 1993, "What's Your Investing IQ?" *Money*, 71.
- National Assessment of Educational Progress (NAEP), 1979, *Teenage Consumers: A Profile*, Denver, CO.
- National Endowment for Financial Education (NEFE), 1993, 1994, and 1995, *CFP Survey of Trends in Financial Planning*, Denver, CO.
- O'Neill, Barbara, 1993, "Assessing America's Financial IQ: Reality, Consequences, and Potential for Change," presented at the Personal Economic Summit '93, Washington, D.C.
- Philip, Christine and Mercedes M. Cardona, 1994, "Education Is Major DC Plan Challenge," *Pension and Investments*, (February 7), 4, 38.
- Schultz, Ellen E., 1995, "Frittered Away: Offered A Lump Sum Many Retirees Blow It and Risk Their Future," *The Wall Street Journal* (July 31), A1, A5.
- Schultz, Ellen E., 1992, "Passing the Buck: In New Pension Plans, Companies are Putting the Onus on Workers," *The Wall Street Journal* (July 7), A1, A5.
- Simon, Ruth., 1992, "The Broken Promise of Financial Planning," *Money* (November), 133-149.
- Spiro, Leah Nathans and Michael Schroeder, 1995, "Can You Trust Your Broker?" *Business Week* (February 20), 70-76.
- Updegrave, Walter L., 1996, "Fund Investors Need to Go Back to School," *Money* (February), 98-100.
- Willettee, Anne, 1995, "Payouts Aren't Being Invested for Retirement," *USA Today*, (September 11, 1995), B1-2.
- Winn, Donna, 1992, "Saving and Hoping: Education Critical in Planning Process," *Pension World*, (April), 31-32.
- Wysocki, Bernard, Jr., 1995, "Binge Buyers: Many Baby Boomers Save Little, May Run into Trouble Later On," *The Wall Street Journal*, (June 5), A1.

Appendix 1. What's your investing IQ?

To measure your investment IQ, take this quiz, developed with the help of John Markese, president of the American Association of Individual Investors in Chicago. Anyone who keeps up with financial matters regularly should have no trouble fielding most of these queries. Score 10 points for each correct answer, explained below.

1. You can't lose money investing in a U.S. Treasury bond, because it is backed by the United States Government.
True or false?
 - a) lost money
 - b) made money
 - c) broken even
2. Investing in a mutual fund that holds a diversified portfolio of stocks protects your investment against market declines.
True or false?
 - a) current yield
 - b) yield to maturity
 - c) yield to call
3. If a financial planner's business card says that he or she is a Registered Investment Adviser, the planner
 - a) meets rigorous standards set by the SEC
 - b) is recommended by the SEC
 - c) has simply paid a \$150 registration fee to the SEC
4. You're considering investing in a mutual fund expected to distribute \$1 a share in dividends. You should
 - a) buy now so you'll get the distribution
 - b) buy after the distribution is paid
 - c) buy either way, because it doesn't matter
5. Let's say the price/earnings ratio on Standard & Poor's 500-stock index is 23 and its dividend yield is 2.5%. This means that the stock market is relatively
 - a) undervalued by historical standards
 - b) overvalued
 - c) fairly valued
6. You invested \$1,000 in a stock two years ago. The stock's trading price declined 40% the first year and rose
 - a) 40% the next. As a result, you've
 - b) 40% the next. As a result, you've
 - c) 40% the next. As a result, you've
7. A broker recommends a municipal bond that matures in 1999 but is likely to be called, or redeemed, as early as 1994. The best gauge of your expected return is its
 - a) current yield
 - b) yield to maturity
 - c) yield to call
8. You own shares in the Germany Fund. The value of your fund's investment in U.S. dollars would be higher if
 - a) the dollar weakens against the Deutsche mark
 - b) the dollar strengthens against it
 - c) neither; a change in the dollar's value doesn't matter in this case
9. The figure that best reflects a mutual fund's performance over a period of years is
 - a) its current yield
 - b) the total of dividends and capital gains it has paid
 - c) its total return
10. If interest rates climb one percentage point, which of these securities would be hurt the *least*?
 - a) a 20-year zero-coupon bond
 - b) a 20-year bond selling at its face value
 - c) a 20-year bond selling at a premium above its face value

Answers: 1). False 2). False 3). C 4). B 5). B 6). A 7). C 8). A 9). C 10). C

SCORING: 100: Congratulations! You could be the next Peter Lynch. **70-90:** You've mastered the basics. **50-60:** Bone up before making any big investments. **40 or lower:** It's time to start educating yourself about investing. In the meantime, don't take any unsolicited calls from brokers.

Reprinted from the *Money* Forecast 1993 Issue by permission; copyright 1992, Time Inc.

Copyright of Financial Practice & Education is the property of Financial Management Association. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.