PART 8

FINANCIAL PLANNING

CHAPTER 48

BASIC FINANCIAL MANAGEMENT 101

Understanding the basics of personal finance is key in ensuring you have a sound financial strategy in addition to your technical career strategy. Superior technical skills complemented with excellent personal financial planning lead to a solid, successful, and rewarding career.

The purpose of this chapter is to review with you the fundamentals of personal financial management. If you have never completed a financial plan or visited a financial advisor, this chapter will bring you quickly up to speed on the key actions you should be considering when formularizing your personal financial plans. For those of you who already have a financial plan and are working with a financial advisor, excellent. You should consider this chapter as a double check to make sure you have all the basics covered.

What makes people great financial planners? They think and act differently. Thomas Stanley in his book, *The Millionaire Mind,* identifies the following characteristics that makes millionaires different [1].

1. No high lifestyle consumption
2. Well-educated
3. Fastidious investors (saving 20% of yearly income)
4. Planners and budgeters

If these characteristics do not sound like you at all, then it is time to seriously consider changing your lifestyle and come up with a financial plan. If these characteristics sound like you then keep going you are on the right track.

The Engineer's Career Guide. By John A. Hoschette

Emerald Publications, in their financial planning workbook, identify the following six basic steps to financial success and security [2].

1. Protecting what you have
2. Take control of your cash flow
3. Invest wisely
4. Manage your taxes
5. Save for retirement
6. Estate planning

PROTECTING WHAT YOU HAVE

The first area of personal financial planning is protecting what you have in the event that life takes a bad turn. Protection is having the proper insurance coverage. The following are several types of insurance that financial advisors recommend you purchase basic coverage to protect your most valuable asset—you.

Medical Insurance. Number one on the list of insurance policies you should have is medical coverage. You absolutely need this. The average daily hospital stay is 5 days at a cost of $22,596 according to Pacific Business News [3]. At this price you could easily use all of your savings in no time with a major illness due to an extended stay in the hospital without medical insurance. Sign up for coverage at your company and review the coverage annually. Medical plans annually change their coverage and fees; you should be aware of these changes and adjust your policy as required. Knowing and following the health insurance provider policies can save you a significant amount of money when comes to using emergency services, hospital choices, and selection of specialists. Correspondingly, not knowing and failing to follow these policies can cost you hundreds of dollars of extra fees. Take the time to read and understand the medical coverage provided by your company's health plan to know exactly what is covered and what is not. Medical coverage is often complemented by dental and vision coverage. These insurance benefits are equally important to understand.

In the event that you leave a company for a new job, make sure you have medical coverage during the time you leave and start the new job. If something happens to you during this time, you could be at great financial risk. Normally, the old company's health plan will allow you to extend the period coverage beyond your last working day if you purchase a separate policy.

Short-Term and Long-Term Disability Insurance. Most companies offer some type of short-term policy as part of your normal employee benefits. This short-term coverage usually guarantees a paycheck for 2 to 4 weeks if you become ill and cannot work. Check to make sure you have this basic coverage. If not, explore what your options are if you become ill for an extended period of time.

After this initial 2 to 4 week time period if you are unable to return to work, the company may no longer provide a paycheck. Some companies offer automatic long-term coverage and others do not as part of their compensation package. You may have to purchase long-term disability separately. Long-term disability coverage becomes effective after short-term disability ends. Long-term disability insurance coverage only replaces a percentage of your normal pay. The typical replacement coverage is usually in the range of 50% to 60% of your normal pay. If you are forced into a long-term disability situation, you could quickly be in trouble if you do not have any reserve savings.

Life Insurance. Next on the list is life insurance. Life insurance pays a lump sum to the beneficiary you name on the policy. If you are single, you should purchase enough life insurance to cover your funeral and estate liquidation costs. If you have a family, you should have as a minimum, enough coverage provides living expenses for your family for at least 1 year if not more. There are several types of life insurance you can purchase. Working with an insurance agent or financial advisor you can help you determine what type is best for you. The best buy on life insurance is usually through your company benefits plan. However, I recommend supplemental life insurance to your company plan, at a young age, in the event that you become unemployed.

Auto and Home Insurance. Next on the list are automobile and home insurance. Most states now require by law, automobile insurance, so there are no options here. You must purchase this on your own. However, the amount of coverage can be adjustable. As most insurance agents will point out, liability is the biggest risk. If you cause an accident and a semi-trailer with valuable cargo is destroyed, you are responsible for everything your insurance policy does not cover. A semi-trailer with cargo can easily run $1 million to $2 million dollars. Therefore, it is good to know your liability coverage limits when selecting your policy. Most companies do not offer automobile insurance as a benefit option. You will have to select your own. Make sure you comparison shop before selecting.

Home/Condo/Apartment/Renters insurance is another must-have policy. You work hard and use your earnings to purchase housing and many personal items. A simple fire in your building/home can wipe out everything you own and leave you in financial ruin. Protect your hard-earned assets with insurance coverage. An insurance agent can quickly assess your needs in this area.

There are many other types of insurance you can purchase and selecting these will depend on your needs and risk. Working with a financial planner can help you determine what other types of insurance you may need for your particular situation.

TAKE CONTROL OF YOUR CASH FLOW

To gain control of your cash flow, you will need to develop a monthly and yearly budget to follow. An example of a spreadsheet showing the monthly bills for an entire year, and the projected cash flow associated for each month, is shown in Figure 48-1. The far left column identifies the bills and income. The columns to the right are the months of the year.

Monthly Bills	J	F	M	A	M	J	J	A	S	O	N	D	Total
Pay Myself First (15%)	$675	$675	$675	$675	$675	$675	$675	$675	$675	$675	$675	$675	$8,100
Automobile Gas	$65	$65	$65	$65	$65	$65	$65	$65	$65	$65	$65	$65	$780
House Pymt (P&I, Taxes)	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$1,800	$21,600
Energy (Electric & Gas)	$250	$250	$250	$120	$120	$120	$250	$250	$120	$120	$250	$250	$2,350
Grocery	$350	$350	$350	$350	$350	$350	$350	$350	$350	$350	$350	$350	$4,200
Entertainment	$75	$75	$75	$75	$75	$75	$75	$75	$75	$75	$75	$75	$900
Cell Phone	$49	$49	$49	$49	$49	$49	$49	$49	$49	$49	$49	$49	$588
Savings for One Time Bills	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$6,000
TV/Computer	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$1,440
Credit Card	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$1,440
One Time Bills													
Car Insurance		$500							$500				$1,000
House insurance			$500							$500			$1,000
Clothing Allowance			$300						$300				$600
Car Maintenance					$400					$400			$800
Water	$50			$50			$50			$50			$200
Tax Preparation				$500									$500
Vacation							$1,000						$1,000
Year End Holidays												$700	$700
Total Monthly Bills (Monthly + One Time)	$4,054	$4,504	$4,804	$4,424	$4,274	$3,874	$5,054	$4,004	$4,674	$4,824	$4,004	$4,004	$52,498
Income (Take Home)	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$54,000
Net Monthly Cash Flow Income - Bills	$446	-$4	-$304	$76	$226	$626	-$554	$496	-$174	-$324	$496	$496	$1,502

Net Yearly Cash Flow

FIGURE 48-1 Example cash flow worksheet for personal finances.

In the top portion of the spreadsheet, the bills that are paid monthly are identified. These include such bills as rent or mortgage payments, energy bills, groceries, and others normally paid on a monthly basis.

The next section down contains a list of the major bills that occur only periodically during the year. These include such bills as house insurance, car insurance, clothing, and others.

Directly below these two sections is the "Total Monthly Bills" row. This is simply the sum of the monthly and one-time bills for each month.

The next section is the Income (Take Home) pay for each month. This section lists the monthly take-home pay you receive after taxes.

The bottom row or line of the spreadsheet is the Net Cash Flow for the month. This is simply the income less the bills you pay out. You should note for this example that there are months highlighted in bold borders where the cash flow is negative. This means that in these months, you have more bills than income, and will need to withdraw from savings in order to meet your bills.

Now let's analyze the spreadsheet. First, the Net Yearly Cash Flow for the year is positive. This is good since it indicates you are living within your means and should have some money left over at the end of the year. This extra money can be used as a special reserve for emergencies and unplanned expenditures. If you set up a cash flow spreadsheet like this and the yearly net cash flow is negative, this means you are living beyond your means and need to immediately cut back and get your spending in control.

▶ ***Career Tip.*** Complete a cash flow analysis and make sure you are living within your financial means.

Financial advisors all agree that the first payment you should make is to yourself. They recommend you live on 80% to 85% of your take-home pay and invest the remaining 15% to 20% of your monthly income for retirement and other long-term needs. This will ensure a sound financial position for you in the years ahead.

▶ ***Career Tip.*** Pay yourself first.

There is good motivation to pay yourself first as George McClure, resource member of the IEEE-USA Career and Workforce Policy Committee points out. "If it is not there, you don't have a temptation to spend it." Another way people are getting into financial difficulty is by using their home equity like an ATM. Spending the equity of your home to pay monthly bills is not sound financial management. Build up your savings reserve by paying yourself first and living on the rest.

In addition to savings, financial advisors and mortgage institutions recommend that you do not spend more than 28 percent of net income on mortgage payments or rent. If you have other debt, advisors recommend keeping your total credit card, mortgage, and other monthly loan payments less than 33% of your take-home pay [4]. A new development today is the cutting back of salary by some corporations—ten percent is not unusual. By keeping your debt down and planning a reserve into your budget, you should be alright if you find yourself suddenly facing a salary reduction.

Now let's look at how you cover the months where there is a negative cash flow. To cover these months you need a reserve or savings account to draw upon. To make sure you have enough in reserve, you need to compute the amount to save each month. Shown in Figure 48-2 is a table listing the large one-time bills, the amount of the bill, the months it is prorated over, and finally the amount you need to save each month to ensure there will be enough to pay these bills. For the example shown, the table identifies that one needs to put away $483.33 each month in order to pay all these bills. If you look at the cash flow spreadsheet, there is a monthly savings bill or deposit of $500. This deposit each month will build up a reserve to ensure during the negative cash flow months you have sufficient funds in your savings account to cover the extra bills when they come due.

The next major step to managing your cash is to pay down and eliminate all your credit card debt. If you have high credit card debt, it makes better financial sense to pay this down before investing. Watch your credit card interest rates; they can be as high as 15% to 20% annual percentage rate (APR). Although it may be tempting to purchase items beyond your financial means through credit cards, don't be fooled by what appears as low monthly payments. You will pay dearly in the long run. Use credit cards only for emergencies and pay off the balance each month. On credit card interest, there is now the interlocking experience—when a payment is late on one card the others may hike up the APR even though payments there were timely.

Major One-Time Bills	Yearly Total	Due - Months	Saving Per Month Required
Car Insurance	$1,000	12	$83.33
House Insurance	$1,000	12	$83.33
Clothing Allowance	$600	12	$50.00
Car Maintenance	$800	12	$66.67
Water	$200	12	$16.67
Tax Preparation	$500	12	$41.67
Vacation	$1,000	12	$83.33
Year End Holidays	$700	12	$58.33
		Total	$483.33

FIGURE 48-2 Budgeting for one-time major bills.

INVEST WISELY

One of the best investments you can make is profit-sharing with your own company. Many companies offer company stock at reduced prices that you can purchase. Some companies offer a matching plan, where they will match each dollar you invest in a 401(k) plan with a percentage. For instance, they may match you 50% to 100% for each dollar you invest up to a maximum limit. This is like getting 50% or better return on your investment. However, be careful about putting all your investment funding into these company match programs since the company stock can go down also.

Another good investment is participating in your company-sponsored retirement plan. Most 401(k)s offer some company match. A common company match is 50 cents on the dollar up to 6%, similar to getting a 50% return on your money. Most companies offer a wide variety of mutual funds to invest this money in. Target Date Retirement Funds and Asset Allocation Funds are a wise place to invest if these are offered in your plan. They are managed according to your age and risk tolerance. For example, a 2035 Target Date Fund would be suitable for an individual who plans to retire at or near year 2035. The fund is a blend of stocks, bonds, and cash and will automatically get more conservative as you get closer to retirement.

Oftentimes, individuals who choose their own funds have a lower rate of return than those who invest in the Target Date Funds or Asset Allocation Funds. Sometimes, companies will only offer company stock as the only option for the match. This is fine, but be sure to diversify this stock over time if you're able to. Oftentimes, there is a vesting schedule on the company stock and it's wise to sell a portion, when available, to be sure you have a diversified portfolio within your risk tolerance.

The key is having a balanced portfolio of investments. Investing is not a passive process or one-time event. It is a continuous process of evaluating your alternatives and selecting the best approach for yourself. Most experts recommend a diversified investment portfolio. This is a combination of investments in different areas to reduce your risks.

Prior to visiting a financial advisor will you need to collect and assemble your financial information. This will include but is not limited to:

1. Last year's tax return
2. Cash flow analysis
3. Company benefits statement
4. Credit rating
5. Net worth statement (list of all assets, savings, and long-term debt)
6. Long-term financial goals
7. Estimate of available funding for investment

On credit rating, you can get a free report annually from each of the three credit reporting agencies. Having this information all assembled prior to your first visit will save time and make subsequent visits more productive.

Many engineering societies have advisors to assist you in your decisions. If you belong to an engineering society, please check into what they offer. George McClure (g.mcclure@ieee.org), a resource member of the IEEE-USA Career and Workforce Policy Committee focuses on benefits and health. He is interested in new problems that are arising in these areas and interested in your experiences.

MANAGING YOUR TAXES

Online Internet tax filing has come a long way in helping you fill out your tax forms. However, just knowing how to fill out tax forms is not good tax management. Good tax management goes way beyond just filling out your tax forms and occurs a long time before you file taxes. Meet with your financial advisor, and a tax expert, regarding how to manage and reduce your tax burdens. The financial advisor can provide you with information on how to best structure your investments to reduce your taxes. Many investments offer reduced tax incentives that may be better for you. Reducing your tax burden on investments can significantly improve their yield and your wealth over the long run.

Visiting with a tax expert and discussing your financial situation will/could result in discovering new tax deductions you did not know existed. This is especially true if you are running a business out of your home, have real estate investments, foreign investments, or special needs, such as medical or family dependencies. The state and federal tax laws change yearly, so this should be a yearly activity. The best time to visit with a tax expert is the start of the New Year. Many tax firms will host free seminars during tax preparation times (February to April) which you can attend and ask questions. Attending a tax seminar could save you hundreds or even thousands of dollars, making them well worth your time.

SAVE FOR RETIREMENT

Planning for retirement is a lifelong activity. The younger you start the better off you will be. Financial advisors recommend that you have a sound balanced portfolio and modify your investments as you age.

Starting early is the best investment policy an individual can make. Let's take the example of Joe versus John. Joe starts investing in his 401(k) at age 25 and contributes $10,000 a year for 10 years, then stops contributing. If he earned a 7% rate of return on his money, at age 60, his account would be worth approximately $630,000. Now John doesn't start saving until age 35. He saves the same amount of $10,000 per year, but does this for 25 years, until he is age 60. At the same 7% rate of return, John's account would be worth approximately $630,000. Joe contributed only $100,000 while John contributed $250,000 and their accounts where worth the same at age 60. If Joe would've kept saving that same amount of $10,000 a year until age 60, his account would've been worth over $1.3 million.

Company stock purchase plans are generally a good investment. They usually allow you to purchase company stock at a discount. Company stock can be volatile and risky, so it's important to diversify the portfolio over a period of time by selling off shares of the stock. Most companies have a vesting schedule on the stock where you must hold it for a specific amount of time. It is prudent to monitor exercise dates and vesting schedules. Don't have all of your eggs in one basket by being too heavily weighted in your company stock in your overall investment portfolio. If you're able, reinvest this company stock over time in a diversified portfolio of mutual funds.

The Rule of 72 states that if you divide a given interest rate by 72 it will tell you the amount of years it takes for your money to double. For example, if you earned a 7.2% rate of return, it would take your money just over 10 years to double. This is a nice rule of thumb when projecting retirement accounts at various rates of return. This demonstrates that saving for retirement should be done sooner than later. Complex financial plans are not the answer to a successful retirement. The most important decision you can make is making the commitment to save a comfortable, affordable amount each month in a well-diversified portfolio and stay with it.

According to many financial advisors, people wait until they turn 50 before they start planning retirement. This can be too late. Also, your company retirement benefits and Social Security benefits are continuously changing; therefore, you will need to review these on a yearly basis. One important fact to remember is that your retirement benefits are never guaranteed. For example, many corporations are now cutting out defined benefit pension plans for the option of matching your 401(k) investments with company stock. Some firms recently have even suspended their 401(k) matches due to economic conditions. All this places much more responsibility on the individual to save over a career lifetime and manage their own investments.

Due to the constantly changing state and federal laws, and changing tax structures, I cannot stress enough the importance of meeting with a financial planner to determine the best methods to save for retirement for you.

A balanced approach to retirement savings is recommended by most financial planners. This balanced approach involves Social Security, 401(k) plans, portfolio income, company pension (if available), savings, and even part-time work. Currently, the final age that you are able to retire is dependent on many factors. Social Security, for example, has multiple ages you can retire and multiple payment plans that will affect the amount of your benefit. Your health and medical benefits are other key factors to consider as well as the standard of living that you wish to maintain. To describe this situation in engineering terms, this is a non-determinate set of equations that have hundreds of possible solutions. Your task is to determine the two or three best retirement solutions for your situation.

ESTATE PLANNING

The final area of personal financial planning is in the area of estate planning. This area is for people who have reached retirement age and would like to protect their estate for their beneficiaries. There are basically four types of estate distribution techniques. These are:

1. Wills
2. Jointly-held property
3. Contracts
4. Trusts

All these methods offer different benefits for estate distribution to beneficiaries. Wills provide a direct means to distribute your estate in the exact manner you wish. However, they expose your beneficiaries to large tax liabilities often eating up a significant portion of the estate. Jointly-held property is a very simple method of transferring estate to surviving partners with little or no tax liability. Contracts are another method, but need the counsel of lawyers to properly structure the agreements. Finally, trusts are a method of locking up the estate assets to ensure they are properly distributed, but involve a complex web of tax rules and regulations that should be only done with the guidance of an attorney.

SUMMARY

Understanding the basics of personal finance is key in ensuring that you have a sound financial strategy in addition to your technical career strategy. The basic steps to financial success and security are: protecting what you have, take control of your cash flow, investing wisely, managing your taxes, saving for retirement, and finally, estate planning. Superior technical skills complemented with excellent personal financial planning lead to a solid, successful, and rewarding career. For those of you who already have a financial plan and are working with a financial advisor—excellent. If you have never completed a financial plan or visited a financial advisor, your best career move is to visit a financial advisor and develop your financial plan immediately.

Have you identified any career actions you want to take as a result of reading this chapter? If so, please make sure to capture these ideas before you forget by recording them in the notes section at the back of the book.

ASSIGNMENTS AND DISCUSSION TOPICS

1 What is a net worth statement?

2 How often should you adjust your investment portfolio?

3 How is your credit score determined?

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