Personal Financial Ratios: An Elegant Road Map to Financial Health and Retirement

by Charles J. Farrell, J.D., LL.M.

Executive Summary

- Investors commonly use stock ratios such as the price to earnings, price to book, and dividend yield to assess the financial health of a company because the ratios concisely benchmark a company's financial status.
- Clients and their financial advisors have no comparable ratios that would allow investors to conduct a similar analysis of their personal financial circumstances. This article establishes a set of personal financial ratios that individuals can use to analyze their financial standing. Just as stock ratios are primarily based on a company's earnings, the personal financial ratios are based on an individual's income. There are three ratios: savings to income, debt to income, and savings rate to income.
- The ratios are derived from a series of assumptions including household budgets, post-retirement income replacement, rates of return, and retirement distribution rates.
- The ratios are designed to serve as a road map so that investors can compare their individual ratios against the benchmarks to determine whether they are on track to retire by age 65. The ratios serve as a practical tool for advisors to help convey to their clients the fundamental relationship between one's income, debt, and savings rate, and how those relationships must change over time.

Charles J. Farrell, J.D., LL.M., is a partner in the financial consulting firm of Dorman Farrell LLC, in Medina, Ohio, and provides financial consulting services to individuals and corporations on retirement asset management and insurance planning. He is a registered representative of Commonwealth Financial Network, Member NASD/SIPC.

Investors commonly use stock ratios such as price to earnings, price to book, and dividend yield to assess the financial health of a company. The reasons the ratios are so widely used are because they convey a great deal of information in a concise format and allow investors to benchmark a company's financial status. When it comes to assessing the financial health of individuals, however, there are no comparable ratios that would allow investors to conduct a similar analysis of their personal financial circumstances. This article establishes a set of personal financial ratios that individuals can use to analyze their financial standing.

Just as stock ratios are primarily based on a company's earnings, the personal financial ratios are based on an individual's income. There are three ratios: savings to income (S/I), debt to income (D/I), and savings rate to income (SR/I). Benchmarks are then created for each ratio at different ages. For example, the D/I ratio is generally much different at age 30 than it is at age 60. The objective of the ratios is to help individuals move from a situation of having high debt and low savings at the beginning of their working careers, to one where they have high savings and no debt at the end of their working careers. The ratios are designed to serve as a road map so that investors can compare their individual ratios with the benchmarks to determine whether they are on track to retire by age 65, or any other desired retirement age.

The theoretical foundation for the ratios is that there is a fundamental relationship between income, debt levels, and saving rates. One affects the other, and investors need to get their finances in proper balance. While advisors may already address the assumptions about savings rates, debt, and income in their planning or in the planning software they use, the ratios are unique because they express these relationships in a concise format. The ratios are incorporated into one, simple table that covers a chosen time frame, such as from age 30 to 65. The assumptions used to develop the benchmarks may be complex, but the output is clear. This allows advisors to quickly benchmark their clients' finances in a format that is easy for clients to understand. The more investors understand these fundamental relationships, the more likely it is they will make good financial decisions. As financial professionals, it is our job to help design tools to convey the importance of these concepts. Ideally,

these personal financial ratios will provide a good start.

Just as stock ratios do not tell the entire story of a company's finances, personal financial ratios have limitations as well. They are not meant to substitute for individual advice or account for all of the specific variations in people's financial lives. But they can serve as an important tool, a guideline, to help convey to individuals how their income, savings, and debt are related, and how those ratios must change over time.

Table 1 shows a sample set of personal financial ratios for an individual from age 30 to retirement at age 65. The primary objective of the ratios is to help the person reach age 65 with no debt, and savings worth 12 times their salary. Why 12 times salary versus, say, 10 or 15 times? This ratio would put the individual in a position to generate approximately 60 percent of his or her pre-retirement income from savings. For example, a 65-year-old with $100,000 of pre-retirement household income would ideally have $1.2 million in savings. At a hypothetical 5 percent distribution rate, that would produce approximately $60,000 of income. Add the person's Social Security benefit of approximately $20,000, and the individual has an income that is 80 percent of his or her pre-retirement income.

TABLE 1

Personal Financial Ratios Assuming 5 Percent Return, 5 Percent Distribution Rates

Age	Savings to Income	Debt to Income	Savings Rate to Income
30	0.1	1.70	12%
35	0.9	1.50	12%
40	1.7	1.25	12%
45	3.0	1.00	12%
50	4.5	0.75	12%
55	6.5	0.50	12%
60	8.8	0.20	12%
65	12.0	0.00	12%

As is explained in more detail later in the article, personal financial ratios, as illustrated in Table 1, are based on specific assumptions, including household budgets, percentage of post-retirement income replacement, rates of return, and retirement distribution rates. Alter the assumptions and the ratios change. Just as advisors may debate the proper P/E ratio for a company, advisors will differ on the proper assumptions for determining rates of return, debt levels, and distribution rates. But the fundamental purpose of the ratios is to provide a quick financial assessment of the progress an individual is making toward his or her target retirement date under certain stated assumptions deemed reasonable by the advisor.

Calculating the Ratios

For purposes of calculating the ratios, I use the following definitions:

Savings. Savings include the current value of one's investments, such as a 401(k), profit sharing, individual retirement accounts and brokerage accounts, the fair market value of investment real estate, and the value of any private business interests. The home is excluded as an investment (for retirement purposes) because people need a place to live. Moreover, few people downsize in price during their retirement years; consequently the equity in one's home is not generally available for retirement income. If an investor wants to include a portion of his or her home equity as retirement savings, the investor needs to be committed to selling and moving to a cheaper home in their retirement years or using a reverse mortgage.

Debt. Debt comprises all debt, including mortgage, student loans, car, and consumer debt. The financial obligations under any auto leases also are included as debt. For example, if an individual leased a $25,000 car for three years and the payments are $350 a month, the lease is a $12,600 obligation.

Savings rate. This refers to the percentage of pre-tax income an investor is saving each year out of his or her total income. Savings include any amount contributed to a 401(k), IRA, or other investment account, plus the value of any vested employer contribution into one's retirement account. For example, if the individual contributed 8 percent of pay to a 401(k) and received a 4 percent company match, the individual's savings rate would be 12 percent. The savings rate does not include dividends, interest, or capital gains on current investment holdings. The gains on investment holdings are incorporated into the account growth assumptions discussed later.

Individuals can use the table by looking up their age and the corresponding ratios. For example, a 45-year-old should (under the stated assumptions) have accumulated investments worth three times his annual salary, have debt of no more than one times salary, and be saving 12 percent of pay. An individual with these ratios at age 45 would be on track to retire by age 65, assuming he continues to save 12 percent of pay and achieves a 5 percent real rate of return on his investments. Similarly, a 50-year-old ideally should have savings worth 4.5 times current wages, and debt of no more than 0.75 of current wages. By consulting the table, an individual can determine if he is on or off track, and which items the individual may need to improve upon.

TABLE 2

Ratios and Benchmarks for Age 45 Individual

Age 45	Savings to Income	Debt to Income	Savings Rate to Income
Client Ratios	2.36	1.36	11.8%
Benchmarks	3.0	1.0	12%

The ratios are based on the total household income, debt, and savings rate, which means the ratios can be used by a single head of household or a married couple. In a married household, if only one spouse works, then the age of the working spouse is used for purposes of the benchmarks. If both spouses work and there is less than a five-year age difference, then a simple averaging of their ages is used. This is reasonable because both spouses are likely to retire within a few years of each other. If there is an age difference of more than five years and both spouses work, then each spouse should run his or her own ratios based on the spouse's age and income and one-half of the total household savings and debt. Running the ratios separately is helpful when there is a large age difference because one spouse may retire more than five years earlier than the other spouse, which means there is less household income available for savings and debt reduction.

The table begins at age 30 because before that age, most individuals are still in school (college or graduate), getting married, having children, or all of the above. Most people cannot seriously start saving for retirement until at or around age 30. Over the next 35 years, however, the individual must move from having a small amount of savings compared with his or her income to having a large amount of savings compared with income.

The ratios are designed to reasonably move people through various financial stages of their lives. I use a constant savings rate of 12 percent every year for the entire 35 years. To save at 12 percent of pay, the individual needs to keep his or her debt level in check at an early age. Too much debt will reduce the individual's discretionary cash flow and inevitably reduce the savings rate. The debt levels have been developed from hypothetical budgets that are designed to provide the family with enough cash flow to save at 12 percent.

If the individual falls behind in the savings rate and does not start to seriously save until age 40 or 45, then the savings percentage must increase dramatically. For example, if an investor saved only 5 percent of pay from age

30 to 39, he would have an S/I ratio of 0.8 at age 40. This means the savings rate will need to increase to 18 percent for every year thereafter to reach an S/I ratio of 12 at age 65. A savings rate of 18 percent is difficult for all but a few investors. Therefore, it is important for individuals to get their financial ratios in order at a young age, or they may find that they do not have enough time or income to rectify the situation.

If investors wait longer to begin accumulating significant savings, then the risk of poor market performance becomes a larger threat to their financial security. By accumulating the capital early, the investor is increasing the odds that he will experience positive long-term portfolio returns. If the investor waits until age 50 to start aggressively saving and the markets suffer from a decade of poor returns, he or she is unlikely to achieve their savings goals. By shortening the time horizon, the investor is relying on many things going right over that time period, which is dangerous in the financial markets.

A Hypothetical Example

Let's take a look at a hypothetical 45-year-old individual to see how he might use the ratios to assess his financial circumstances. This person has the following financial statistics:

Salary $110,000
Mortgage $125,000
Auto Loan $25,000
Investments $260,000
Annual Savings $10,000
Employer 401(k) Match $3,000

Based on these statistics, the hypothetical individual ratios are as follows:

Savings to Earnings: $260,000 / $110,000 = 2.36
Debt to Earnings: ($125,000 + $25,000) / $110,000 = 1.36
Savings Rate to Earnings: ($10,000 + $3,000) / $110,000 = 11.8 %

Now we can plug the individual's ratios into Table 1 and compare his ratios to the benchmarks for a 45-year-old.

The individual can quickly see that his savings are low for his age and his debt is too high. His current savings rate is appropriate, but he will need to save more in the future to make up for his low total savings now. He must also focus on paying down his debt. Is this information useful? It certainly is, because it will help the individual make more informed decisions. Assume that the hypothetical individual is considering whether to buy a new home. Many people trade up to a larger home in their mid-forties without critically analyzing their financial status as it relates to their retirement. A mortgage lender would certainly qualify this person for much more debt, which may lead the person to believe that he can afford the bigger home. But if he were to run the ratios, he might make the decision to dedicate his additional cash flow to his retirement plan and paying down his current debt.

Assumptions Behind the Ratios

Assumptions. Several assumptions underlie the ratios, and the assumptions are discussed in more detail later. First, I assume a 5 percent real rate of return on an individual's savings. By using a 5 percent real rate of return, an individual is required to save 12 percent of pay each year over the 35-year time horizon between ages 30 and 65 to accumulate total savings worth 12 times pay at age 65. As advisors may differ on the return assumptions, the ratios can be modified for higher or lower return figures. A higher return assumption will lower the savings rate and a lower return assumption will increase the required savings rate.

Second, as mentioned earlier, the ratios assume a 5 percent portfolio distribution rate in retirement. At a 5

percent distribution rate on savings worth 12 times final pay, the individual is in a position to generate a retirement income that is approximately 60 percent of his pre-retirement income. Add a Social Security benefit of approximately 20 percent, and this individual should have a retirement income that is 80 percent of his pre-retirement level. Third, I developed detailed household budgets to arrive at the appropriate debt levels so that there is enough cash flow to allow an investor to save 12 percent of pay at age 30.

As mentioned previously, advisors will differ on what the proper assumptions should be. My objective was to use assumptions that had a solid historical basis. As I explain below, I believe each of the financial assumptions is reasonable given the historical performance of the financial markets. I have also included a sample budget to address the debt levels. I expect many individuals might feel the debt levels are too low, but the budgets support these debt levels. The bottom line is that most households carry too much debt, which is why the average savings rate is less than 1 percent. It is hard to escape the numbers.

Five percent real rate of return. Many financial analysts believe that the United States and global economies are facing the prospects of lower rates of return for the next decade or two. I also believe there is a high probability that the current markets will experience lower rates of return. If the ratios were simply based on a ten-year time horizon starting today, then I would have to drop the real rate of return to 3.5 percent or 4 percent. But the table is designed as a savings, debt, and investment road map for a 35-year cycle, starting at age 30. Therefore, the question is, for purposes of the 35-year time horizon, is a 5 percent real rate of return reasonable? I believe it is.

Jeremy Siegel, the noted professor of finance from the Wharton School of the University of Pennsylvania and author of *Stocks for the Long Run* and *The Future for Investors*, has calculated the long-term real return for equities since 1821 at 6.5 percent to 7.0 percent.1 He notes that the 6.5 percent to 7.0 percent figure is remarkably consistent for long-term investment cycles over the 180-year time horizon.

Moreover, Ibbotson Associates calculated the annualized return on a 70 percent stock and 30 percent bond portfolio from 1926 through 2004 to be 9.4 percent.2 When you net out inflation over that period of 3.0 percent, you have slightly more than a 6 percent real rate of return. This time frame, of course, includes the Great Depression and the bull market of the 1990s. Certainly, future decades will be above and below the 5 percent real return figure, but it is a reasonable assumption for a 35-year investment cycle. Furthermore, in its probabilistic forecasting data for the next 20-year cycle, Ibbotson predicts equity returns of 10.24 percent at the 50 percentile and returns of 7.29 percent at the 25th percentile.3 Market forecasting is a difficult business, but we are forced to make certain assumptions about the future. I believe the 5 percent long-term real rate of return is reasonable.

Initial Distribution Rate

The ratios also assume a 5 percent initial distribution rate in retirement. The initial distribution would then be adjusted each year for inflation. Is this rate reasonable? I believe it is. Today, many advisors argue that investors should distribute only 4 percent to 4.5 percent of their portfolios. I agree that a 4 percent distribution rate is appropriate right now. But we are in a period of historically low interest rates and historically high equity valuations. This cycle is not the norm or most likely scenario. It is unfortunate for those retiring today, but it is unlikely to stay like this forever. A newly retired individual in 2005 faces a 20- to 30-year retirement investment cycle. It is likely that there will be many years that support a rate above 4 percent; we just don't know when they might occur.

If one studies historical market returns and portfolio distribution failure rates, it is clear that distribution rates will vary significantly depending on market conditions. Some cycles can support a 7 percent rate and others only a 4 percent rate. The 5 percent assumption is reasonable given what we know about historical market trends. The 1999 study by professors Cooley, Hubbard, and Walz at Trinity University in San Antonio, Texas, provides a

detailed study of portfolio failure rates for rolling 30-year historical periods between 1926 and 1997.4 Their research determined that at a 5 percent inflation-adjusted distribution rate, the portfolio would last for a 30-year retirement cycle between 70 percent and 86 percent of the time. The difference in success rates is the result of different equity allocations between 50 percent and 100 percent of the retirement portfolio. I have also recreated every 10-, 15-, 20-, and 30-year retirement cycle since 1926 using Ibbotson large company stock and intermediate-term bond data. I also found similar failure and success rates at a 5 percent inflation-adjusted distribution. Investors will need to address the financial markets as they find them when they retire. For the majority, a 5 percent distribution is a likely scenario. For some, they may be required to live on less.

What if you believe the rate of return and the distribution rate should be lower than 5 percent? Table 3 uses a 4 percent real rate of return and a 4 percent distribution rate in retirement. At a 4 percent distribution, an investor needs savings equal to 15 times his or her wages to produce a retirement income stream of 60 percent of their pre-retirement level. The increased S/I ratio, plus the reduced assumption for investment returns, push the savings rate to 19 percent of pay.

TABLE 3

Personal Financial Ratios Assuming 4 Percent Return, 4 Percent Distribution Rates

Age	Savings to Income	Debt to Income	Savings Rate to Income
30	0.1	1.70	19%
35	1.2	1.50	19%
40	2.5	1.25	19%
45	4.1	1.00	19%
50	6.1	0.75	19%
55	8.5	0.50	19%
60	11.4	0.20	19%
65	15.0	0.00	19%

If one believes that a 4 percent real return and a 4 percent distribution rate are more realistic, then the ratios shown in Table 3 could be used. I believe these assumptions create ratios that most individuals would find difficult to achieve. Not only would an individual have to save 19 percent of pay, they would also have to consider reducing their debt load to accommodate the higher savings rate. While it is possible to experience only a 4 percent real rate of return and also retire during an economic cycle that would only support a 4 percent distribution, I think it is less probable than the 5 percent/5 percent assumptions. For a 30-year-old today, this person is facing a 60- to 65-year investment cycle—35 years before retirement and 30 years in retirement. This time frame is long enough to use assumptions that are closer to our historical norms.

Households or advisors may design their own tables using whatever assumptions they believe are reasonable. The foundational theory for the ratio table, however, would remain constant, which is that there is a fundamental relationship between one's earnings, debt, and savings rate, and these ratios must change over time.

For example, an advisor may believe that a 6 percent real return is more appropriate. At a 6 percent return, the savings rate would decline to 9.5 percent. This would then permit the individual to carry a slightly higher debt level because of the lower required savings. The S/I ratio would also change as an assumed higher rate of return would lower the S/I ratio in the early years. At age 50 using a 6 percent real return (and a 5 percent retirement distribution), the individual should have an S/I ratio of 4.0, compared with 4.5 using a 5 percent real return assumption.

Conversely, an advisor may believe that a 4 percent real return is more appropriate. By lowering the assumed

return, the savings rate climbs to approximately 15 percent. This then arguably lowers the acceptable debt level because more household cash flow must be dedicated to savings. A lower assumed rate of return also increases the S/I ratio at an earlier age because the individual must accumulate more capital to offset the lower return assumption. At a 4 percent return assumption, the S/I at age 50 must be approximately 4.9, compared with 4.5 using a 5 percent return. If an advisor uses a 4 percent real return, then the advisor will likely have to reduce the retirement distribution rate to 4 percent, which drives the numbers even higher, as previously illustrated in the 4 percent/4 percent table.

The ratios also can be customized to illustrate retirement dates other than 65. For example, if an individual wanted to target age 60, the savings rate would jump to 16.5 percent, assuming a 5 percent real return and a 5 percent distribution, and the S/I would need to be 6.0 at age 50. The individual would then need to create a household budget to allow him to save 16.5 percent of pay, which likely means he must carry a much lower debt burden while younger. Alternatively, an age-70 date could be used, which drops the savings rate to 9 percent, and the S/I falls to 3.4 at age 50, assuming the 5 percent real return and 5 percent distribution. The main point is that the ratios are flexible and can be designed using the financial assumptions each advisor believes are reasonable and the objectives of each particular client.

Debt Ratios

As for the establishment of the debt figures, the debt ratio at age 30 is based on an analysis of a hypothetical family household. For purposes of the hypothetical family, I have assumed a spouse, two children, total income of $100,000, and a savings rate of $12,000. I then calculate a basic budget from the individual's after-tax income, taking into account many of the typical expenses a family might incur. The debt ratio is designed to allow the investor to save at a rate of 12 percent while still living a typical suburban lifestyle. The debt ratios then decline over time following a typical amortization schedule, since the largest debt is often the mortgage debt. Auto debt is also included in the declining debt ratios. With the average car costing $25,000, it is important to reduce the auto debt to the minimum needed for family transportation. Families that take on significant auto debt or leases can increase their total monthly debt payments by 30 percent to 50 percent. It is not uncommon to see clients with auto payments of $800 to $900 a month for two cars, which can significantly reduce the funds available for retirement savings.

In the hypothetical family budget, the family has mortgage debt of $145,000 and auto debt of $25,000. This puts the total debt load at about $170,000, or 1.70 times income, which is the maximum recommended debt level at age 30. Some individuals and advisors may believe these debt levels are too low and do not reflect the debt that most families are carrying. The purpose of the ratios is not to illustrate how much debt people *are* carrying, but to illustrate how much debt they *should be* carrying. If a family carries a debt load higher than 1.7 times salary at age 30, it will be very difficult for that family to save 12 percent of pay. If they cannot save 12 percent of pay starting at age 30, then (as previously discussed), the savings rate will increase substantially later in life, which may not be possible to achieve.

The debt levels also assume that the 12 percent retirement savings contribution is coming from the individual's salary. If an individual receives a company contribution into his or her 401(k) or profit-sharing plan, those funds can be subtracted from the family's savings goal and allocated to other expenses. With the decline of defined-benefit pension plans, however, many employees will need to provide the funding for the majority of their retirement savings.

As you can see in Table 4, there is not much room left in the family budget once an individual accounts for typical family expenses. Moreover, the budget excludes any college savings or child-care expenses. With only $289 left, it is hard to argue that this family could support a higher debt load. If, for example, the family is required to incur child-care expenses, then they may need to reduce expenses for vacations, entertainment or other non essentials until the kids are older and out of child care. The point is that the family needs to be operating the household to allow for a 12 percent savings rate (including any employer contributions).

TABLE 4

Estimated Household Budget, $100,000, 2 Children

Annual Wages	$100,000
401(k)	$12,000
Effective Tax Rate (Federal, State, FICA)	21.00%
Monthly Net Income	$5,793
Mortgage Debt	$145,000
Term	30
Interest Rate	6.00%
Estimated Monthly Expenses	
Mortgage Payment	$869
Real Estate Taxes	$250
Gas	$125
Electric	$125
Phone	$40
Cable	$65
Internet	$40
Cell Phone	$50
House Insurance	$50
Car Insurance	$130
Life Insurance	$70
Disability Insurance	$60
Health Insurance (Monthly Contribution)	$250
Medical and Dental Expenses	$60
Groceries	$550
Car Payments (2)	$525
Automobile Gas	$110
Work Parking	$150
Work Lunch/Incidentals	$150
Household Items	$225
Clothes	$225
Household Maintenance Repairs	$250
Entertainment	$500
Children's Tuition (Private School)	$0
College Savings for 2 Children	$0
Child Care	$0
Charity	$100
Pet Expenses	$50
Dry Cleaning	$50
Personal Care (Haircut, etc.)	$60
Vacations (Prorated Monthly)	$250
Gifts	$125
Total Expenses	$5,504
Net Income/Loss	$289

I have found that many households underestimate expenses such as entertainment, vacations, personal care, employment-related costs, gifts, health, and dental expenses, household purchases, and the many other monthly costs that drain a family's budget. For some expenses, I have taken the annual cost, such as vacations, and

expressed them as a monthly budget item. While one could argue about the appropriateness of each expense, the bottom line is that most families incur these listed expenses. Some may spend more than others on any given line item, but they generally spend something on each item. Failing to account for these expenses is why many families find it difficult to save at 12 percent of pay. At the end of the month, the money just is not there.

If an individual pushes his or her debt levels to 2.5 or 3.0 times pay, it is unlikely the family will have the cash flow to save 12 percent of pay. One could try to rationalize a higher debt load by claiming the family won't spend money on entertainment, vacations, gifts, clothes, and so on. Yet we know that few people are willing to severely restrict their quality of life in order to accommodate their mortgage and retirement goals. Besides, it is difficult for a family to cut back on certain items, such as health care, insurance, food, and taxes. At an income of $100,000, a debt load of $250,000 would consume about 18–20 percent of pay. Under the above example, the family budget would be in the red by $340 a month as a result of the increased debt obligation. As household income rises, a family could carry a slightly higher debt level and still achieve its savings goals of 12 percent. This is because certain costs such as health care, food, and clothing consume more of the family budget at the $100,000 level than they will at the $250,000 level. Since less than 3 percent of households have incomes above $250,000, most families will need to stick close to the debt levels used in the chart.

What often happens is households spend the money on their current lifestyle and leave little for their savings. In some regions of the country, people may find that the debt levels are not achievable given the average cost of housing. This may be true, but it is also why many people cannot afford to sufficiently save for retirement. As financial advisors, there is little we can do about the cost of housing, but we can help clients understand how housing costs may affect their financial security.

Home Equity and Retirement Savings

Many households would like to include the equity in their homes as part of their total retirement savings. One could argue that including some of the equity is reasonable, but how much is the question. The only practical way to extract the equity is to move to a less expensive home. That would require retirees to substantially change their lifestyles by moving to a significantly smaller home in the same area, or moving to a less expensive region of the country. Many people live in certain parts of the country because they have family close by or enjoy the culture of the area. It would be a big change to pack up and move to an entirely new location a substantial distance from one's current home. Households would need to be confident that they are disciplined enough to make that move.

Further, to include the equity in the home, the individual must plan on paying down the debt by the time he or she retires. For example, assume a 65-year-old owns an $800,000 house in California, with a $500,000 mortgage. There is $300,000 of equity in the home. Even if he moves to a lower-cost region of the country, a new home is likely to cost $250,000 or more. Now, all the equity has been transferred to the new home and the person still has no additional retirement savings.

The person would need to be sufficiently disciplined to pay off the $800,000 house by age 65, sell the home, buy a new home for $300,000 or less, and invest the $500,000 of capital gains. If households want to include a portion of their home equity, they should do so cautiously, with the full understanding of what steps need to be taken to access the equity. They could turn to reverse mortgages, but that should be a last resort. That equity may be needed for long-term care or other unexpected expenses.

In summary, the personal financial ratios are an important tool for the financial services industry. They simplify complex calculations and present the material to clients in a format that can be easily understood. The ratios also provide households with a practical tool for analyzing their personal finances and the progress they are making toward financial independence.

Endnotes

1. Jeremy Siegel, *The Future for Investors: Why the Tried and True Triumph Over the Bold and New* (New York: Crown Business, 1st edition, 2005): 171; Siegel, Stocks for the Long Run (New York: McGraw-Hill Companies, 2nd edition, 1998): 79.
2. Ibbotson Stocks, Bonds, Bills, and Inflation 2005 Yearbook, Ibbotson Associates, 54.
3. Ibbotson Associates, 173.
4. Financial Counseling and Planning, 10, 1 (1999).

Web Sites

- www.ibbotson.com
- www.jeremysiegel.com