Clueless: What Graduates Need to Know About Making Financial Decisions

By Tom L. Potts and William Reichenstein

Today's college graduates are usually enthusiastic and well-trained in their discipline.

But they are often clueless about financial matters.

Unfortunately, the fallback position is typically to do nothing. But these early-year "non-decisions" can have a detrimental effect on their financial well being throughout their working lives, and especially in retirement. If only they had known how important it is to make good decisions in these early-year financial matters!

This article is aimed directly at the younger generation, and it designed to help them avoid such financial mistakes.

A Tale of Two Graduates

Let's start with a simple story of two young people just entering the workforce. Although the names and details are fictional, the decisions they make and their consequences are typical of the youth of every generation.

Let's start with Todd. It is the best of times for Todd. He graduates from college at age 22 and is anxious to begin his career and show the world that he has arrived. His first job pays $40,000. He rents a quality apartment in a popular area. Although he has some furniture from his college apartment, he buys mostly new furniture with his credit card. He also buys a new Camry, which he finances with a 60-month loan. Although his old car has years of useful life in it, it would not show the world that he has arrived. In a typical workday, he charges $20 for Starbuck's coffee, a bagel, and his lunch. In addition, he eats dinner out about four days a week. Although his firm matches 401(k) contributions up to 6% of salary, he forgoes this opportunity, while promising himself that he will begin saving at the first opportunity. [A later section explains the terms: 401(k) and matching contributions.]

Now let's turn to Sylvia. Sylvia also graduates from college at age 22 and takes her first job with a salary of $40,000. Although she would like a new car, she decides that her five-year old sedan has several years of useful life in it. Budgeting for unanticipated expenses, she rents a cute but modest apartment in a middle-class neighborhood. She begins saving 6% of her salary in the firm's 401(k) plan to attain the firm's 6% matching contribution. In addition, she decides to increase the percentage of her salary that she will save by 1% each year until she will be saving 10% beginning her fifth year. Since the savings increases will coincide with her annual salary increase, she will be allocating part of each salary increase to savings, while enjoying the fruits of the remainder. Sylvia makes a sack lunch four days a week and treats herself to lunch once a week. In addition, she occasionally skips a prepared lunch to join friends for lunch. She tries to limit her restaurant outings to about once a week. Although she has a credit card, she pays the balance each month.

Now let's look down the financial road at these two individuals, assuming that they continue to make their financial decisions based on these patterns of behavior.

At five years past graduation, Sylvia has no credit card

debt, but she has one year remaining on the loan of a new car she bought two years earlier. She is now saving 10% of her salary (which has increased over the years) in the 401(k) plan. She has also started to save $150 a month for a down payment on a house. The 401(k) funds are invested in stocks earning 10% and the savings for the down payment are invested in short-term bonds earning 4%. At 27, she has more than $40,000 in the 401(k) plan and about $3,750 saved for the house down payment.

At eight years past graduation, part of Sylvia's salary increases have gone toward more retirement savings (she is now contributing 15% of her salary each year) and more house savings. She has no credit card debt, has amassed over $93,000 in her 401(k) plan, and has already bought her first home (and her good credit ratings meant she qualified for a lower mortgage rate on the home purchase). Excluding the values of her car and household possessions, her net worth is over $113,000.

Todd, however, has taken a far different financial route. At five years past graduation, he has postponed his plan to begin contributing to his firm's 401(k) plan because of other purchases he wanted to make, and he now has credit card debt of $30,000. His net worth is negative. Yet he continues to spend. Salary increases due to promotions go toward higher-rent apartments, more expensive cars (which he leases) and other "rewards" to himself. In addition, he decides to "invest" $3,000 in a "hot" penny stock on which he received a tip.

At eight years past graduation, Todd has yet to begin saving for retirement. Moreover, the prospects for him beginning a savings program are not good since most of his take-home pay is already committed for payments on apartment rent, car lease, a new boat and the minimum monthly payment on his credit card debt. He has $30,000 in credit card debt and owes $10,000 on his new sailboat, plus he still owes three years of car lease payments, which is like a debt obligation. If we exclude the values of his sailboat and household possessions, his only asset is the penny stock, which is now worth only $1,000. His net worth is negative—substantially negative.

The story will not end here. These saving and spending patterns will likely continue for the rest of their lives, or until Todd is forced to change.

Procrastination Is Expensive

The problem is that Todd's financial choices are expensive, not only in current terms, but even more so in future terms. A recent financial study suggests that a 30-year-old with no prior savings would have to save almost 12% per year of future salary to be ready for retirement—and Todd will have to save even more, since his net worth is negative. In contrast, given Sylvia's current retirement savings (and ignoring her home equity), the study indicates she will only need to save 6.8% per year to be ready for retirement.

In fact, the cost of procrastinating early in life is the need to save a larger percentage of income later in life. And the longer Todd procrastinates, the larger the percentage of income he will need to save. To put numbers on it, that same study estimates that if Todd gets out of debt and begins saving for retirement at a later age, he will need to save each year:

- 11.8% of salary if he begins at age 30;
- 14.6% if he begins at age 35; and
- 17.6% if he begins saving at 40.

Since he could not save even 6% the first year to attain the matching contribution, the chances are poor that he will suddenly begin saving sufficiently to meet his retirement needs.

In contrast, Sylvia not only owns a house, but she is well on the way toward a financially secure retirement, maybe even an early retirement.

The Moral of the Story

The lessons presented in this story are simple:

- You should begin saving for retirement right away. At a minimum, make sure you attain any matching contributions that your firm may offer.
- Use part of salary increases to increase the percentage of your salary saved. Windfalls such as an inheritance or IRS refunds should be used in the same manner. Don't use all of your take-home pay to finance your lifestyle—you will never be able to begin serious saving for retirement.
- While you should be cautious about taking on any kind of debt, there is a difference between good debt and bad debt. Debt used to finance "things"—credit card purchases, cars, any depreciating asset—is "bad" debt and should be minimized. Home purchases are assets that will probably increase in value, and debt used to purchase homes is "good" debt, or at least "not as bad as bad debt." Good debt is typically less expensive than bad debt—mortgage interest rates typically are much lower than credit card interest rates, for instance. Mortgage payments also are typically tax deductible, while the interest on credit cards and similar loans are not.

These lessons take willpower and thus may be hard to follow, but they are easy to understand.

In the remainder of this article, we will expand on these lessons, presenting primers on savings decisions, retirement plans, investments and investment decisions. This information is designed to help young people get a jumpstart on their finances by making good financial decisions in the first years of their careers.

A Primer on Savings Decisions

You may not realize it—and perhaps it is a bit unfair—but most young people today need to save a greater percentage of their paycheck than their parents, and much more than their grandparents, to ensure sufficient funds for a financially healthy retirement.

Your grandparents may have worked 43 years and, if still alive, retired at 65, when their life expectancy may have been five years. To provide some leeway in case they lived past life

expectancy, they may have planned to finance a 10-year retirement.

Your parents may work some 43 years, retire at 65, and then have a 17-year life expectancy. To be prudent in case they live past life expectancy, they may plan for a 25-year retirement.

You may work 43 years and retire at 65. But given medical advances, today's 20-somethings may have a 25-year life expectancy by age 65. And to be prudent, you may need to plan for a 35-year retirement.

The situation for today's graduates is even worse when Social Security is considered. Your grandparents and perhaps even your parents could depend upon Social Security to provide part of their retirement needs. But when today's graduates are ready to retire, it is unclear whether Social Security will be around and, if it is, what benefits it might pay. Today's graduates who do not save adequately may have to work until 70 or later to finance their longer life expectancies.

Your savings decisions should focus on two key action plans:

- You should begin saving right away, and
- You should increase the percentage of salary saved until your contributions (or your plus your firm's contributions) are perhaps 10% to 15% of salary.

The first key can be achieved by signing up for your firm's retirement plan, whether it is a 401(k), 403(b), or another plan. All firms will encourage employees to join their retirement plan. In most retirement plans, the default option is for new employees not to enter the plan. New employees may opt in, but about half do not. Today, many retirement plans have changed the default option to that of automatically enrolling new employees in the plan. Although they may opt out of the plan at any time, changing the default option dramatically increases participation rates.

The second key can be achieved by increasing the percentage of salary saved until your contributions (or your and your employer's contributions) are perhaps 15% of salary. In an optimal world, you would take the initiative to increase the savings percentage by perhaps 1% or 2% per year until you are saving the desired amount. However, most of us procrastinate and, left on our own, would never get around to increasing the savings rate. To offset this inertia—indeed, to make it work for us—some retirement plans are encouraging employees to sign up for an automatic annual increase in savings percentage. Each year, timed to coincide with the firm's salary increases, an employee may increase the percentage of salary saved by 1%, 2% or 3% until he is saving the maximum allowed in the plan. You can always opt out of this agreement, but the encouraging news is most people do not. However, since most retirement plans do not provide for automatic savings increases, you may have to follow Sylvia's example and make it a point to increase your savings rate each year on your own, without prompting from your employer.

A Primer on Retirement Plans

Our savings decision focuses on employer-sponsored retirement plans, but many young employees have little understanding of how these plans work.

Defined-Benefit vs. Defined-Contribution Plans

In a defined-benefit plan, the employee receives retirement benefits that are defined based on his or her employment history usually at that firm. The defined-benefit plan may promise the employee a monthly income for the rest of his or her life based on years of service and average salary. For example, the firm may promise an annual retirement income of 1.8% × years of service × average income in highest three years. A 30-year employee of that firm may be promised $35,100 a year or $2,925 per month for the rest of his or her life [1.8% × 30 × $65,000]. In a defined-benefit plan, the firm saves the money, makes the investment decisions, and bears the investment risk, while the employee receives the benefits.

Some firms and occupations still offer defined-benefit plans—for example, career military, policemen, firemen, and teachers are usually covered by defined-benefit plans. But for the most part, these kinds of plans are being phased out. Many for-profit companies have moved to defined-contribution plans, and more are expected to follow.

In a defined-contribution plan, the employee makes the investment decision and bears the investment risk. The firm may contribute to the plan, but the employee is also able to, and generally should, contribute to this plan.

In a defined-contribution plan, the employer may be required to make a contribution that is defined as a percent of current income. For example, a firm may contribute each year 6% of the employee's income. At other times, the firm agrees to match employee contributions up to 6% of income. That is, if the employee contributes 3% or 6% of income to her retirement plan, the firm will make matching contributions of 3% or 6%. The employee may contribute more than 6%, but the firm will only match the first 6%.

It should be clear that all employees, including new graduates, should make every effort to save at least enough to capture all of the company's matching contributions.

The other issue you need to understand about contributions is "vesting"—that is, the employee's right of ownership of the employer's contribution to your retirement benefits. The vesting schedule for your retirement plan is determined by your employer, and it applies only to employer contributions and earnings on employer contributions; employee contributions are always immediately vested. The vesting schedule determines your ownership rights to the contributions; typically you accrue more ownership rights the longer you stay at a firm.

Tax-Exempt vs. Tax-Deferred Plans

Table 1 presents a list of some of the more common retirement plans. In a 401(k), 403(b), 457 plan, and traditional IRA, the contributions (i.e., amounts

Table 1. A Sampling of Retirement Plans

Tax-Deferred Accounts	Tax-Exempt Accounts
401(k)	Roth 401(k)
403(b)	Roth 403(b)
457	Roth IRA
SIMPLE	
SEP IRA	
Traditional IRA	

saved) are pretax funds. In these tax-deferred qualified accounts:

- The individual's contributions are deducted from that year's taxable income,
- Returns grow tax deferred until withdrawal,
- Withdrawals from the plan are fully taxable as ordinary income. In addition, withdrawals made before retirement age (typically 59½) are usually subject to an additional 10% penalty tax, so these savings plans are intended for retirement savings.
- If you leave your employer, you can take your contributions (and the vested portion of your employer's contributions) with you by rolling the total over into a new employer-sponsored plan or a traditional IRA, or by taking an early distribution (which is subject to taxes and early withdrawal penalties).

In the Roth IRA, Roth 401(k), and Roth 403(b), the individual contributes aftertax funds. In these tax-exempt accounts, the individual does not get to deduct the contribution amount from that year's taxable income. So, there is no immediate tax savings. However, if withdrawn after 59½, withdrawals, including the decades of returns on investments, are tax exempt. [For further information on the decision to save in a tax-deferred account or a tax-exempt account, see Waltenberger, Rothermich, and Reichenstein at www.tiaa-crefinstitute.org/research/trends/tr030106.html.]

Let's consider an example. Sylvia works for a firm that offers a 401(k) and a Roth 401(k), and matches employee contributions dollar for dollar up to 6%. She should make every effort to save at least 6% to attain the matching contribution. A 6% contribution of her $40,000 salary would be a $200 monthly contribution, but the firm matches this contribution by kicking in another $200 per month. She must decide whether her $200 should go in a 401(k) or a Roth 401(k). Regardless of her choice, the firm's $200 contributions would go into a 401(k).

In general, if given the choice, young employees should save in a tax-exempt account instead of a tax-deferred account. That is, they should save in a Roth 401(k) instead of a 401(k), a Roth 403(b) instead of a 403(b), and a Roth IRA instead of a traditional IRA. In a tax-deferred account, the investor gets the tax break up front since the contribution amount reduces that year's taxable income and thus taxes. In a tax-exempt account the investor gets the tax break at withdrawal, since the withdrawal (if made past age 59½) is tax exempt. In the early years of work, most young employees will be in a low tax bracket. So, it would be better to take the tax break in retirement when they will probably be in a higher tax bracket.

The advice to save in a tax-exempt account before a tax-deferred account is especially useful in the graduate's first year. For example, Sylvia may graduate in May, begin work in July, and have six months of income. She will probably be in the 0% or 10% tax bracket that year. So, she would save either no or minimal taxes from a contribution to a 401(k). Instead, she should save in a tax-exempt Roth 401(k) so the withdrawals in retirement will be tax free. Moreover, there are other advantages to saving in a Roth 401(k) instead of a 401(k). In particular, there are tax advantages if she has to or chooses to withdraw funds from the Roth 401(k) before age 59½. Also there are no required minimum distributions in retirement from the Roth 401(k) and other tax-exempt accounts as there are for tax-deferred accounts.

The firm's $200 monthly matching contributions would go into a 401(k). Depending upon the vesting period in the firm's retirement plan, the firm's contributions may immediately vest or, perhaps, vest in three years. If the firm's contributions are immediately vested then Sylvia could keep the firm's contributions (and returns thereon) even if she left the firm after six months. If there is a three-year vesting period, she would have to work for three years to keep all of the firm's contributions (and returns thereon). Depending upon the plan's vesting schedule, she may get none of the firm's contributions if she leaves before three years or she might be entitled to one-third of the firm's contributions (and returns thereon) after one year, two-thirds after two years, and the full amount after three years. Regardless, Sylvia always keeps her own contributions (and returns thereon).

A Basic Primer on Investments

This primer is very very basic, and intended for inexperienced investors who may not know the difference between a stock and a bond.

Bonds and stocks are the two major types of investments underlying the investment options of any employer-sponsored retirement plan.

Bonds are loans separated into small pieces. Exxon Mobil may want to borrow $1 billion. Since no one would want to loan the firm $1 billion, the firm borrows the $1 billion by issuing bonds, probably in $1,000 units. Each unit or bond is, in essence, a $1,000 loan to Exxon Mobil. On a 6%, 10-year bond, the firm promises to pay $60 each year in interest plus return of the $1,000 in principal in 10 years. The returns on this bond are limited, since Exxon Mobil will not pay more than $60 in interest even if their earnings soar. However, barring default risk, the investor knows exactly what he will receive. In practice, there can be a few complications. For example, Exxon Mobil may have the right to repay the bond early if it so chooses. But the key idea is that bonds are fixed-income

investments—the $60 a year plus $1,000 at maturity for this bond.

In contrast, common stocks (frequently called stocks or equities) are ownership units of the firm. Exxon Mobil has about five billion shares of stock outstanding. So, each share represents ownership of one-five billionth of the firm. The stock price tends to rise and fall with the firm's earnings. Earnings or net income after taxes is what remains after the firm pays all expenses, including bond interest payments.

Stocks are riskier than bonds. That is, year-to-year returns on stock indexes have been much more volatile than bond returns. For example, the S&P 500—a well-known index of 500 stocks of mostly large U.S. firms—lost 22.1% in 2002 but gained 28.7% in 2003. Over the long term, stock returns on average are much higher than bond returns, but the price investors pay for these higher returns is higher risk. Unfortunately, it is not possible to predict whether next year's returns or even the next five year's returns on stock indexes will be good or bad. However, since investors do not like risk, we believe that stocks will probably continue to produce higher long-run returns than bonds.

A Primer on Investment Decisions

Most young people want to save for many different purposes—a car, emergency funds, down payment for a house, and, of course, retirement.

Where should you put these savings?

The investment horizon for savings other than retirement is typically less than five years. For that reason, these funds probably should be invested in safe, short-term assets, such as bank certificates of deposit (CDs) or a low-cost short-term, high-grade bond fund. In addition, since they will be used before retirement age they should be in a taxable account—that is, they should not be invested in a tax-deferred retirement account, which typically has a substantial penalty for early withdrawals.

When saving for retirement, your first goal should be to take advantage of the tax-sheltering benefits offered by tax-deferred retirement accounts—in other words, try to contribute as much as you can to your employer-sponsored plan. Once you have maxed out on your retirement account contributions, your retirement savings should be put into taxable accounts, with investments that emphasize tax efficiency.

Where should you invest your retirement plan contributions?

There are two major steps when saving for retirement within an employer-sponsored plan:

- First, you should select your target asset allocation—that is, the percent of your portfolio invested in stocks, bonds, and cash.
- Second, select specific stock and bond mutual funds from the list of mutual funds in your firm's plan.

Selecting Your Target Asset Allocation

Table 2 summarizes recommended asset allocations for individuals who expect to retire in 2050. The recommendations come from financial planning professionals at three respected families of mutual funds that offer life-cycle funds—funds that act as an all-in-one mutual fund for "typical" investors at various ages.

The professionals' advice reflected in Table 2 espouses a simple idea: Young investors should split their retirement nest eggs into three broad baskets—U.S. stocks, international stocks, and U.S. bonds—and each of those baskets should contain several different securities. In terms of target allocations, the common advice for very young investors (those who will not be retiring until the year 2050) is the following:

- Your retirement funds should be between 90% and 95% invested in stocks and 5% to 10% in bonds. "Cash" investments should be avoided until you actually approach your retirement years.
- The stock portion of your portfolio should be between 75% to 85% invested in broadly diversified U.S. stocks and 15% to 25% in diversified international stocks.

Many company retirement plans offer life-cycle funds. If so, one good choice for many graduates would be to invest all their retirement funds in the life-cycle fund with their appropriate target date. These portfolios are already well diversified, containing U.S. stocks, international stocks, and U.S. bonds.

If your pension plan does not offer life-cycle funds, then you could set an asset allocation for your retirement plan that mimics the recommendations of these 2050 target retirement date funds. For example, perhaps 70% could be invested in U.S. stocks, 23% in international stocks, and 7% in U.S. bonds. To the degree possible, while attaining the broad diversification, we suggest using index funds because they usually have much lower expenses.

To fill the U.S. stock portion of the portfolio, you could select one broadly diversified domestic stock fund and invest the U.S. stock portion in this fund. One good strategy would be to invest the entire U.S. stock portion in a broad-based U.S. stock index fund such as one that indexes the Russell 1000, Russell 3000, MSCI (Morgan Stanley Capital Index) Investable Market 2500

Table 2. Recommended Asset Allocations for 2050 Life-Cycle Funds

	Fidelity	T. Rowe Price	Vanguard
U.S. Stocks (%)	70.0	76.5	72.0
International Stocks (%)	20.0	15.0	18.0
U.S. Bonds (%)	10.0	8.5	10.0

Fidelity, T. Rowe Price, and Vanguard are three large, respected mutual fund families. The table presents these families' recommended asset allocations for their 2050 life-cycle funds—their funds intended for typical individuals retiring around the year 2050.

index or Broad Market index. Most retirement plans offer an S&P 500 index fund. Since this large-firm (aka, large-cap) index represents about 75% of the market value of all U.S. stocks, another good option would be to invest 75% of the U.S. stock portion in an S&P 500 index fund and the other 25% in a small-cap stock fund.

The international stock exposure provides international diversification. Just as it is prudent to diversify the U.S. stock portion of the portfolio by investing in hundreds of domestic firms' stocks, it is also prudent to invest in an international stock fund that contains hundreds of international firms' stocks. One useful separation of international stock markets is into those of developed markets such as Western Europe and Japan and emerging markets such as China and Latin American countries. The model portfolios in Table 2 suggest that about 85% be invested in developed stock markets. The pension manager at your firm should be able to help you attain this goal.

The mutual fund families recommend investing perhaps 5% to 10% in U.S. bonds. Any domestic bond mutual fund should serve that purpose.

Investing in Human Capital

The largest asset for most young investors is their human capital, a term used by economists to denote the present value of your future earnings.

When selecting a job, one factor you should consider when choosing a job is whether the firm will help enhance your human capital:

- Will your superiors take time to mentor you?
- Will the firm provide or pay for professional training?
- Will it pay for exam fees and a review course for you to try to attain a professional certification?

Clueless—Not

Anyone embarking on their first "real" job will probably have to decide whether to enter their firm's retirement plan, how much to save, and where to invest those funds.

These are the relatively simple guiding principles you should follow when making these kinds of financial decisions:

- You should participate in your firm's retirement plan.
- You should increase the percentage of your income that you save in your early years.
- In addition, you should strive to avoid excessive debt, especially credit card debt.

Taking a few simple steps in the next few years can go a long way to helping you ensure your financial security in the future.

If you make good financial decisions from day one of your first job and avoid the costly mistakes that many of your peers will make, you can dramatically improve your financial health for the rest of your life. ▲

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