Personal Finance: Another Perspective

Retirement Planning 1: Basics

Updated 2020-03-10

Objectives

A. Understand why retirement planning is critical and the principles of successful retirement planning

B. Know the steps and stages of retirement planning and the payout options at retirement

C. Understand one method of how to monitor your retirement planning progress

D. Understand and create your Retirement Plan

Your Personal Financial Plan

- Section XII.: Retirement Planning Section
  - What is your vision for retirement? (use Retirement Planning (LT01-12))
  - What are your retirement goals? Years until you retire? Age at retirement?
    - How much will you need? How much do you now have?
    - How much must you save annually to reach your goals (include Retirement Planning Spreadsheet (LT06))?
    - Include a copy of your *Social Security Statement*
  - What are your Plans and Strategies for retirement?
    - What are your accumulation, retirement and distribution plans?
  - What are your constraints and accountability?

Case Study

Data:

- Clint and Abby, both age 30, are putting together their future retirement income and expense projection. They hope to retire in 35 years at age 65. They determined that they would have retirement income of $15,000 each year in today's dollars before-tax ($10,000 from Social Security and $5,000 from their savings), and they would need $60,000 before-tax in retirement income to retire comfortably.

Calculations:

- How much must Clint and Abby save annually for 30 years of retirement if they wish to meet their income projection, assuming a 2 percent inflation rate both before and after retirement, and an 7.0 percent return on investments before retirement, and 6.0 percent during retirement.

A. Understand Why Retirement Planning is Critical and the Principles

- What three questions does retirement planning answer and when will we cover them?

  - 1. How much money *do you need* at retirement to retire according to your vision and goals, and how much *must you save* annually to accomplish them?

  - 2. *How long* do you expect to live and how do you tell if you are *on track* to reach your retirement vision and goals?

  - 3. *What are* the major retirement vehicles available (business, small business, individual and government) and how can you *use them* to reach your retirement goals

Planning is Critical (continued)

- Why is retirement planning so important?
    - We are responsible for taking care of ourselves and families
    - Adequate retirement planning will help ensure we fulfill our responsibilities to our families.
    - Planning for the future ensures a better future
        - No one cares for your family like you
    - There are [30 Key Decisions for Retirement](#) you should make as you prepare for retirement
        - You should make these before you start to retire

Planning is Critical (continued)

- What are the factors that determine your savings needs at retirement?
  - Desired retirement income (be realistic)
  - Other sources of retirement income (Social Security, retirement and investment accounts, real estate, home)
  - Age starting investing, age at retirement, and death
  - Estimated tax and inflation rates (both before and after retirement)
  - Risk tolerance (both before and in retirement)
  - Expected return on your savings (both before and after retirement)

Planning is Critical (continued)

- Why start saving today ?
  - Although retirement seems a long way away, it isn't!
    - Employer benefits are changing, being reduced, or are simply not available
      - Plan accordingly
  - Government programs are not certain
    - The future of government benefits, particularly Social Security, is questionable (and that's taking a positive view)
    - Social Security isn't likely to be enough to survive on even if it is still around

Planning is Critical (continued)

- How long are you expecting to live?

  - Interesting statistics
    - The life expectancy 1900   2016
      - Men   46   76.3
      - Women   48   82.3

  - There are nearly 67,000 Americans who are at least 100 years old (130% increase from 1990)

    - The est. number of centenarians in 2050 is 834,000, with 82% expected to be women

    - Source: Kiplinger Magazine, Feb. 2001, http://www.data360.org/dsg.aspx?Data_Set_Group_Id=195

Planning is Critical (continued)

- How long are you expecting to live?

  - Social Security estimates you will live this long based only on date of birth and gender

    - Social Security – Life Expectancy Calculator

  - Take one or more of these other quizzes to help get an idea of how long you will live

    - Longevity Quiz - Northwestern Mutual Life Insurance

    - How Long Will You Live - Blueprint Income

    - Life Expectancy Calculator - Bankrate.com

Principles of Successful Retirement Planning

- What are the principles for successful retirement planning?
    - 1. Know yourself, your vision, goals, and risk tolerance
    - 2. Seek, receive and act on the Holy Ghost's guidance
    - 3. Understand the retirement vehicles available to you and use them wisely
    - 4. Choose wisely the investment vehicles and assets and invest wisely
    - 5. Know and follow the Retirement Planning Steps
    - 6. Develop a good retirement plan, write it carefully, and follow it closely
    - 7. Start today!

Principles (continued)

- Finding balance

- <u>Principles</u>   <u>Doctrines</u>

Know yourself, your goals and vision	Identity
Seek, receive and act on guidance	Obedience
Understand retirement vehicles	Stewardship
Choose assets wisely	Stewardship
Know the steps for retirement	Agency
Develop and follow your plan	Accountability
Start today	Stewardship

Principles (continued)

From obedience to consecration

I am a child of God (identity), striving to live worthy of the Spirit (obedience), learning about key areas and steps and strategies of retirement (stewardship). With this information, I can make wise decisions about my future (agency) which will allow me to save and invest appropriately now (accountability) to accomplish my personal mission and individual and family vision and goals.

Questions

- Any questions on why planning for retirement is important and the principles of successful retirement planning?

Determining Your Retirement Needs Worksheet (LT06)
Less Detailed Before Tax Analysis
Personal Finance: Another Perspective

Directions: Fill the green cells with your data. Be careful not to modify the blue cells. Percentages must be converted to decimal form. Be careful with before- and after-tax amounts.

Key Data:

Amount Needed and Expected Annually

1. Desired before-tax Amount of Money Needed at Retirement	60,000
2. Before-tax Money expected at retirement (SS, DBP, earnings)	36,000

Before Retirement

3. Number of Years Till Retirement that Investments Will Grow	20
4. Estimated Average Growth Rate of Investments Until Retirement	6.0%
5. Estimated Average Annual Rate of Inflation Until Retirement	2.0%

Retirement

6. Number of Years In Retirement	25
7. Estimate Growth Rate of Investments During Retirement	5.0%
8. Estimated Annual Rate of Inflation During Retirement	2.0%
9. Estimated tax rate in retirement	

B. Understand the Steps and Stages of Retirement Planning

- ## What are the steps to successful planning?

  - 1. Catch your vision and set goals and plans for what you want at retirement

  - 2. Estimate your current annual income available at retirement

  - 3. Estimate your total retirement needs after inflation (i.e., the inflation-adjusted shortfall)

  - 4. Determine how much you have accumulated so far on a before-tax basis

  - 5. Determine the contribution or reduction to your retirement plans from your home

  - 6. Determine how much more you will need to save and start saving and investing today

  - 7. Determine your optimal investment vehicles and begin save

  - Retirement Planning Needs (LT06) can help with this process

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Steps (continued)

- 1. Catch your vision for how you want to live in retirement and set goals for what you want
  - Estimate your needs on a before-tax basis
    - How do you want to live when you retire?
    - Will you need more or less than now?
- 2. Estimate your current annual income available at retirement
  - This will include on a before-tax basis:
    - Social Security, Defined benefit pension income, Qualified retirement plan income, and Savings

Steps (continued)

- 3. Estimate your total retirement needs after inflation (i.e. the inflation-adjusted shortfall)
  - How long will you live?
  - What return and inflation rates are likely?
  - Assume an annuity to provide your resources
- 4. Determine how much you have accumulated so far on a before-tax basis
  - List the current value of all your retirement and investment accounts
  - Take into account tax considerations
  - Calculate the future value of your investments at an expected return consistent with your portfolio risk

Steps (continued)

- 5. Determine the contribution or reduction to your retirement plans from your home
  - Forecast the value, estimated growth, cost of a new home, and what you will owe at retirement
  - Include the cost of a new home if you plan to move at retirement
- 6. Determine how much more you will need to save
  - Determine your total investment shortfall
  - Estimate the growth in investments and inflation, and calculate your monthly and annual payments to meet your goals

Steps (continued)

- You will need to include Retirement Planning Needs (LT06) use Tab "Needs before Tax (Fin200)"
  - Based on your estimates of how much you will need and how much you now have, years till and in retirement, returns before and in retirement, and inflation before and in retirement, it shares how much you need.

- 7. Determine your preferred retirement investment vehicles and financial assets and start now and save and invest
  - Save and invest wisely through the optimal investment vehicles using the Priority of Money

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Stages (continued)

- There are 3 stages to retirement planning. You will need to develop strategies for each stage

- Stage 1: Accumulation

  - This stage begins when you start work and is the time where you accumulate assets which you will later use for retirement and other goals

    - Develop a plan for this stage on how you will save money for retirement in the years before you retire

    - Get on a budget and save 20% percent of your income each month (10% minimum)

    - Start now (or sooner)

Strategies (continued)

- Stage 2: Retirement or Annuitization
  - This stage begins when you retire
    - It is your plan on how your assets will be distributed at retirement
      - Your goal is to have sufficient assets for your lifetime to enable you and your spouse to live like you planned

Strategies (continued)

- Stage 3: Distribution/disposition/decumulation
  - This stage begins after you have retired
    - This is your plan as to how best take distributions from your remaining retirement and taxable accounts to minimize taxes and maximize the availability of your assets

Payout Options at Retirement

- Plan ahead before deciding how a distribution or payout is to be received
  - Make sure you understand the tax consequences of any payout or distribution option chosen
  - Look at all your investment and retirement payouts together. Be diversified in payout options: annuitize some and invest some
  - Consider the pros and cons of an annuity versus a lump sum payout, as well as the costs and expenses of annuities and other retirement options
- Plan your payouts to minimize taxes and maximize the assets available for you at and during retirement

Payout Options (continued)

- What are annuities?
  - A financial product designed to accept and grow funds, and then, upon annuitization, make payments for a specified length of time (just like a bond)
    - Annuities can be structured many different ways, such as payments for life for annuitant or spouse (i.e., for life of both), duration of payments (i.e., 20 years certain or life, whichever is longer), the type of payments (i.e., fixed or variable), etc.
      - They can also provide the flexibility to construct a contract to be meet your cash flow needs (however, it also increases expenses)

Payout Options (continued)

- What are the different types of annuities?
  - <u>Immediate</u>. Payments begin immediately
  - <u>Deferred.</u> Payments are deferred until the specified time the investor elects to begin receiving them
  - <u>Fixed</u>. Fixed payments are made to the investor until the end of the contract, usually till the investor dies
  - <u>Variable.</u> Variable payments are made to the investor until the end of the contract, but payments are variable based on a specific asset's performance
  - <u>Life</u>. Fixed payments are made each period until the end of the investor's life
  - <u>Period Certain</u>. Fixed payments are made for a specific period, regardless of the investor's life span

Payout Options (continued)

- What are the types of annuity distribution payouts available at retirement
  - <u>Single life</u>. You receive payments for the rest of your life only—not including your spouse's life
  - <u>Life with "certain period"</u>. You receive payments for as long as you live; however, if you die, payments continue until the end of the certain period
  - <u>Joint and Survivor</u>. You receive payments for as long as both you and your spouse live.   Benefits may be reduced for your spouse when you die
  - <u>Lump-sum</u>. You receive a single payment of all principal and interest at retirement

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Payout Options (continued)

- How are retirement payouts taxed?
  - Annuity payments
    - Payments will be taxed as normal income
  - Lump-sum payment:
    - Will normally be taxed as if you received the money over a 10 year span. This reduces taxes slightly, but you are still liable for all the tax immediately
    - Lump sum payments from an annuity may be rolled over into an IRA to avoid taxes and continue tax-deferred growth

Payout Options (continued)

- What percent of retirement assets should be annuitized?
  - The key principle is not to outlive your money
    - The amount you annuitize is based on many factors, including amount of wealth at retirement, level of Social Security benefits accrued, risk tolerance, level of interest rates, expected returns on asset classes, inflation, marital status, age, pension income, amount wanted to leave to heirs, etc.
      - It is a complex task

Payout Options (continued)

- Are there *general* guidelines for annuitization?
  - a. Annuitize enough to cover 100% of your *minimum acceptable level* of retirement income (this is the minimum needed for survival to pay all the bills, be comfortable, but not take that vacation or buy that new car). This minimum level will vary from individual to individual
  - b. *Once minimum levels are annuitized*, the amount of additional assets to annuitize would depend on your risk tolerance and assets available
    - The lower (higher) your tolerance for risk, the higher (lower) the amount you would annuitize of your remaining assets

Payout Options (continued)

- What about inflation?
  - If you are concerned about inflation, you can include a cost of living (cola) rider on your annuity
    - This rider allows an adjustment for the amount paid to take into account increases in inflation
    - Realize that this rider has a cost, and will likely mean a lower payout initially but a higher payout later on.

C. Understand One Method of How to Monitor your Retirement Planning Progress

- Key Points to Remember
  - Changes in inflation can have a drastic effect on your retirement planning
    - Watch it.
  - Once you retire, you may live a long time.
    - Plan accordingly
  - Don't neglect your insurance coverage.
    - Healthcare costs can quickly reduce a good retirement plan
  - Monitor your progress towards your goals and make changes as necessary
    - Review and evaluate performance annually

Monitoring Progress (continued)

- One of the biggest challenges is how do you know how well you are doing in preparing for retirement?

  - Is there a way to monitor your progress on how well you are reaching your retirement goals?

  - Is there a tool to give you guidelines as to where you should be as you work toward retirement so you can make changes consistent with your own goals and objectives?

- The following article is from Jonathan Clements, "Ugly Math: How Soaring Housing costs are Jeopardizing Retirement Savings, *The Wall Street Journal*, March 25, 2005, p. D1. Instead of summarizing the article, I chose to copy it into the slides.

Getting Going / By Jonathan Clements

Ugly Math: How Soaring Housing Costs Are Jeopardizing Retirement Savings

TAKE A DEEP BREATH—and then look at the accompanying table.

There, you will find savings and debt guidelines put together by Charles Farrell, a financial consultant in Medina, Ohio. These guidelines will, I suspect, generate howls of outrage. But I think the table offers a much-needed reality check, especially for folks who are piling on the mortgage debt so they can play in today's overheated housing market.

The numbers tell you how much retirement savings and how much debt you should have, relative to your income, at different ages. Suppose you are 45 years old and hauling in $70,000 in annual income.

According to the table, you ought to have $210,000 saved for retirement and just $70,000 of debt. Are you hitting these targets? Probably not. Should you strive to catch up? You'd better believe it.

■ **Taking aim.** "I use the table with clients to see if they're behind the eight ball," explains Mr. Farrell, who specializes in advising individuals and corporations on retirement issues. "Are people a bit surprised by the ratios? Yeah, they're surprised. It can be a tough pill to swallow."

For instance, if you are 30, the table recommends limiting your total debt, including mortgage debt, to 1.7 times income. That is a lofty goal, especially if you live in a major city on the East or West coast, where most people have to borrow heavily to buy even a half-decent house.

Similarly, if you are 65 and about to quit the work force, the table indicates your nest egg should be equal to 12 times income. To many people, that will seem like an impossibly large sum.

But before you dismiss the table's targets as absurdly draconian, I have bad news. If anything, the targets aren't stringent enough. The reason: Underpinning the ratios are three key assumptions—and all three may be a tad optimistic.

First, Mr. Farrell assumes your retirement savings will earn roughly five percentage points a year more than inflation. You may have a tough time notching that sort of return, given today's rich stock-market valuations, skimpy bond yields and the drag from investment costs.

Second, Mr. Farrell assumes you will sock away about 12% of your pretax income for retirement every year from age 30 to 65. If your employer contributes 3% of your salary to your 401(k) plan, that would reduce your share to 9%. Your required annual savings would also be lower if you expect to receive a traditional company pension.

Still, let's be realistic: With the official savings rate hovering at about 1%, most folks—even with their employer's help—aren't saving anything like 12%.

Finally, Mr. Farrell may also be a little too

generous when it comes to retirement withdrawals. Today, many financial experts advise retirees to withdraw just 4% or 4.5% of their portfolio's value during the first year of retirement and thereafter to step up their annual withdrawals along with inflation. Mr. Farrell, however, assumes a 5% withdrawal rate.

Suppose you and your spouse earned $80,000 in your final working year and retire with 12 times that sum, or $960,000. A 5% withdrawal rate would give you $48,000 in the first year of retirement, or 60% of your preretirement income. "Throw on some Social Security, and the typical retiree would be up around 80%" of his or her preretirement income, Mr. Farrell figures.

■ **Catching up.** Wouldn't mind having that sort of retirement income? My advice: Stick close to the table's targets—or you could find yourself in a heap of trouble.

Let's say you are 40 and your family income is $100,000. The table says you should have $125,000 in debt and $180,000 of retirement savings. But instead, enamored by today's highflying real-estate market, you have plunked for the big house, leaving you with a whopping $300,000 of mortgage debt and just $50,000 in retirement savings.

Suddenly, the math gets really ugly. To get back on track, so you can retire with a portfolio big enough to generate 60% of your preretirement income, Mr. Farrell figures you would need to sock away 20% of your pretax income every year for the next 25 or 26 years. Hitting

Measuring Up

Are your finances on track? Look below. An example: If you're age 50 earning $100,000, you should have $450,000 in savings and $75,000 of debt.

AGE	SAVINGS-TO-INCOME	DEBT-TO-INCOME
30	0.1	1.70
35	0.9	1.50
40	1.8	1.25
45	3.0	1.00
50	4.5	0.75
55	6.5	0.50
60	8.9	0.20
65	12.0	0.00

Source: Dorman Farrell LLC

that savings target would be all but impossible, because mortgage payments and taxes would likely consume more than 40% of your income.

"There is a fundamental relationship between what you earn, how much debt you have and what you can afford to save," Mr. Farrell says. "If you're servicing too much debt, you can't hit your savings target."

Real-estate junkies would no doubt respond that, come 65, they can cash out some of their home equity and retire in style. That strikes me as a dubious strategy, for two reasons.

First, it assumes that today's highflying real-estate market will keep on soaring. Second, even if home prices hold up, these folks have severely crimped their ability to save, because real estate is devouring so much of their annual income. After all, the big house means not only big mortgage payments, but also hefty maintenance expenses, property taxes, utility bills and homeowner's insurance.

Got far more debt than the table suggests—and far less savings? There are ways to straighten out the mess, but the choices aren't pleasant.

"Maybe you should trade down earlier," Mr. Farrell says. "Maybe you need to delay retirement. Maybe you should talk to the kids about taking out loans for college. Maybe, if one spouse doesn't work, it's time to get a part-time job and then sock away all of that extra income."

Monitoring Progress (continued)

Age	Savings-to-Income	Debt-to-Income
30	0.1	1.70
35	0.9	1.50
40	1.8	1.25
45	3.0	1.00
50	4.5	0.75
55	6.5	0.50
60	8.9	0.20
65	12.0	0.00

This chart is from Doman Farrell, LLC as quoted in: Jonathan Clements, "Ugly Math: How Soaring Housing Costs are Jeopardizing Retirement Savings," Wall Street Journal, 23Mar05, p. D1.

Monitoring Progress (continued)

- What does this framework tell us?
  - It gives a reality check in today's overheated spending frenzy
  - It shows the relationship between savings and debt and how we need to manage both
  - It encourages us to reduce debt at the same time you increase savings

Monitoring Progress (continued)

- Assumptions of the article:
  - 1. Investors will earn 5% more than inflation
    - What do you think?
  - 2. Investors will save about 12% of pre-tax income every year from age 30 to 65
    - What do you think?
  - 3. Investors will withdraw 5% of portfolio value each year
    - What do you think?

Monitoring Progress (continued)

- Review of Assumptions
  - 1. You will earn 5% over inflation?
    - You may have a hard time achieving that return unless you have a preference for a larger equity allocation
  - 2. You will save 12% of pre-tax income
    - That is a challenge for most people
      - But not for students of this class
  - 3. You withdraw 5% of portfolio value each year
    - This is probably OK
- Overall, these guidelines are likely to be too soft. They should probably be made more stringent!!!

Monitoring Progress (continued)

- Is there a tool that would take into account where we are, where we want to be, and that could help us as we work toward retirement?
  - One suggestion is Retirement Planning Forecasts Ratio (LT25)
    - While it is still in preliminary form, it may be useful given different financial situations and goals

Monitoring Progress (continued)

- Advantages of [Retirement Planning Needs Forecasts](#) (LT25)

  - It shows that retirement is a planned process that can be charted and worked on

  - It gives basic assumptions that can be changed depending on your situation

  - It shows weaknesses in current plans and can help in the monitoring process

- Disadvantages

  - It is only as accurate as the respective inputs you put into the spreadsheet

D. Understand and Create your Retirement Plan

- Is it easy to come up with a retirement vision and plan?
  - No. It is very difficult because we all have different visions, goals, and plans
  - While it is difficult to develop, it is something that we should think about to give us motivation to prepare for retirement
  - Following are a few ideas

Vision and Strategies (continued)

- Vision
  - From your Plan for Life
- Goals
  - Take some assets and purchase an immediate annuity, which with Social Security and defined benefit plan will give a minimum level of income each year.
  - Take social Security at 3 years beyond full retirement age, and my spouse at full retirement age.
  - Our defined benefit payments will be for joint and survivor 100%, so that spouse will have sufficient.
  - Our home is paid for and we will have no debt
  - Retirement portfolios will be 40% tax-deferred, 30% Roth, and 30% taxable to target tax rates.

Vision and Strategies (continued)

- Plans and Strategies

- *Accumulation Stage: Age 33-65*

  - Continue to save and invest 20% of all earnings, with 15% going into retirement consistent with our risk

  - 2% will go into our children's education and mission accounts consistent with our Mission/Education Plans.

  - 3% we will use to pay down the mortgage with a goal is to have it paid off by the time I turn 45.

  - We will pay all tithes and offerings and rebalance our investment portfolio to asset allocation targets with appreciated securities to minimize taxes.

Stages and Strategies (continued)

- *Other Accumulation strategies* could include:
  - Live on a budget , save 20%, get the company match
  - Save 20%, 15% into your Roth 401k, 3% for other goals, and 2% for children's mission and education
  - Invest in Roth accounts while young and rates are low. Use these to target tax rate in retirement (to a low level)
  - Maximize investments in Roth vehicles as you are actually saving more for retirement
  - Plan to have all debts paid off before retirement. Do not go into retirement with debt
  - Plan, if desired, to not take social security until 3 years past full retirement age to maximize benefits
  - Live like a retiree before you retire, so there are fewer fixed expenses

Vision and Strategies (continued)

- Plans and Strategies (continued)

- *Retirement Stage Age 65 – 70.*

  - Take a portion of assets and purchase a 5 year immediate annuity, which with Social Security and defined benefit payments, be sufficient to give our minimum level of retirement income.

  - Save 5% during this period, although overall resources will be diminished due to helping to pay for our children's education/missions.

  - Go on our 1st mission at 65, and use this time to convert traditional accounts into Roth accounts.

  - We will likely come back to teaching until age 70, then go on four other missions, subject to our health.

Stages and Strategies (continued)

- *Other Retirement strategies* might include:
  - Calculate a *minimum level of retirement income*, and annuitize that amount (if you have assets).
  - Take a percentage of your assets at retirement (if sufficient) to purchase an ***immediate*** annuity to give you your minimum acceptable level of income
  - Regardless of when you retire, take SS at 3 years beyond Full Retirement Age to get the maximum you can and leave the most for your spouse at death
  - Have all debts paid off before you retire so you have fewer fixed expenses and hence taxes
  - Have both Roth and traditional retirement assets so you can target your tax rates in retirement

Vision and Strategies (continued)

- Plans and Strategies (continued)

- *Distribution Stage: Age 70 - 97*

  - Take social Security at 3 years beyond full retirement age, and my wife at full retirement age.

  - Our work defined benefit payments will start at age 70, and will be for joint and survivor 100%.

  - Our home will be paid for and we will have no debt

  - We pay cash for all vehicles and keep them a minimum of 10 years.

  - We will continue to pay tithes and offerings with appreciated securities and will enjoy life to the fullest.

Stages and Strategies (continued)

- *Other Distribution strategies* might include:
  - Set up a framework to not outlive your assets.
    - Take out a maximum of 3.6% of assets each year
    - Take out earnings from investments of previous year
  - Have taxable (tax now), Roth (rarely taxed) and traditional (taxes later) to target your rate in retirement
  - Set a target tax rate, then use traditional assets to that amount, then Roth assets afterwards to reduce taxes
  - Make sure to pay your Required Minimum Distributions
  - During your later years which your income is less, i.e., during missions, transfer money from your tax-deferred to tax-eliminated Roth accounts
  - Have your house paid for so you have fewer fixed expenses

Vision and Strategies (continued)

- Constraints
  - Budget. We will continue to live on a budget and save for our individual and family vision and goals
  - Saving. We will continue to save 20% of gross income per year, with 15% going into retirement vehicles
  - Health. We will always have sufficient health coverage, through both government and private coverage
  - Sin. We will guard against loss of the Spirit, testimony and eternal lives. We will continue serving, reading our scriptures, attending the temple, etc. to help us become more like the Savior

- Accountability:
  - From your Plan for Life

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Review of Objectives

A. Do you understand why retirement planning is critical and the principles of successful retirement planning?

B. Can you name the important steps and stages of retirement planning and the key payout options at retirement?

C. Do you know one way of how to monitor retirement performance?

D. Can you create your Retirement Plan?

Case Study #1

Data:

- Clint and Abby, both age 30, are putting together their future retirement income and expense projection. They hope to retire in 35 years at age 65. They determined that they would have retirement income of $15,000 each year in today's dollars before-tax ($10,000 from Social Security and $5,000 from their savings), and they would need $60,000 before-tax in retirement income to retire comfortably.
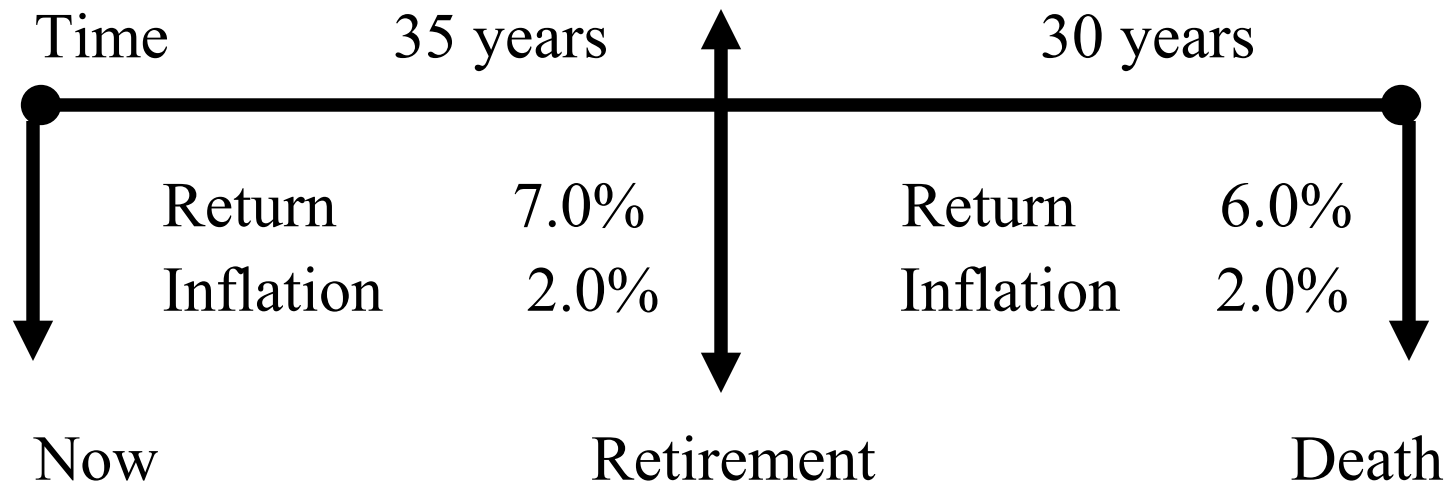
Calculations:

- How much must Clint and Abby save annually for 30 years of retirement if they wish to meet their income projection, assuming a 2 percent inflation rate both before and after retirement, and an 7.0 percent return on investments before retirement, and 6.0 percent during retirement.

Clint and Abby, 30, retire in 35 years, have retirement income of $15,000 each year in today's dollars before tax, need $60,000 before-tax. Calculate the amount to save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 7% return before retirement, and 6% during retirement.

- First, draw the diagram, then:
  1. Calculate the Shortfall
  2. Inflation adjust the shortfall
  3. Calculate the real return and the annuity
  4. Calculate the period payment

Time	35 years		30 years	
Return	7.0%		Return	6.0%
Inflation	2.0%		Inflation	2.0%
Now		Retirement		Death

Clint and Abby, 30, retire in 35 years, have retirement income of $15,000 each year in today's dollars before tax, need $60,000 before-tax. Calculate the amount to save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 7% return before retirement, and 6% during retirement.

- 1. Calculate the shortfall (all on a before tax basis as stated):
  - The shortfall is $60,000 – $15,000 = ?
    - C and A's shortfall is $45,000 before tax.
- 2. Calculate the inflation-adjusted shortfall (end mode):
  - The adjustment is PV=$45,000, I=2%, N=35, FV=?
    - Clint and Abby need $89,995 each year (you can round to the closest dollar)
- 3. Calculate the real return and annuity:
  - The real return is (1 + nominal return)/(1 + inflation) – 1 or (1.06)/(1.02) – 1 = ?
    - The real return is 3.92%

Clint and Abby, 30, retire in 35 years, have retirement income of $15,000 each year in today's dollars before tax, need $60,000 before-tax. Calculate the amount to save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 7% return before retirement, and 6% during retirement.

- To calculate an annuity (remember you will want the payments at the beginning of the period so use the begin mode on your calculator)
  - To get the annuity, set PMT = $89,995, N = 30, I = 3.92%, and solve for PV
    - C and A need $1,632,737 to be available in 35 years to give them the annuity for 30 years
- 4. Calculate the period payment (use end mode)
  - To get this future amount, we set the FV = $1,632,737, N = 35, I = 7.0%, and calculate the PMT=?
  - C and A need to save $11,811 each year to meet their retirement goal ($907 per month)

Clint and Abby, 30, retire in 35 years, have retirement income of $15,000 each year in today's dollars before tax, need $60,000 before-tax. Calculate the amount to save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 7% return before retirement, and 6% during retirement.

Determining Your Retirement Needs Worksheet (LT06)
Before Tax Analysis
Personal Finance: Another Perspective

Directions: Fill the green cells with your data. Be careful not to modify the blue cells. Percentages must be converted to decimal form. Be careful with before- and after-tax amounts.

Key Data:

Amount Needed and Expected Annually

a. Desired before-tax Amount of Money Needed at Retirement	60,000
b. Before-tax Money expected at retirement (SS, DBP, earnings)	15,000

Before Retirement

c. Number of Years Till Retirement that Investments Will Grow	35
d. Estimated Average Growth Rate of Investments Until Retirement	7.0%
e. Estimated Average Annual Rate of Inflation Until Retirement	2.0%

Retirement

f. Number of Years In Retirement	30
g. Estimate Growth Rate of Investments During Retirement	6.0%
h. Estimated Annual Rate of Inflation During Retirement	2.0%
i. Estimated tax rate in retirement	20.0%

Step 1: Calculate Your Shortfall

A. Desired before-tax Amount of Money Needed at Retirement	60,000
B. Before-tax money expected at retirement (includes Social Security, D	15,000
C. Calculate your Shortfall in today's dollars	45,000

Step 2: Inflation Adjust Your Shortfall

A. Number of Years Till Retirement	35
B. Inflation Rate until retirement	2.00%
C. The Inflation Adjusted shortfall?	89,995

The calculation is PV = $45,000 I = 2.00%, N = 35, Solve for FV

Step 3: Calculate Your Real Return and Annuity

A. Nominal return during retirement	6.0%
B. Inflation during retirement	2.00%
C. Real return [(1 + nominal return)/(1 + inflation)] - 1	3.92%
D. Amount needed each year in retirement	$89,995
E. Number of Years In Retirement	30
F. Annuity needed to provide this benefit?	$ 1,632,737

The calculation is PMT = $89,995., I = 3.92%, N = 30 (begin mode), Solve for FV

Step 4: Calculate your Amount Needed to Save Each Month

A. Target amount needed at retirement	$ 1,632,737
B. Number of Years Until Retirement	35
C. Estimate Growth Rate of Investments Before Retirement	7.0%
D. Total Investment Amount needed each month in today's dollars	$907

The calculation is FV = $1,632,737, N = 35*12, I = 7.00%/12, Solve for PMT

E. Total Investment Amount needed annually in today's dollars	$11,811

The calculation is FV = $1,632,737, N = 35, I = 7.00%, Solve for PMT

Step 5. Start saving now!!!!!!!!!

Case Study #2

Data:

- Clint and Abby Smith are now 45 years old with six kids and are making $82,000 per year. They are 20 years into their retirement plan. They have $115,000 in savings, and their remaining balance on their home mortgage and credit card debt is $150,000. They have saved only 5% per year and have earned 7% on their savings, and have felt that was sufficient.

Calculations:
    Are they on-track for retirement or not?
    Calculate their income/debt ratio's from the Wall Street Journal article

AGE	SAVINGS-TO-INCOME	DEBT-TO-INCOME
30	0.1	1.70
35	0.9	1.50
40	1.8	1.25
45	3.0	1.00
50	4.5	0.75
55	6.5	0.50
60	8.9	0.20
65	12.0	0.00

Source: Dorman-Farrell LLC

Application:
    How are they doing, and what more should they be doing?

Getting Going / By Jonathan Clements

Ugly Math: How Soaring Housing Costs Are Jeopardizing Retirement Savings

TAKE A DEEP BREATH—and then look at the accompanying table.

There, you will find savings and debt guidelines put together by Charles Farrell, a financial consultant in Medina, Ohio. These guidelines will, I suspect, generate howls of outrage. But I think the table offers a much-needed reality check, especially for folks who are piling on the mortgage debt so they can play in today's overheated housing market.

The numbers tell you how much retirement savings and how much debt you should have, relative to your income, at different ages. Suppose you are 45 years old and hauling in $70,000 in annual income.

According to the table, you ought to have $210,000 saved for retirement and just $70,000 of debt. Are you hitting these targets? Probably not. Should you strive to catch up? You'd better believe it.

■ **Taking aim.** "I use the table with clients to see if they're behind the eight ball," explains Mr. Farrell, who specializes in advising individuals and corporations on retirement issues. "Are people a bit surprised by the ratios? Yeah, they're surprised. It can be a tough pill to swallow."

For instance, if you are 30, the table recommends limiting your total debt, including mortgage debt, to 1.7 times income. That is a lofty goal, especially if you live in a major city on the East or West coast, where most people have to borrow heavily to buy even a half-decent house.

Similarly, if you are 65 and about to quit the work force, the table indicates your nest egg should be equal to 12 times income. To many people, that will seem like an impossibly large sum.

But before you dismiss the table's targets as absurdly draconian, I have bad news. If anything, the targets aren't stringent enough. The reason: Underpinning the ratios are three key assumptions—and all three may be a tad optimistic.

First, Mr. Farrell assumes your retirement savings will earn roughly five percentage points a year more than inflation. You may have a tough time notching that sort of return, given today's rich stock-market valuations, skimpy bond yields and the drag from investment costs.

Second, Mr. Farrell assumes you will sock away about 12% of your pretax income for retirement every year from age 30 to 65. If your employer contributes 3% of your salary to your 401(k) plan, that would reduce your share to 9%. Your required annual savings would also be lower if you expect to receive a traditional company pension.

Still, let's be realistic: With the official savings rate hovering at about 1%, most folks—even with their employer's help—aren't saving anything like 12%.

Finally, Mr. Farrell may also be a little too

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generous when it comes to retirement withdrawals. Today, many financial experts advise retirees to withdraw just 4% or 4.5% of their portfolio's value during the first year of retirement and thereafter to step up their annual withdrawals along with inflation. Mr. Farrell, however, assumes a 5% withdrawal rate.

Suppose you and your spouse earned $80,000 in your final working year and retire with 12 times that sum, or $960,000. A 5% withdrawal rate would give you $48,000 in the first year of retirement, or 60% of your preretirement income. "Throw on some Social Security, and the typical retiree would be up around 80%" of his or her preretirement income, Mr. Farrell figures.

■ **Catching up.** Wouldn't mind having that sort of retirement income? My advice: Stick close to the table's targets—or you could find yourself in a heap of trouble.

Let's say you are 40 and your family income is $100,000. The table says you should have $125,000 in debt and $180,000 of retirement savings. But instead, enamored by today's highflying real-estate market, you have plunked for the big house, leaving you with a whopping $300,000 of mortgage debt and just $50,000 in retirement savings.

Suddenly, the math gets really ugly. To get back on track, so you can retire with a portfolio big enough to generate 60% of your preretirement income, Mr. Farrell figures you would need to sock away 20% of your pretax income every year for the next 25 or 26 years. Hitting

Measuring Up

Are your finances on track? Look below. An example: If you're age 50 earning $100,000, you should have $450,000 in savings and $75,000 of debt.

AGE	SAVINGS-TO-INCOME	DEBT-TO-INCOME
30	0.1	1.70
35	0.9	1.50
40	1.8	1.25
45	3.0	1.00
50	4.5	0.75
55	6.5	0.50
60	8.9	0.20
65	12.0	0.00

Source: Dorman Farrell LLC

that savings target would be all but impossible, because mortgage payments and taxes would likely consume more than 40% of your income.

"There is a fundamental relationship between what you earn, how much debt you have and what you can afford to save," Mr. Farrell says. "If you're servicing too much debt, you can't hit your savings target."

Real-estate junkies would no doubt respond that, come 65, they can cash out some of their home equity and retire in style. That strikes me as a dubious strategy, for two reasons.

First, it assumes that today's highflying real-estate market will keep on soaring. Second, even if home prices hold up, these folks have severely crimped their ability to save, because real estate is devouring so much of their annual income. After all, the big house means not only big mortgage payments, but also hefty maintenance expenses, property taxes, utility bills and homeowner's insurance.

Got far more debt than the table suggests—and far less savings? There are ways to straighten out the mess, but the choices aren't pleasant.

"Maybe you should trade down earlier," Mr. Farrell says. "Maybe you need to delay retirement. Maybe you should talk to the kids about taking out loans for college. Maybe, if one spouse doesn't work, it's time to get a part-time job and then sock away all of that extra income."

Source: WSJ, 23Mar05, p. D1.

Clint and Abby, 45, $82,000 salary, 20 years into their retirement plan, $115,000 in savings, and $150,000 in debt. Are they on-track for retirement or not? How are they doing? What should they do more?

Calculations

Are they on track? You can't tell until you calculate their ratios

Current	Salary	Savings	Debt
• Age 45	$82,000	$115,000	$150,000

• Ratios	Current	Recommended
Savings to income ratio	1.40 ($115/82)	> 3.0
Debt to income ratio	1.83 ($150/82)	< 1.0

Results

• They are way behind on their savings and debt goals for retirement.

AGE	SAVINGS-TO-INCOME	DEBT-TO-INCOME
30	0.1	1.70
35	0.9	1.50
40	1.8	1.25
45	3.0	1.00
50	4.5	0.75
55	6.5	0.50
60	8.9	0.20
65	12.0	0.00

Source: Dorman-Farrell LLC

Clint and Abby, 45, $82,000 salary, 20 years into their retirement plan, $115,000 in savings, and $150,000 in debt. Are they on-track for retirement or not? How are they doing? What should they do more?

- Application:
  - They have too little savings and too much debt
    - They need to save an even bigger percentage of their salary (I suggest 20%)
    - They need to work harder if retirement is really a goal
  - What should they be doing?
    - They have too much debt
      - They may need to sell assets to reduce debt
      - They may need to downsize
    - They have not been saving enough
      - They need to begin saving a larger percentage of their income!

Case Study #3

- Data

  - Lets take this same couple who have only been saving 5% and make a few more assumptions to bring it in line with our previous case. Assume they took out a $250,000 mortgage at age 30 at 4% (which would give them their $150,000 remaining debt). Add in their $115,000 savings. Assuming they can buy an annuity at retirement earning 4.0%, how much will saving 20% until retirement allow them to take out each year.

    - To answer this question, I tried to take the WSJ article intent and allow for changes due to age, buying a house, prepaying the mortgage, etc. to create Retirement Planning Forecasts Ratio (LT25). While it is still in preliminary form, use it to solve for how much will saving 20%, starting now, roughly give them in retirement?

Case Study #3 Answers

Retirement Planning Ratio Forecasts (LT25)

Debt and Income Information

Age at beginning of employment	45
Starting Income	$ 82,000
Average annual increase in income	1.5%
Age at retirement	65
Years in Retirement	30
Number of Working Years	20
Estimated Annuity Rate (in %)	4.0%
Estimated Payout Percentage (in %)	4.0%
Annual percent of salary saved	5.0%
Current Savings	115,000
Return on Investment	7.0%
Assumed inflation rate	
Age when you purchase(d) home	30
Cost of the home	250,000
Down Payment	
Mortgage amount	$ 250,000
Taxes and Insurance	3,000
Mortgage interest rate	4.0%
Mortgage term	30
Years to pay off loan	30
Assumed growth in home prices	

Estimated Savings and Debt to Income Ratios / WSJ Recommended Ratios

Age	Savings	Debt	Savings	Debt
25				
30	NA	NA	0.10	1.70
35	NA	NA	0.90	1.50
40	NA	NA	1.80	1.25
45	1.45	1.86	3.00	1.00
50	2.19	1.22	4.50	0.75
55	3.15	0.55	6.50	0.50
60	4.40	-	8.90	0.20
65	6.02	-	12.00	-
			Note 1	Note 2

Total Savings at Retirement

		Annuity Pymt	Payout Pymt
Total Savings	$ 665,128	38,464	26,605
Savings to Income / % of Salary	6.02	35%	24%
Total Inflation-adjusted Savings $	220,114	12,729	11,006
Savings to Income / % of Salary	1.99	12%	10%

As a % of Salary		PITI should be less than 36%
Mortgage Payment before Prepm	21%	

Notes:
1. The annuity payment is calculated based on your estimated annuity rate in F19.
2. 5% Payout assumes a 5% reduction in total savings per year

Saving their current 5%, they will only have about 35% of what they need. They must save more

Case Study #4 Answers

Retirement Planning Ratio Forecasts (LT25)

Debt and Income Information	
Age at beginning of employment	45
Starting Income	$ 82,000
Average annual increase in income	1.5%
Age at retirement	65
Years in Retirement	30
Number of Working Years	20
Estimated Annuity Rate (in %)	4.0%
Estimated Payout Percentage (in %)	4.0%
Annual percent of salary saved	20.0%
Current Savings	115,000
Return on Investment	7.0%
Assumed inflation rate	
Age when you purchase(d) home	30
Cost of the home	250,000
Down Payment	
Mortgage amount	$ 250,000
Taxes and Insurance	3,000
Mortgage interest rate	4.0%
Mortgage term	30
Years to pay off loan	30
Assumed growth in home prices	

Estiomated Savings and Debt to Income Ratios			WSJ Recommended Ratios	
Age	Savings	Debt	Savings	Debt
25				
30	NA	NA	0.10	1.70
35	NA	NA	0.90	1.50
40	NA	NA	1.80	1.25
45	1.60	1.86	3.00	1.00
50	3.28	1.22	4.50	0.75
55	5.46	0.55	6.50	0.50
60	8.30	-	8.90	0.20
65	12.00	-	12.00	-
			Note 1	Note 2

Total Savings at Retirement		Annuity Pymt	Payout Pymt
Total Savings	$ 1,325,471	76,652	53,019
Savings to Income / % of Salary	12.00	69%	48%
Total Inflation-adjusted Savings	$ 880,457	50,917	44,023
Savings to Income / % of Salary	7.97	46%	40%

As a % of Salary		PITI should be less than 36%
Mortgage Payment before Prepm	21%	

Notes:
1. The annuity payment is calculated based on your estimated annuity rate in F19.
2. 5% Payout assumes a 5% reduction in total savings per year

Increasing their savings rate to 20%, they will have about 70% of[63] what they need. They must get serious and save more

Case Study #4

Data:

- Clint and Abby, both age 35, recently reviewed their future retirement income and expense projection. They hope to retire in 25 years. They determined that they would have a retirement income of $25,000 each year in today's dollars before-tax ($10,000 from Social Security and $15,000 from their savings), but they would actually need $67,500 before-tax in retirement income to retire comfortably.
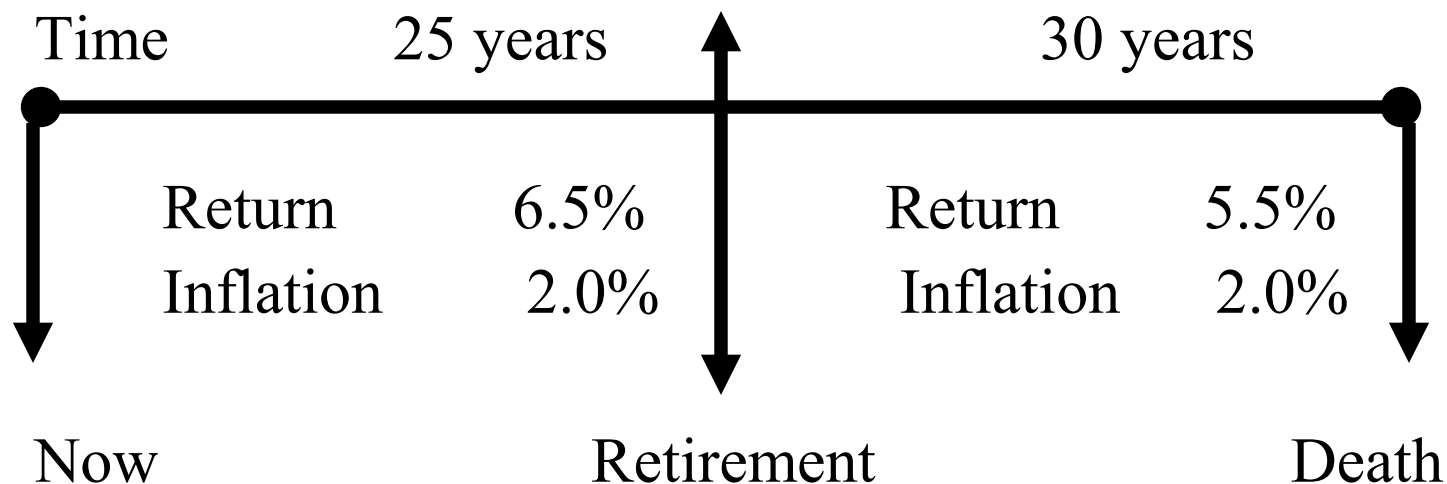
Calculations:

- How much must Clint and Abby save annually for 30 years of retirement if they wish to meet their income projection, assuming a 2 percent inflation rate both before and after retirement, and an 6.5 percent return on investments before retirement, and 5.5 percent during retirement.

Clint and Abby, 35, retire in 25 years, have retirement income of $25,000 each year in today's dollars before tax, need $67,500 before-tax. Calculate the amount they must save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 8% return before retirement, and 7% during retirement.

- First, draw the diagram, then:
  1. Calculate the Shortfall
  2. Inflation adjust the shortfall
  3. Calculate the real return and the annuity
  4. Calculate the period payment

Time	25 years		30 years	
Return	6.5%		Return	5.5%
Inflation	2.0%		Inflation	2.0%
Now		Retirement		Death

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Clint and Abby, 35, retire in 25 years, have retirement income of $25,000 each year in today's dollars before tax, need $67,500 before-tax. Calculate the amount they must save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 6.5% return before retirement, and 5.5% during retirement.

- 1. Calculate the shortfall (all on a before tax basis as stated):
  - The shortfall is $67,500 – $25,000 = ?
    - C and A's shortfall is $42,500 before tax.
- 2. Calculate the inflation-adjusted shortfall (end mode):
  - The adjustment is PV=$42,500, I=2%, N=25, FV=?
    - Clint and Abby need $69,726 each year (you can round to the closest dollar)
- 3. Calculate the real return and annuity:
  - The real return is (1 + nominal return)/(1 + inflation) – 1 or (1.055)/(1.02) – 1 = ?
    - The real return is 3.43%

Clint and Abby, 35, retire in 25 years, have retirement income of $25,000 each year in today's dollars before tax, need $67,500 before-tax. Calculate the amount they must save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 6.5% return before retirement, and 5.5% during retirement.

- To calculate an annuity (remember you will want the payments at the beginning of the period so use the begin mode on your calculator)
  - To get the annuity, set PMT = $69,726, N = 30, I = 3.43%, and solve for PV
    - C and A need $1,337,882 to be available in 25 years to give them the annuity for 30 years
- 4. Calculate the period payment (use end mode)
  - To get this future amount, we set the FV = $1,337,882, N = 25, I = 6.5%, and calculate the PMT=?
  - C and A need to save $22,719 each year to meet their retirement goal ($1,787 per month)

Clint and Abby, 35, retire in 25 years, have retirement income of $25,000 each year in today's dollars before tax, need $67,500 before-tax. Calculate the amount they must save annually for 30 years of retirement, assuming 2% inflation both before and after retirement, and an 6.5% return before retirement, and 5.5% during retirement.

From Retirement Needs Worksheet (LT06),
Retirement Needs – Before

Determining Your Retirement Needs Worksheet (LT06)
Before Tax Analysis
Personal Finance: Another Perspective

Directions: Fill the green cells with your data. Be careful not to modify the blue cells. Percentages must be converted to decimal form. Be careful with before- and after-tax amounts.

Key Data:

Amount Needed and Expected Annually

a. Desired before-tax Amount of Money Needed at Retirement	67,500
b. Before-tax Money expected at retirement (SS, DBP, earnings)	25,000

Before Retirement

c. Number of Years Till Retirement that Investments Will Grow	25
d. Estimated Average Growth Rate of Investments Until Retirement	6.5%
e. Estimated Average Annual Rate of Inflation Until Retirement	2.0%

Retirement

f. Number of Years In Retirement	30
g. Estimate Growth Rate of Investments During Retirement	5.5%
h. Estimated Annual Rate of Inflation During Retirement	2.0%
i. Estimated tax rate in retirement	20.0%

Step 1: Calculate Your Shortfall

A. Desired before-tax Amount of Money Needed at Retirement	67,500
B. Before-tax money expected at retirement (includes Social Security	25,000
C. Calculate your Shortfall in today's dollars	42,500

Step 2: Inflation Adjust Your Shortfall

A. Number of Years Till Retirement	25
B. Inflation Rate until retirement	2.00%
C. The Inflation Adjusted shortfall?	69,726

The calculation is PV = $42,500 I = 2.00%, N = 25, Solve for FV

Step 3: Calculate Your Real Return and Annuity

A. Nominal return during retirement	5.5%
B. Inflation during retirement	2.00%
C. Real return [(1 + nominal return)/(1 + inflation)] – 1	3.43%
D. Amount needed each year in retirement	$69,726
E. Number of Years In Retirement	30
F. Annuity needed to provide this benefit?	$ 1,337,882

The calculation is PMT = $69,726., I = 3.43%, N = 30 (begin mode), Solve for FV

Step 4: Calculate your Amount Needed to Save Each Month

A. Target amount needed at retirement	$ 1,337,882
B. Number of Years Until Retirement	25
C. Estimate Growth Rate of Investments Before Retirement	6.5%
D. Total Investment Amount needed each month in today's dollars	$1,787

The calculation is FV = $1,337,882, N = 25*12, I = 6.50%/12, Solve for PMT

E. Total Investment Amount needed annually in today's dollars	$22,719

The calculation is FV = $1,337,882, N = 25, I = 6.50%, Solve for PMT

Step 5. Start saving now!!!!!!!!!