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Money Management Skills

Course Guidebook

Professor Michael Finke
Texas Tech University

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Michael Finke, Ph.D.

Professor of Personal Financial Planning
Director of the Retirement Planning
and Living Consortium
Texas Tech University

Professor Michael Finke is a Professor of Personal Financial Planning and Director of the Retirement Planning and Living Consortium at Texas Tech University, where he leads the doctoral program—considered the premier academic program in financial planning. He completed a doctoral degree in Consumer Science from The Ohio State University in 1998 and in Finance from the University of Missouri in 2011. He is the former editor of the *Journal of Personal Finance* and is currently a contributing editor to *Research* magazine. A longtime advocate for ethical financial advice, Professor Finke is the former president of the American Council on Consumer Interests and serves as an expert on regulatory and legal issues related to financial planning.

Professor Finke has authored a number of award-winning research articles in the fields of retirement income, investment advice, and investor decision making. In total, he has published more than 50 peer-reviewed articles and book chapters on personal finance topics.

Professor Finke also has received numerous awards as an instructor of a wide range of financial planning courses, from basic undergraduate personal finance to doctoral-level research methods. He frequently speaks at industry and academic conferences on advanced financial planning topics. In 2012, he was named to the *InvestmentNews* Power 20 list for his research on the impact of proposed fiduciary legislation on the brokerage industry, and in 2013 and 2014, he was named to the *Investment Advisor* IA 25 list of most influential people in the investment advising industry.

As an expert on personal finance issues, Professor Finke has appeared in the national press, including *The Wall Street Journal*, *The New York Times*,

USA TODAY, *Kiplinger's Personal Finance*, and *SmartMoney*. He is also a frequent guest on national radio shows, such as NPR's *On Point* with Tom Ashbrook. ■

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Money Management Skills

Scope:

Managing money is more than being frugal. It's about recognizing how we respond emotionally to financial decisions, understanding the basics of financial products and markets, and creating a plan that helps us reach our life goals. This course will guide you through the surprisingly fascinating world of how we manage money throughout our lifetime. You will explore new research that explains how our intuition leads us to make common mistakes, review the most important information about financial products and theories, and learn how to create a financial plan—even if you've had a difficult time staying on track in the past.

In the first lecture and throughout the course, you will learn how our emotions often lead us to make the wrong decisions. The emerging field of behavioral finance shows us why we have a difficult time dealing with risk, choose the wrong investments, buy the wrong kinds of insurance, and fail to meet our goals. The first step to creating a financial plan isn't necessarily knowing what we should do—it's knowing our limitations so we can implement strategies that are going to work.

The fundamental theory that guides money management is life cycle finance. When we make money decisions, they have consequences that ripple throughout our life. You'll learn how we can use this framework to make better and more consistent choices in all of our financial matters. You'll also learn when and why it makes sense to borrow and save and what it really means to take investment risk. The life cycle framework is a powerful concept that will change the way you think about managing money.

Within this framework, you will be given the information you need to know to make better financial choices over a lifetime. Modern portfolio theory and market efficiency make selecting the right investments surprisingly easy. You'll learn how to choose mutual funds in a 401(k) and how to manage different accounts to give you the highest possible return for the amount of risk you want to take.

Following a life cycle plan involves understanding our choices for borrowing and investing over time. Education is among our most important investments. You will be introduced to the options for saving for educational expenses, and you will determine whether it makes sense to go into debt to pay for college. You will learn how to manage credit and debit cards, how to obtain and maintain credit scores, and how the credit industry works. You will also learn the pros and cons of buying a home, how to qualify for a mortgage, and what types of mortgages make the most sense.

The science of risk management explains how we should choose insurance products that protect against big risks while ignoring some popular products that aren't as valuable. You will be introduced to the basic philosophy of the federal tax system, along with the various deductibles and exemptions we can use to lower our tax bill. You will learn about the most important aspects of planning an estate, including options to transferring assets outside of a will and the legal documents everyone should complete to ensure that we and our loved ones are cared for. Retirement planning involves estimating how much we'll need to save for retirement, when we should retire, and how best to invest to meet our retirement goals.

The final lecture of this course covers the basics of putting together your own financial plan and how to hire an expert to help you through the process. You will learn the steps involved in putting together a budget that balances future goals with spending needs. You will also learn how to create an investment policy statement and how to manage investments over time. The lecture will demystify the investment advising business by reviewing the types of financial advisers, how they are paid, and who does and does not have to make recommendations in your best interest. ■

Understanding Your Financial Brain

Lecture 1

How do we prepare ourselves for an uncertain financial future when so much is at stake? Money management requires knowledge of financial products, investment and risk theory, and tax rules. But it also requires an understanding of how we as fallible humans make mistakes. In this course, you will learn the most important information you need to manage your finances. You will also gain insight from the emerging science of personal financial decision making so that you can avoid following your emotions down the wrong path.

Financial Decisions and the Brain

- Especially when it comes to financial decisions, our brain is in a constant struggle. We know what we should do, but we often don't do it. That's because we don't have just one cognitive system; we have two primary brain parts that influence how we respond to money.

- Most Americans believe that they should save more than they are saving for retirement—but not enough to actually do something about it. When we're planning for the future, we use a small part of our brain right behind our eyes called the prefrontal cortex. This part of the brain likes to think it's in control. In fact, when faced with evidence that it's not in control, it goes to great lengths to justify why we, for example, sold all our stock after a market crash.

- The truth is that the prefrontal cortex we use in conscious decision making isn't really in control at all. It has been likened to a rider sitting on top of an elephant. The rider can generally guide the elephant around just fine, until the elephant decides it really wants to go somewhere else.

- The elephant part of our brain is called the limbic system. It is a much older part of the brain and takes up much more real estate

in your head. It's responsible for things like emotions, automatic responses to stimuli, and memory. It takes a lot of work to keep your prefrontal cortex activated. The limbic system is a lot faster and more efficient, and it's the part that we use most often in our daily tasks.

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Financial planning causes a struggle between the rational brain and the emotional brain.

- Successful financial planning means not only knowing what to do but how to create a plan that will actually work. That means recognizing that we will be tempted by impulse spending with credit cards or never actually putting money in our 401(k), especially if we've had these problems in the past. The best plan is one that keeps our emotions in check.

- Another conflict between the rational brain and the emotional brain is something economists call hyperbolic discounting. Experiments show that we have a tendency to be very impatient when making decisions in the present and are much more patient when making decisions about the future. In a brain scan, the prefrontal cortex lights up when you engage in planning for the future, but the limbic system lights up when making decisions right now.

- Research shows that when CEOs get more cash, they tend to spend it on buying other companies or investing in questionable projects. We all have a hard time resisting temptation. The best way to resist temptation is to get rid of it. Savings accounts are a great example of a concept known as narrow framing, or simply framing, that

financial planners have been using for decades to help their clients meet long-term goals.

- If you deposit a 10,000-dollar paycheck into your checking account, it's going to get spent. A better strategy would be to deposit the paycheck into a savings account and then transfer money to the checking account when you need it. Savings accounts often require a few days to transfer assets to a checking account before you can spend it. Because the transfer happens in the future, you have to use your rational brain. This can reduce annual spending by thousands if you force your rational brain to intervene before your limbic brain gets tempted.

Loss Aversion

- Our emotions have a difficult time dealing with a loss. Why do we dwell on losses? Our best guess is that loss aversion gave our ancestors a better chance of survival. If you freak out when you lose some of your stash of winter food, then you're more likely to make it to the next harvest. But that emotional response isn't that useful in modern financial markets. In fact, it is the reason why many people underperform the market, buy the wrong insurance, and avoid taking sensible risks.

- The 2008/2009 stock market crash was brutal for investors. Many financial advisors fielded dozens of calls from clients who wanted to stop the emotional pain and pull out of the market. Rationally, we know that stock prices tend to go through cycles and that the worst time to sell is after prices have fallen.

- But the rational part of our brain can be overruled by the much more powerful emotional part. Investors pulled record amounts of money out of stock funds in early 2009 when the market hit bottom. An investor who freaked out and sold 100 dollars in stock in early March 2009 and invested it in a money-market account would have earned a few dollars by the summer of 2013. The patient investors saw their stock investment climb more than double, to about 250 dollars.

- Loss aversion is fascinating because we seem to give a lot more weight to small losses than large ones. This isn't rational because small losses are a normal part of taking risk, and we get rewarded for accepting risk. People will buy an expensive insurance plan to protect themselves against the loss of a 500-dollar iPad, but they won't raise their liability limits on a car insurance plan to protect themselves against a much larger loss.

- We also tend to focus on a reference point. If you start a new investing plan, you'll tend to focus on the original amount you invest and compare your results to this reference point. Some investment advisors try to shift their clients' reference point by providing annual statements, which are less likely to show a loss from fluctuating markets, instead of quarterly statements.

- Loss aversion means we tend to not care enough about our gains. Experiments show that the unhappiness from a loss is greater than the pleasure you get from an equal-sized gain. The happiness that you get from a gain is related to a concept known as risk tolerance.

- If you're risk tolerant, or if your experience and knowledge allow you to control your emotional responses, then you'll be willing to lose money in order to make more on average over time. You'll begin to accept the losses as just an inevitable part of reaching your long-term financial goals. If you can control your myopic and loss-averse tendencies, you can achieve a long-term bonus by accepting investment risk.

Other Behavioral Barriers

- In addition to having difficultly controlling emotions like loss aversion, the prefrontal cortex is also slow and gets tired easily when we have to make too many decisions. A common sales tactic—for car salesmen, for example—is to overwhelm the customer with complicated information. When we're faced with information overload, we just want to make a decision and go home because our emotions have overwhelmed our weaker rational brain.

- Brain fatigue can lead to very bad decisions when we have to make an offer on a house, choose a mortgage, or even agree to buy an investment product from a salesman. The solution is to never make a big, important financial decision without sleeping on it. This is one piece of conventional wisdom that can be explained by neuroeconomics.

- Another limitation of our rational brain is a tendency to focus on more easily available information. For example, we tend to worry more about flying in an airplane if there has been a recent crash. But we're ignoring the fundamental probabilities that this event will occur when we overweigh recent events.

- The tendency to focus too much on recent events affects our general sentiment about the economy. It's well known that consumer sentiment ebbs and flows with business cycles. When there is an economic expansion, people tend to be very optimistic about the future. When there's a recession, we tend to be very pessimistic. When we're pessimistic, we start losing our love for risky assets like stocks. When we're optimistic, we can't buy enough stocks.

- This cyclical optimism and pessimism also impacts the expected return on stocks. When sentiment is low and stock prices fall, this can be an excellent time to rebalance your portfolio by selling bonds and buying more stocks—the opposite of what our emotions would tell us to do. When sentiment is high and stock prices rise, this can be a good opportunity to sell stocks and rebalance our portfolio into bonds.

- But this is also very difficult; it means that our rational brain has to override our emotional brain. Veteran investors can do this by reminding themselves of previous market recoveries. Or you can choose investments that automatically rebalance and avoid the elephant entirely.

- This benefit of automatic tools has been one of the most surprising and powerful findings from academic studies over the last decade.

Especially when it comes to saving for retirement, the best strategy is also to keep the elephant out of the process. This effect is so powerful that it has completely transformed how we think about retirement policy. Humans tend to follow the path of least resistance, and we often overestimate our future willingness to change our bad habits. Recognizing that we're probably going to be just as lazy tomorrow as we are today can help us select strategies that are more likely to work.

- Most advisors know that the single best way to get a client to save more for retirement is to have them bring in a retirement form from their personnel office, fill it out during the meeting, and then mail it back to their employer. Once an employee starts saving more for retirement, they tend to never notice the drop in their paycheck. Research shows that retirement savings are incredibly sticky; once you choose a percentage or monthly savings amount, almost all employees stay at that amount forever.

- Knowledge doesn't always equal success. More important than knowledge is the ability to use that knowledge to change habits and take steps to avoid forcing our rider to steer the elephant. And don't think that academics are any less overconfident in their ability to control the elephant—in fact, they're probably worse.

- Overconfidence is another important behavioral barrier to sound financial decision making. Men in particular seem to believe that they can do better than the market. Unfortunately, researchers have found that overconfident men tend to trade too often, and this frequent trading leads to investment performance that's lower than that of investment accounts owned by women. If you're a man, one surefire way to improve your investing performance is to accept a dose of humility and stop trying to beat the market.

- Another important finding from investment account research is that we all have a tendency to sell our winning stocks and keep our losing stocks. This is also related to loss aversion. It would be painful to lock in a loss by selling a stock that's fallen in value,

but it makes us feel good to lock in gains from a winning stock. Investors will predictably sell their winners and keep their losers.

- The problem is that stock prices tend to exhibit short-term momentum: Today's winners are probably going to also be winners tomorrow, and today's losers are probably going to keep falling tomorrow. So, the best strategy is either to sit tight or get rid of our losers. But that means having a fight with the elephant.

Suggested Reading

Angeletos, Laibson, Repetto, Tobacman, and Weinberg, "The Hyperbolic Consumption Model."

Barberis and Thaler, "A Survey of Behavioral Finance."

Camerer, Loewenstein, and Prelec, "Neuroeconomics."

Questions to Consider

1. How are long-term financial goals affected by the struggle between the elephant and the rider, and how can the rider outsmart the elephant?

2. How can we learn to accept risk if our emotional response to loss is so powerful?

Managing Money with Life Cycle Theory

Lecture 2

In economics, the framework that is used to make financial decisions is known as life cycle theory. Unlike many scientific theories, this one is fairly easy to understand. But despite its simplicity, life cycle theory is incredibly powerful at helping us make sense of financial decisions. The basic logic of life cycle finance is that you should spend your money when it gives you the most happiness and save it in times of plenty. By the end of this lecture, you might have a completely different perspective about your financial life.

Assumptions of Life Cycle Theory

- If you're going to buy into life cycle theory, you have to understand some of its assumptions. None of these assumptions are radical; they all make sense. But combine these sensible assumptions into a framework and you can get some very surprising results. You may find that behaviors you thought were sensible aren't so sensible under life cycle theory. And you may find that financial choices that seemed unreasonable are actually rational.

- One assumption of life cycle theory is what economists call decreasing marginal utility of money, where "utility" is another word for happiness and "marginal" means the amount of happiness we get from spending each additional dollar. The decreasing marginal utility assumption says that we get a little less happiness from each additional dollar we spend.

- That's the essence of life cycle finance. Think of borrowing and saving not as bad or good but as what it actually is—a transfer of spending across our lifetime. Borrowing means you spend less in the future in order to spend more today. Saving means you spend less today so you can spend more in the future.

- According to life cycle finance, you're doing it right if the amount of happiness you get from spending in all of your life cycle periods—young, middle age, retired—is the same. That means that you get the most happiness possible over a lifetime, because you're not living in luxury in one life cycle stage while living in poverty in another. If you agree with the idea of decreasing marginal utility of spending, then that means that you also have to agree that spending about the same amount of money in every year of your life is what will make you the happiest.

- You can begin to see how life cycle finance is different from some conventional financial wisdom. Life cycle theory says that you should be both a borrower and a lender. You should be a borrower when you're young and investing in education, and you should be a lender when you're in the peak earning years of middle age. You're just borrowing from and lending to yourself—using financial instruments, such as checking accounts, mortgages, student loans, and mutual funds.

- Conventional wisdom suggests that you should always save money. You may have heard that saving 10 percent of your income is a good idea and that the younger you save the more wealthy you'll be later in life. This is undoubtedly true: If we are always saving, then we'll always be getting richer. But is getting richer the goal?

- In general, people who have more money do appear to be happier. But there's not a lot of evidence that people who spend 200,000 dollars in a year are a lot happier than those who spend 100,000 dollars in a year. In fact, sitting on too much money can be a burden. So, instead of thinking about life as a game where the goal is to build the biggest pile of money, think of it as a game where the goal is to get the most out of life with the money you have.

- Another important assumption of life cycle planning is that our income tends to follow a predictable pattern over our lifetime. When we're in our 20s, we're often making very little money, but

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Education is an investment. It costs you money, but more education means a steeper earnings path.

we're also often making an investment—in our education. And education has a big impact on life cycle planning.

- If you have a college education, your earnings will start out very low—in fact, you may earn nothing while you're in college and go deeply into debt. But your earnings path over your lifetime will look a lot different than the earnings path of someone who never went to college. More education means a steeper earnings path. In other words, your income starts out low, but by middle age, you'll be making a lot more if you have a college degree.

- So, should a 25-year-old earning 40,000 dollars per year be saving for retirement? The life cycle model says that he or she shouldn't. The 25-year-old is earning the same amount as what economists call the permanent income. If you take all of a worker's expected earnings over their lifetime and divide it by their life expectancy, you get the permanent income, or the amount of money you should ideally spend each year if you smooth spending.

- The 25-year-old will maximize his or her lifetime happiness by spending every penny of the 40,000 dollars he or she earns that year. It also means that if the 25-year-old earns more than this amount, he or she should save. If the 25-year-old earns less, he or she should borrow. As the 25-year-old gets raises and promotions in the future, he or she should increase his or her savings rate.

- Life cycle theory doesn't let you off the hook when it comes to saving; it just says that you should save a larger percentage of your salary as your income rises. If a young person is earning much less than their permanent income—for example, while they are in college—the life cycle model says that he or she should be borrowing and not saving. Going into debt can make sense if our income today is a lot lower than it's going to be in the future.

- According to the life cycle model, the savings plan that makes the most sense is to save less early in life, and then to increase your saving rate in middle age. In fact, it may make sense to save much more than 10 percent of your income in your 50s and save none of your income in your 20s. If you do it right, by the time you retire, you'll be able to keep spending 40,000 dollars after inflation each year. This smooths out spending over the life cycle.

Saving and Investments

- When we're young, we may be spending money on things that we'll still be enjoying in retirement. We spend a lot more early in the life cycle on what's known as durable goods, the biggest of which is a house. Early in the life cycle, chances are we'll be spending a big chunk of our income on a mortgage. Some of this payment goes toward interest on the loan, but the rest of it goes toward paying the mortgage off over 15 to 30 years. You can think of a mortgage payment as a form of saving.

- An investment isn't just a stock or a bond; it is anything we do that reduces our spending now in order to increase spending in the future. Getting an education is an investment because we spend time and money in the present in order to increase our earnings in

the future. In the same way, a mortgage is an investment because we'll still be enjoying our house for many years after we pay off the mortgage. Each payment is partially an investment.

- Life cycle planning is about making sure that we get the most out of our money; it isn't about becoming a millionaire by the time you're 40. It's about recognizing that we have a finite number of years on this planet and we need to get the most out of every one. Often, the wealthiest retirees have a very difficult time spending all the money they've built up over time. And all that money represents a trade-off: The wealthy retiree has all that money in the bank now because he or she didn't spend it when he or she was younger.

- Thinking in terms of marginal utility of spending is like using a big scale. You could spend your money now, or you could spend it in the future. Things like having kids or making an investment in education tilt the scales toward spending now. A big drop-off in spending after retirement tips the scales in favor of spending in the future.

Financial Risk

- The idea of marginal utility of money is essential to dealing intelligently with financial uncertainty. Risk means the possibility of loss. And loss means that we'll have less money to spend than we had anticipated. Our permanent income is an estimate based on how much money we expect to have in the future. If things don't work out, then we might have to spend less; if the loss is really serious, then we may have to cut our spending a lot.

- An important everyday risk of living is that you will die younger than you'd expected, and those left behind—your spouse and children—won't have access to your income. This could result in a large decrease in the standard of living for your family. In addition to being emotionally traumatic, life cycle theory says that a sharp drop in spending is something you always want to avoid.

- Nobody ever knows exactly how life is going to turn out, but our best strategy is to plan our saving and spending based on the best information we have about the future. Once we've figured out how much we expect to earn over our life cycle, we can estimate our permanent income and try to spend about the same amount of money every year.

- A financial risk means that there is a chance our spending could decrease drastically if something bad happens, such as the death of a breadwinner. Why not reduce our spending a little bit now by buying insurance if it can prevent a large drop in spending from an unexpected loss?

Suggested Reading

Browning and Crossley, "The Lifecycle Model of Consumption and Saving."

Ibbotson, Milevsky, Chen, and Zhu, "Lifetime Financial Advice."

Questions to Consider

1. Explain how the conventional wisdom of saving 10% of income early in the life cycle is not consistent with the life cycle model. Why might it still be recommended that a young family save?

2. Can we ever really know our permanent income, and what should we decide to save if we don't know exactly what our income will be in the future?

Basic Investing—Keep It Simple

Lecture 3

Choosing the right kind of financial asset—such as stocks, bonds, or shares of a money-market mutual fund—is what smart investing is all about. In this lecture, you will be introduced to the basic characteristics of investments so that you can decide which investments make sense for your financial goals. In addition to learning the names of various investments and their basic features, you will be exposed to a way of thinking about investments that fits within the life cycle framework.

Liquidity

- One of the basic features of financial assets is liquidity. A liquid asset can be turned quickly into cash. You have a checking account so that you can write a check and immediately turn your financial asset into cash. Liquid assets are good because they can provide immediate resources to cover a health emergency, spending during a period of unemployment, or payment for an unexpected home repair.

- One of the drawbacks of liquid assets is that they have a very low or nonexistent rate of return. Because their value doesn't change based on market fluctuations, liquid assets are very safe. Safe assets have a lower rate of return than risky assets. So, one cost of keeping money in your checking account is that it won't grow in value over time from taking investment risks.

- The second disadvantage is also related to rate of return. Because investors need to be compensated for locking up their money, investments that are easier to exchange for cash will have a lower rate of return. An example of this is a certificate of deposit (CD), which is less liquid than a checking account because a penalty is charged if you cash it in early. CDs are less attractive to investors who might need the cash for an emergency. Therefore, a CD will have a higher rate of return than a checking account.

- A third disadvantage of liquid assets is that they create temptation. When we don't have cash on hand, we aren't tempted to spend money on a vacation or new wardrobe. But once money starts building up in our checking account, it's difficult to say no to things we can now afford. This means that liquidity has what economist calls trade-offs. Easy access to cash is good, but we have to trade off higher return and the cost of temptation. Other assets also have trade-offs, and many of these trade-offs are related to risk.

Risk

- The second important feature of a financial asset is uncertainty about the value of the investment in the future. Unlike liquidity, risk is something most investors don't like. When we buy an asset like a stock or bond today, we expect that in the future it will be worth more—that it will have a payout that represents the difference between the price of the investment and its value in the future. This payout is the return on that asset. Risk is when we don't know what the payout will be, and greater volatility in the payout means higher risk.

- Most people don't like the uncertainty of risk. That's why stock investors historically have received a higher rate of return on their investments. Their payout is more variable, which means that when they go to spend the money they invested, it could be a lot or a little. Recall that we get the most happiness from spending the same every year; uncertainty opens up the possibility that we'll have to spend less.

- If you are a bond investor who has 5,000 dollars to spend, how much less happy would you be if you had only 2,500 dollars to spend? How much more happy would you be if you had 20,000 dollars? Are you willing to take a 50/50 bet on spending the lower amount or the higher amount? This is the essence of a concept known as risk tolerance.

- A risk-tolerant investor is willing to accept a 50/50 chance of spending less or spending more. A risk-averse investor takes the

certain 5,000 dollars. This is what the risk trade-off is all about. Risky investments aren't for everyone; you need to be able to accept volatility if you're going to take investment risk.

- Imagine that you invest 1,000 dollars in a government bond at age 40, and you are 100 percent sure that it will turn into 5,000 dollars over 30 years. When you are 70 years old, you have earned five-and-a-half percent on your investment. This is the risk-free rate of return. Instead, imagine that you invest in stocks, and there is a 50/50 chance that you could get either 2,500 dollars or 20,000 dollars. On average, you will get 11,250 dollars. That's equal to an eight-and-a-half percent return over the 30-year period.

- The difference between the five-and-a-half percent return from investing in government bonds and the eight-and-a-half percent return from investing in stocks is the risk premium—it's how much extra return investors get on average for accepting more variation in the payout.

- In the 20th century, the equity risk premium, or the extra return investors got from investing in U.S. stocks, was close to five percent. This means that the average investor must be very risk averse *because* he or she needed such a high rate of return to buy stocks, or it means that stock investors may have just gotten lucky in the United States. Or it's a little of both.

- Investors with a longtime horizon would be consistently better off holding a mix of investments that include a hefty share of stocks, even if they are very risk averse. That's because even if stocks did poorly in some years, they tend to bounce back, making a long-term investment in stocks less volatile than a short-term investment in stocks. That's because stocks may go up or down a lot over a few-month period, but if you lengthen the time period, they have historically been less risky.

- There are two reasons why many less-sophisticated investors shoot themselves in the foot when they invest in stocks, underperforming

the stock market on average by a significant margin. First, they can't handle the fact that stocks are going to lose money. One of the best strategies for building wealth is being able to accept an occasional loss when taking a risk makes sense. And for most long-term investors, holding a healthy percentage of stocks in your portfolio makes sense.

- The second reason many people lose money on their investments is related to a concept known as the dumb money effect. People tend to throw money at investments after they've had a healthy increase in value. If you pick a hot stock or a hot sector right now, chances are it is going to underperform in the future. A much better strategy is to invest in the market as a whole.

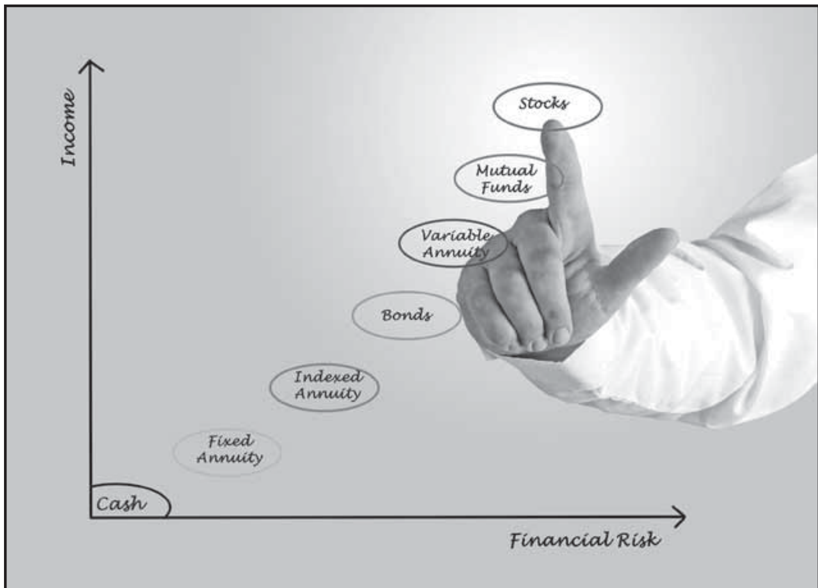
Diversification

- This leads to the third important characteristic of a financial asset: diversification. In general, you want to hold a mix of assets in your portfolio that is well diversified. By combining assets, you can reduce the overall volatility of your investment portfolio.

- Individual stocks tend to be very volatile. A stock can go up 50 percent in a year while another goes down by 50 percent. But if you had half of your money in each of the stocks, your portfolio wouldn't have changed at all.

- But even if you have a well-diversified portfolio, you can't get rid of a certain amount of volatility caused by the ups and downs of the stock market. When markets rise, most stocks tend to increase in value. When the stock market falls, most stocks have a negative return.

- No amount of diversification is going to get rid of risk in the overall market. This type of market risk is known as systematic risk. Think of it as the risk that's involved when you invest in the overall economic system. Because the economy swings back and forth between recession and expansion, you can't get rid of systematic risk.



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Stocks are risky financial assets, but they also have the potential to make you a lot of money.

- Modern portfolio theory recognizes that there are two basic types of risk. The first type is the systematic risk that you can't get rid of. The second type is the kind of risk that comes from investing in a single stock instead of investing in a bunch of different stocks. That's called unsystematic risk.

- Individual stocks carry a lot of unsystematic risk because anything can happen to their business that doesn't affect the economy as a whole. The type of unsystematic risk that affects each company is also known as firm-specific risk. And as an investor, you shouldn't really care how much firm-specific risk a company has (unless, of course, you work for that company). That's because if you invest in dozens or hundreds of different companies, this firm-specific risk goes away.

- If you have a diversified portfolio, the only thing that matters is systematic risk, because that's the risk you can't get rid of. Modern portfolio theory says that the risk of your portfolio is directly related to the amount of systematic risk you carry. And because investors don't like risk, you should get a higher expected return if your portfolio has greater systematic risk.

- Investors get rewarded with a higher expected return for taking more systematic risk, and they get no extra return for bearing unsystematic risk. This is because anyone can get rid of unsystematic risk through diversification. If it's easy to get rid of, you won't get a higher expected return for taking more unsystematic risk by only investing in two or three stocks instead of investing in a diversified mutual fund.

- The most diversified portfolio you can get is a portfolio that invests in every type of risky asset, including American and international stocks, bonds, real estate, and even commodities. That's what is known as the market portfolio. It is as broad as it can possibly be. And because investors only get rewarded for taking systematic risk, the more assets you throw in the pile, the more efficient your investment will be, because you're eliminating all the risk you can get rid of for free.

- Modern portfolio theory says that instead of owning five or six different mutual funds, you're better off owning one well-diversified, risky mutual fund and one risk-free mutual fund. The percentage of your portfolio that you invest in the risk-free and the risky mutual funds depends on your risk tolerance and the time horizon of your investment goal.

Keep It Simple

- You don't need a complicated investment portfolio. There are intelligent, hard-working people who try to beat the market, but it can't be done. All information is incorporated into stock prices, and all stocks are priced fairly based on their systematic risk. This is what's known as market efficiency.

- The fact that you won't be able to beat the market may sound depressing, but it's actually a great thing. It means that someone who doesn't know anything about the stock market can do just as well as—if not better than—most professional mutual fund managers. That's why so many experts say that the best mutual fund strategy is to use what are known as index funds that don't try to beat the market. They just give you a well-diversified mix of stocks that captures systematic risk and reward.

- Research in finance shows that simple has historically outperformed more complicated strategies over time. It's easy to get intimidated by too many investment choices. But you don't need to be intimidated. Take some risk, keep your hands off your investments until you meet your goal, and choose simple, inexpensive, well-diversified funds.

Suggested Reading

Bogle, *The Little Book of Common Sense Investing*.

Graham, Zweig, and Buffett, *The Intelligent Investor*.

Questions to Consider

1. What will happen to the risk premium if more investors prefer stocks to bonds in the future?

2. Do you think that 401(k)s that have more mutual fund options to choose from result in better investment choices by employees?

The Key Financial Instruments

Lecture 4

Financial instruments are the products we buy in the marketplace as savings tools. In this lecture, you will learn that a simple strategy using passive investments of stocks and bonds not only makes you better off in the long run but also keeps you from having to worry about investments. The goal of financial management isn't to beat the market—it's to get the most out of life. Keeping investing simple is the best strategy for getting the most out of your money.

Liquid Assets

- Liquid assets are what we use when we need to pay a bill right now. Cash is usually considered the most liquid asset, although you wouldn't pay an electricity bill by putting a wad of cash in the mail. For this reason, the main purpose of cash is for direct transactions between individuals. Many believe that they can negotiate a better deal by paying an individual or business with cash.

- For most liquid transactions, the most useful liquid accounts are checking accounts, money-market accounts, and money-market mutual funds. These are listed in order of the interest you can expect to get from each, with checking accounts generally paying the least (if they pay any) and money-market funds paying the most.

- Checking accounts allow unlimited monthly transactions. If they are drawn from a bank that is a member of the Federal Deposit Insurance Corporation (FDIC), they are also protected against the bankruptcy of the bank for up to 250,000 dollars per bank. You can access money in a checking account by writing paper checks, using a debit card, withdrawing cash through an ATM, or doing an electronic exchange.

- Money-market accounts limit the number of transactions per month but usually provide a slightly higher interest rate. New

online high-interest savings accounts may be the best deal for those who want easy access to cash and don't mind transferring money between savings and checking accounts online. Both money-market and savings accounts are FDIC insured up to 250,000 dollars per account.

- Mutual funds invest in securities like stocks and bonds. One type of mutual fund can be used as a liquid account, and it's called a money-market mutual fund. Money-market funds differ from money-market accounts mainly because they're not insured by the FDIC. But they invest in safe, short-term bonds like U.S. Treasuries, so they're really not that risky.

- All of these liquid funds are fully taxable. That means you'll pay income tax on the interest. Think rationally about how much time to devote to getting a better deal. If interest rates rise, it becomes more important to make sure you're investing liquid funds in a high-yield account.

- A good plan for liquid funds is to keep enough money in a checking account to cover any short-term expenses. Keep the rest of the liquid assets in a higher-yield savings account that you can transfer back into your checking account anytime. Having both at the same institution usually provides seamless transfers. Don't go above your FDIC limits, and you've got a liquid asset plan to cover emergencies.

- When you're buying investment assets, you shouldn't buy stocks and bonds directly. Most individuals do a terrible job of picking stocks. So, the best advice is to buy a pre-diversified mix of stocks and bonds through a mutual fund or an exchange-traded fund.

Mutual Funds

- The most popular way for small investors to buy stocks is through mutual funds. Mutual fund companies basically just do paperwork. The fund buys stocks and bonds in the market, and then it sells shares of the mutual fund to investors. The share represents your

cut of the total mix of stocks and bonds in the mutual fund. The fund company keeps track of who owns what percentage of the stocks and bonds in their portfolio.

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Mutual funds are the most popular way for small investors to buy stocks.

- The most common mutual fund matches the S&P 500 by buying shares of stocks on Standard and Poor's 500 stock list of big corporations that do a good job of representing the U.S. economy. The mutual fund company takes your money and buys stocks in each of these companies. Because some of these shares can cost hundreds of dollars apiece, it makes sense to send your money to a fund company instead of trying to buy shares yourself.

Stocks

- A corporation needs money to grow—to buy supplies and buildings and pay for research and development in order to make products. A small private business might rely on a bank or even the owner's own savings. Corporations can use the capital market to sell securities like stocks and bonds.

- This is a great system. It means that companies aren't beholden to big banks, which might only lend money to firms that have a track record of profitability. Corporations with a good idea that may or may not work out can issue shares of stocks to investors. Investors are able to provide capital to these companies. Some of them work out and become profitable. Some of them go bankrupt. But that's okay, because smart investors will diversify their stock ownership.

- Another way to think of the stock market is a system where you lend money to a corporation, which uses the money to hire managers and workers to create a product, and then sells the product back to you and pays back part of the profit to you—the investor. That's the way a well-functioning capitalist system works. Citizens provide the capital that then goes to its most efficient use to make the products people want.

- Stocks and bonds are the instruments we use to provide capital to a corporation. A stock gives us a theoretical share of ownership of that company. In reality, it doesn't give us much, but if you own enough stock, you can vote on the board of directors, and for every share of stock, you receive a dividend that is a percentage of the profits earned by a firm. Small investors own a tiny share of the value of that company.

- The value of a company is supposed to be how much profit the market expects the company to earn in the future. Some companies don't earn any profit right now. So, the market has to guess how successful the company will be in the future. Stocks whose profits are expected to grow in the future are known as growth stocks.

- Value stocks, on the other hand, tend to be older, dividend-paying, profitable companies whose earnings are not expected to jump in the future. And, frankly, many of them are boring. Because of this, the prices of value stocks tend to be fair, and they tend to outperform over time.

- The best way to invest in stocks is either through a mutual fund or an exchange-traded fund, which is similar to a mutual fund in concept but trades on the market instead of issuing and redeeming shares through the fund itself.

- There are two types of mutual funds. Actively managed funds hire a fund manager to choose which stocks to buy and when to buy or sell them. About 80 percent of all mutual funds are actively managed.

This fact doesn't make much sense, because actively managed funds consistently underperform passively managed funds.

- The biggest reason that actively managed funds underperform is that they have to pay the fund manager. This means that the fund will need to outperform an index like the S&P 500 by the extra amount that you pay for the fund manager. Unfortunately for the fund manager, he or she has to pick the right stocks that are already in each index and avoid the wrong ones. There is no evidence that any fund manager can consistently pick the right stocks often enough over time to beat a passive index.

- Choosing a stock mutual fund is easy. You just find a single well-diversified passive index fund and hold it over time. You'll do better than most other fund investors, who try to make it complicated. One way to gain added diversification benefits is to invest in a passive fund that includes both U.S. stocks and stocks from other countries. An easy way to do this is through what is known as a global index fund, which spreads your money around the world, including the United States. Your best bet is to invest in a single global index fund with a low expense ratio.

Bonds

- If you've ever invested in a certificate of deposit (CD), you already know what it's like to hold an investment that looks like a bond. You pay for the CD today and then wait a few years and get the amount you originally paid plus interest. A bond is a little different, because most make interest payments every six months, called coupons.

- A bond's maturity date is when the agreement between you and the company ends and they give you back your initial investment. That assumes the company is still in business—which is one of the reasons it is important to diversify your bond investments.

- Bond values rise and fall for two reasons. If interest rates go up next year, then the value of the bond will drop, especially if it doesn't

mature for a number of years. In general, bonds will give you a higher interest rate than liquid investments, so once you've filled up your emergency savings account, start thinking about putting money into both bonds and stocks to earn a higher return.

- In addition, bond coupon payments are taxed at the ordinary income tax rate. Other types of investments, such as stocks or exchange-traded funds, will pay dividends, or grow in value. Both of these have historically been taxed at lower rates, so these are known as tax-advantaged investments. Bonds are tax-disadvantaged investments.

- There are two important things to remember about bond investing. The first is that you should think of your total investment portfolio as a combination of taxable accounts and tax-sheltered accounts, such as a 401(k). If you want to invest 50 percent of your portfolio in bonds and 50 percent in stocks, that doesn't mean that both your taxable investment accounts and your IRA/401(k) accounts should be a 50/50 mix of stock and bond funds. Smart investors will put their tax-disadvantaged bond funds in their 401(k) and their stocks in the taxable account.

- The second thing to remember is that if you invest in a bond fund, the duration of that fund will determine how much the fund will rise and fall in value when interest rates change. In general, long-term bonds will be most sensitive to a change in interest rates. However, long-term bond funds on average have a higher rate of return over time than short-term bond funds.

- The other characteristic of bond funds you need to consider is whether they invest in government bonds or corporate bonds. The most important reason to pay attention to this is because government bonds may be tax advantaged, in which case you should put them in a taxable account. Corporate bonds are the most tax-disadvantaged investment; they should go in an IRA or a 401(k).

Investing in Stocks and Bonds

- The best way to invest in stocks and bonds is through passive, well-diversified, low-expense-ratio exchange-traded funds and mutual funds. To obtain a high-quality, relatively tax-efficient investment portfolio, you may only need a single fund that invests in both stocks and bonds across the world. It's called a global balanced index fund. But these funds are pretty rare, so your best option might just be a U.S. balanced index fund or a 50/50 mix of an S&P 500 fund and a corporate bond index.

- Another easy strategy is to invest in a global bond index fund in your tax-sheltered account and a global equity exchange-traded fund in your taxable account. If you have most of your investments in an IRA, then first start with an optimal asset allocation—for example, 50 percent stocks and 50 percent bonds.

- Stocks bounce around a lot over time. After stocks fall or rise in value, rebalance your portfolio so that you still have 50 percent stocks and 50 percent bonds. Rebalancing also forces you to buy more stocks after they've gone down in price and to sell them after they've risen in value.

Suggested Reading

Cochrane, "New Facts in Finance."

Fama, "Luck versus Skill in the Cross Section of Mutual Fund Returns."

Questions to Consider

1. How large of an emergency fund do you really need? What factors about liquidity, investments inside and outside of retirement accounts, and taxes do you need to consider?

2. Why do you think there are so many mutual funds if most investors would be better off investing in a low-fee index fund?

How to Use Credit Optimally

Lecture 5

Credit gives us spending flexibility and convenience. But it can also be a temptation that prevents us from reaching our long-term goals. Making the most out of credit means understanding how the consumer credit system works, but is also means being aware of our own limitations. In this lecture, you will learn some strategies for those who have trouble dealing with credit, along with how to get the most out of borrowing tools like credit cards and consumer loans.

Credit Cards

- Credit cards are issued by a bank. The bank makes money from charging you interest in the outstanding balance of your credit card debt, fees for things like late payments, and an interchange fee. The interchange fee is about two percent of every charge you make, and it is paid to the bank by the merchant. The bank also pays part of the fee back to the credit card company. Americans spend about a dollar per day on interchange fees, and that money shows up in slightly higher prices at businesses.

- There is competition among banks to lower these fees. About half of the fees are rebated back to consumers through reward cards. These can include a cash percentage of each transaction paid back to you at the end of the year or points toward gift cards, hotels, or airline travel. The second way these fees are paid back is through incentives to sign up for credit cards.

- Carrying credit card debt is costly, and it can sabotage your long-term goals. Why do we carry credit card debt? Many people suffer from narrow framing. We tend to see our investment accounts as existing in a world that is separate from our credit card, but that's not the case.

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It's certainly easy to swipe a credit card to buy goods, but you can get into credit card debt if you aren't good at managing your money.

- Financial habits can be very powerful. If we find ourselves in the habit of carrying a credit card balance, we often think that at some point in the near future we'll become more responsible and pay it off. Then, when the future comes, we get tempted by the same things that tempted us yesterday and fall into the same spending habits. Understanding our habits can help us develop the tools to break them.

- If you have enough liquid and investment assets to pay off your credit card debt, then do it. But understand that you'll probably rack those debts back up in the future if you don't change your habits. An easy solution is to simply reduce your credit availability. Limit yourself to one or two credit cards, and ask your bank to reduce the spending limit on each. Cancel your other cards.

- One method for reducing unnecessary spending is to make each much more salient. A psychological problem with credit card

spending is that it insulates you from the financial trade-off you make when you buy something. Experimental studies show that buyers who pay in cash aren't as willing to pay a higher price for goods and are better able to imagine the other things they could have bought with the money.

- A powerful personality trait related to the misuse of credit is impulsiveness. If you think you might be impulsive and find yourself with more credit card debt than you like, then you're much more likely to dig yourself out of the debt hole by working around your impulsive tendencies. Reducing available credit card balances, paying in cash, sleeping on a big purchase, and avoiding tempting shopping malls or the Internet all help you avoid spending on impulse.

- If you don't have enough money to pay off your credit card debt, then develop a plan for reducing debt every month. Reduce credit availability and avoid impulsive spending. One problem is that we often don't have space in our budget to make that payment this month, so we're tempted to wait until next month to write the check. A good strategy is to set up an automatic payment from a checking account to the bank every month.

Debit Cards

- The popularity of debit cards may seem like a mystery, because they don't have many important advantages of credit cards: There are no rewards, you don't receive a free float between when you spend the money and when you pay it back, and your checking account balance might disappear if someone steals your card. If you're just starting out, using a debit card also won't help you establish a credit history.

- The good news about debit cards is that you don't have to pay the high interest expenses on a credit card balance. Debit cards draw money immediately out of your bank account; you can't spend more than you have. So, debit cards avoid some of the behavioral pitfalls that many credit card users experience. But the biggest reason for

the growth in debit card use is its popularity among those with bad or no credit who may not be able to get a credit card. Today, it's a lot more convenient to pay with a card than with cash.

- A credit card trumps debit cards for people who pay off their balance every month. They give you rewards and a free loan of up to a month before you pay your credit card bill. But they also provide a means for those with self-control problems to dig themselves into a credit hole. If you can't get in the habit of paying off a credit card balance in full every month, then a debit card gives you convenience without temptation.

Car Loans

- The most significant sources of consumer debt are student loans and mortgages. Other than credit cards, the next largest source of consumer debt is a car loan. There are two basic types of car loans. A standard car loan is a typical amortized loan where your payments consist of interest and principal. Principal is just the amount of money that you borrow, and you chip away at it over time with your car payment while paying interest for the privilege of borrowing.

- Equity is the difference between the car's current market value and the remaining principal on the loan. You can think of equity as your stake in the car, or the percentage of the car that belongs to you. New cars tend to drop in value quickly during the first year of ownership—this drop in value is known as depreciation.

- At the beginning of the loan, the interest part of your payment will be high because you still owe a lot of money. This means that after a year of ownership, you may have very little or no equity. Negative equity is known as being underwater. When you try to trade your car in, it essentially has a negative value toward a new car. Equity tends to become positive toward the end of the loan.

- It's always a good idea to shop around for a car loan. Start with your local bank or credit union. Your interest rate will depend on

your credit rating and whether you're buying a new or used car. You may also finance your car at the dealership, but financing rates at the dealership can be uncompetitive and are often a source of profit for the car dealer.

- Occasionally, you can get a very low rate that is subsidized by the manufacturer to help move a slower-selling car, but you have to compare the low rate against other possible price discounts. It may be a better deal to take the price discounts and finance through your own bank.

- You'll also need to decide how long the car loan will last. You can often get a lower interest rate by paying off the car in three years instead of five. In general, interest rates on car loans are higher than the interest rate you can receive on liquid savings, so you are better off paying the loan than putting the money in a checking account.

- The biggest mistake people make when buying cars is being impulsive. They often end up at a single car dealership and both buy and finance a car the same day. This means that the price they pay is often higher than the price they could have gotten from shopping around, and the loan terms are less attractive. Being methodical about shopping around for the best price and the best loan terms can have a big payoff.

- The second mistake people make is to focus only on the car payment and not on how much they are paying for the car and what interest rate they're paying. Don't go to a car dealership without some idea of the loan terms you can get from a bank, including the down payment, interest rate, and length of the loan.

- The second way to borrow money for a car is through a lease. With a lease, you do not own the car after the loan is finished. The lease allows you to make a lower payment that only covers the expected cost of depreciation on the car. It is possible to get a lease either from a car dealer or from a lender unaffiliated with the dealership or car manufacturer.

- The most important thing to remember about leasing is that you'll be paying for the most expensive years of ownership of that car. A car depreciates the most the first year and a little less each year after that. A mistake that many people make is buying a new car every few years and suffering most of the depreciation, and then handing the car over to a second owner, who pays a lot less each year to drive it.

- Continually leasing cars is expensive. The possible exception is when car companies try to get rid of slow-selling cars through artificially low lease payments. Although this might be an attractive alternative to buying the car, if you go this route, make sure that you stay within the mileage specified in the lease, and don't buy the car at the end of lease.

Credit Score

- One of the most important determinants of whether you'll be able to get a competitive interest rate on a car loan or a credit card is your credit score. A credit score can also affect how much you pay for car insurance and even whether you get a job. An investment in a good credit score can pay off by reducing loan and insurance payments by thousands of dollars over a lifetime.

- A credit score is not the same thing as a credit report. A credit report is a detailed listing of your prior credit experiences, including which credit cards you've owned, what the current balance is, and whether you've paid them off on time. If you haven't looked at your credit report recently, you can access it three times per year for free. Visit www.annualcreditreport.com.

- Check over the accuracy of your credit report. The reason you get three free credit reports is that there are three primary credit-reporting bureaus that provide information to lenders: Experian, Equifax, and Transunion. Get one report from each. There may be some inconsistencies among reports because of inaccurate information, so be sure to compare them. If you find any problems, you can dispute the data, and the credit bureau must respond within 30 days.

- When you apply for a loan, the lender won't look at your credit report; they'll use a number that's calculated from what's in your credit report—your credit score. The credit score is supposed to represent the likelihood that you'll default on a loan. Academic studies show that credit scores do a good job of predicting default.

- The credit score is also called the FICO score, for Fair Isaac Corporation. FICO scores are not free. Getting your FICO score through www.myfico.com costs 20 dollars for each of the three credit-reporting companies. It's probably worth checking out your score to see whether you're eligible for the lowest interest rates on a loan before you shop for a car or house.

- The credit score is composed of five factors. The most important is payment history. The second most important is your debt. These two factors make up two-thirds of your credit score. There are three other characteristics that make up the rest of the score. The first is the length of your credit history. The second is how many different types of credit you have. Last is the number of times a lender has recently searched your score for credit.

Suggested Reading

American Bar Association. *Family Legal Guide*. Chapter 8: Consumer Bankruptcy.

Federal Trade Commission. Consumer Information: Credit and Loans.

Questions to Consider

1. Describe the optimal use of credit within a life cycle framework. When does borrowing make sense?

2. How does a credit score impact life cycle borrowing? Explain ways in which a borrower with a lower credit score is worse off than a borrower with a higher credit score.

Investing in Education

Lecture 6

Like any investment, paying for knowledge involves costs and benefits. Many students go to college without fully grasping the costs and benefits of a degree. Most think that college is more or less a necessity in today's workforce. But many students choose the wrong school, the wrong major, and the wrong source of financing, and some maybe shouldn't have gone to college in the first place. While education is complex, it is perhaps the most important investment people make in their lifetime. And, as you will learn in this lecture, making the right choice affects both income and life satisfaction.

The Education Payoff

- Studies on the return on education show that your major is even more important than where you go to college in predicting future income. There's also an increasing correlation between college

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Education pays off in the long run, but you have to figure out how to pay for it first.

major and profession, meaning that you're more likely to move from a more specialized major into a job within that profession.

- Over a lifetime, the payout will be higher from an investment in a major that requires more specialized skills in a field where workers are in high demand. Enjoying your profession is important as well; in general, life satisfaction doesn't rise significantly with income beyond about 80,000 dollars. Knowing as much about your profession as possible by investigating salaries and job satisfaction is a good way to make sure you're making the right investment.

- Nobel Prize–winning economist Gary Becker has speculated that education trains us to think critically and to defer gratification. Both of these skills help not only in our work productivity but also in our personal lives. These nonpecuniary benefits also need to be considered as benefits from investing in education.

- One variable that's often left out of studies that compare earnings of college and high school graduates, or engineers versus psychology majors, is variation in innate ability. Some students are just better at learning complex information and completing high-quality written work on time. These types of skills tend to be rewarded in the marketplaces no matter what is written on your diploma. In general, more-skilled students tend to get accepted by more-prestigious colleges and go into higher-paying majors.

- Borrowing money to go to college is a risk. And it is a much bigger risk if you're less likely to graduate. College dropouts tend to be the more marginal students and also tend to come from a lower socioeconomic background than those who graduate from college. So, the payout from education is going to be higher for more-talented students, and it may not be a good idea to encourage a marginal student to borrow heavily to attend college.

Planning and Saving for Education

- Planning for an education requires estimating future costs, including tuition, books, supplies, and living expenses. According

to the Bureau of Labor Statistics, rates of inflation on tuition have been about double the overall rate of inflation in the United States. If these trends continue, a new parent might need to save three to four times the current cost of a college education for their child.

- Many parents and grandparents feel that it's an obligation to help pay for the education of young adults. But remember that investing in someone else's education means that you are choosing to reduce your own spending in order to transfer resources to someone who is going to reap the benefits from education after he or she graduates with no or lower student loans because of your generosity. You do this either out of a sense of obligation or because the future well-being of that person improves your own satisfaction. This is how economists see altruism.

- The government provides a number of tax incentives to encourage people to save for education. The most common is the 529 plan, which is named after a part of the federal tax code. In a 529 plan, any money you invest can be taken out tax-free if you use it for qualified educational expenses, such as college tuition, fees, dorms, and other school expenses.

- Unlike a 401(k), you can't deduct the investment in a 529 from your taxable income. The only advantage you get is that you can shelter, or avoid federal taxes, on the investment made in a 529. Like any other sheltered savings plan, the benefits from using one are great over longer time periods. Some states provide an extra bonus by letting you reduce your taxable income by the amount of the contribution. This isn't a huge benefit, but it can add up over a few years.

- Only a state can set up a 529 plan. The state sets up the plan, but they don't manage the money. Different states have different investment options and fees. But you don't have to go with your own state. Your state may limit your state tax deduction if you use a 529 from another state, so you'll need to check out the savings from better investment options versus your own tax savings.

- Many states offer low-fee, passive investment options. And many 529 plans offer age-based investments that will reduce stock allocations in order to lower your level of risk as your child gets closer to age 18, when you'll take out the funds to pay for school.

- The government provides an additional incentive when parents contribute to college tuition. The American opportunity credit essentially gives you a free 2,000 dollars per student: You pay it up front, but you can credit it dollar for dollar against your tax liability if your income is below about 180,000 dollars for married couples. Then, you can take 25 percent (or up to 500 dollars) off the next 2,000 dollars from your taxes. Above that amount, it makes sense to pay for school expenses from the 529. Also, you can't use American opportunity credit money for room and board, but you can use a 529.

- After you've used up the American opportunity credit for the first four years of a student's college education, you can take advantage of the lifetime learning credit. This gives you a 20 percent tax credit up to 10,000 dollars worth of expenses, so your maximum credit is 2,000 dollars. Also, you can use the lifetime learning credit for graduate education or education to improve your job skills, and you don't need to be a full-time student. There is an income limit, so higher earners won't be eligible.

- The lifetime learning credit can only be used for tuition and fees. Higher-earning parents might be better off using a tuition and fees deduction, which reduces your taxable income amount. The tuition and fees deduction will allow you to reduce your income by up to 4,000 dollars. Both the lifetime learning credit and the tuition and fees deduction are capped per tax return, while the American opportunity credit is capped per student.

- The Coverdell education savings account allows a smaller annual contribution of 2,000 dollars per student per year. Unlike 529 plans, high-income parents may not be eligible for a Coverdell. The main advantage of the Coverdell is that you can use the money for private elementary and secondary education, while the 529 is only for college.

- There is no ability to save on state income taxes with a Coverdell, so the only tax advantage is avoidance of federal taxes on any investment earnings within the account. Because the main advantage of Coverdell accounts is for precollege education, and the only tax advantage is sheltering from investment taxes over time, these make sense for parents who are saving early for private schools. But Coverdell accounts can also be used for college.

- A type of individual retirement account known as a Roth IRA can also be used as a college savings tool. It's kind of like a 529, but you can use the funds for either a college education, a first-time home purchase up to 10,000 dollars, or retirement. But the earnings are taxed, unlike a 529, and if you use Roth money for college, you just avoid the 10 percent penalty from early withdrawals. It's not a great option, because you're giving up a very attractive retirement savings tool and students may be better off just borrowing money.

Federal Student Loans

- The federal government provides loans to students, but your ability to obtain some of these loans is determined by the Free Application for Federal Student Aid (FAFSA). FAFSA also determines eligibility for grants such as Pell grants, but these are primarily for very low-income students whose parents may not have enough to help out with college expenses. The institution might also provide grants to defray costs. Colleges have their own deadlines for filling out the FAFSA.

- The FAFSA requires tax return income information from parents and students, along with information on assets outside of retirement accounts. There is some strategy to maximizing loan eligibility, so it might be worth seeing an adviser or consultant to maximize financial aid.

- One of the disadvantages of a 529 is that when it is pulled from an account that is owned by someone other than a parent, this counts as student income for FAFSA purposes. In other words, the benefits

provided by the 529 may be somewhat offset by the reduced student aid availability.

- There are two basic types of federal student loans. With subsidized loans, the government pays all of the interest expenses while the student is still in school. When the student graduates, interest starts. The government also provides unsubsidized student loans; during school, the interest accumulates on the loan balance.

- Rates of interest are slightly lower for undergraduate debt and higher for graduate education. Your eligibility for subsidized loans is determined by the FAFSA, and in general, only students from lower-income households are eligible for subsidized loans.

- Federal unsubsidized student loans are smallish loans, ranging from about 6,000 to 10,000 dollars per year, depending on whether you're a dependent or an independent student your first year. These amounts increase by a few thousand dollars for students in later years of their education. Aggregate loan limits are a little over 30,000 dollars.

- Government loans have more flexibility than private student loans in terms of repayment. The standard term is 10 years, and you will pay a fixed amount each month based on the interest rate when you borrow the money.

- Extended repayment plans allow you to stretch the term out to 25 years if you have more than 30,000 dollars in consolidated public loan debt. There are also graduated payment loans that start at a lower amount and increase every two years for students whose income will likely climb over time. Income-contingent loans will let you pay no more than 20 percent of your monthly discretionary income. You can even switch between these plans.

- Payments can be deferred if you experience a financial hardship. You might even be able to get loan forgiveness if you work at a government or nonprofit job and make payments on a student

loan for 10 or even 25 years. The disadvantage of deferring loan payments is that it will take you longer to pay off your loans. From a life cycle perspective, it can make sense to have an increasing loan repayment schedule because the income of college graduates climbs at a higher rate than other workers.

- Students may also be eligible for private loans through banks or credit unions. These are generally less attractive because interest rates are higher, and many have variable rates of interest that can increase student loan payments in the future. Loan terms are not standardized, and it may be difficult to obtain loans with an extended repayment schedule.

- One of the downsides of student loans is that you cannot get rid of them through bankruptcy. Also, if you die, your public loans are forgiven, but private loans are not. If you become disabled, your public loan debt will go away, but private loans won't. There are some disadvantages of private loans beyond higher interest rates. In general, it's a good idea to maximize public student loans before you begin taking private ones.

Suggested Reading

The College Board, *Getting Financial Aid 2015*.

Goldin and Katz, "Long-Run Changes in the Wage Structure."

———, *The Race between Education and Technology*.

Questions to Consider

1. Explain how education is like an investment. What is the cost of the investment, what are the payoffs, and what is the risk?

2. What are the life cycle implications of funding a child's education, for the parents and for the children?

The Economics of Home Ownership

Lecture 7

Americans have nearly 10 trillion dollars in home equity—larger than any other single source of wealth. For most Americans, a home is our largest asset, and our mortgage is our most significant liability. But that doesn't mean that a house is always a good investment. Houses are expensive to keep and maintain, it costs a lot to sell them, and we make enormous interest payments over a lifetime. In this lecture, you will learn the basics of housing, including getting and understanding a mortgage, shopping around for a house, paying property taxes, and why homeowners are wealthier than renters.

Buying a House

- When should you start thinking about buying a house? A good rule of thumb is that if you're going to live in a location for at least five or six years, then consider buying a home. If you've just graduated and are working an entry-level job, chances are you'll be moving on in a relatively short time span. Or if you're in an industry that places you in different locations every two or three years, then buying might not be the best option. The reason is that the costs of buying and selling a home are high. If you move frequently, it's generally cheaper to rent.

- How do you know which house to choose? It turns out that many of the things that we might look for in a new house, such as a fireplace or jetted bathtub, have no impact on residential satisfaction. The impact of square footage is positive, but generally what is in that square footage seems to matter more.

- But spending more does generally bring greater happiness; more-expensive houses tend to be bigger but also tend to have more and better stuff. They're likewise in areas that have lower crime rates, better schools, less noise, and other positive neighborhood characteristics.

- The two most important factors you may underestimate are number of bathrooms and having a balcony or porch. Having separated spaces increases your feeling of control, and if you feel like you're in control of your environment—a concept known as locus of control—you tend to be happier.

- There is a general tendency to underestimate the additional costs that come along with home ownership. In addition to paying for a mortgage, property taxes, and homeowner's insurance, homes are also less energy efficient than rental units and require regular and costly maintenance. Because home expenses tend to be unpredictable, make sure that you have enough liquid cash to cover these costs. Everything else being equal, a homeowner will need to have more money in a liquid account than a renter.

Home Financing

- The mortgage market uses financial ratios to determine how much of a loan you can qualify for. These ratios are based on your income and debt payments. Higher income and lower debt means you'll qualify for a bigger loan.

- The practice of establishing and maintaining a credit history in order to maximize your credit score becomes very important when buying a first house. Your credit history can dictate the interest rate you receive on a mortgage, and a higher interest rate will affect how much you can borrow.

- Lenders consider two financial ratios when deciding how much you can afford. First, they look at the front-end ratio. The payment needs to be under a certain percentage of your total income—for example, 31 percent. So, if your income is 5,000 dollars per month, then you can afford to pay 31 percent of that, or 1,550 dollars, on housing. That's total housing expenses, including property taxes and homeowner's insurance as well as any other expenses, such as condo or community fees. Second, they look at your total debt payment to see whether you have enough room in your budget.

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When buying a house, you need enough money for a down payment, which should be at least 20 percent of the price of the house.

- To buy a house, you'll also need a down payment. Generally, lenders will require at least 5 or 10 percent of the price of the house. However, if you put down less than 20 percent, you'll have to pay private mortgage insurance, which can cost about 50 dollars monthly for every 100,000 dollars you borrow. And it protects the lender against default; it doesn't protect you.

- You could also try to borrow money from your family to buy a house. There are few instances where it can be a good idea to borrow money from a parent or relative. Helping a child make a 20 percent down payment on a home—repaid by setting up regular, automatic withdrawals from your paycheck at the mortgage rate—can be a great way to reduce costs for a first-time home buyer.

- The front-end ratio only considers your income and housing expenses. The back-end ratio is affected by your other debt payments. Because these debt payments are added to the mortgage

payment, a back-end ratio limit is higher than the front-end ratio limit.

- More financially literate home buyers end up getting a lower mortgage rate, mainly because they know the system and shop around. Once you know how much you can afford, go to an online site that collects quotes from different mortgage companies to see what rate you can get based on the size of your mortgage. You'll be surprised at how much mortgage rates vary from the cheapest to the most expensive lender.

- The annual percentage rate (APR) contains all the information about the financing costs of the loan all factored into a single easy-to-compare number. All the fees and expenses and the actual monthly interest rate are rolled into a single borrowing rate. So, when you look up mortgage rates online, make sure you sort and compare by APR.

- There are other mortgage products, and some of them—especially the ones that are more complex—aren't quite as efficient. Adjustable-rate mortgages are very common, and many are very efficient and worth considering for many borrowers. They typically represent about a quarter of mortgages.

- Fixed-rate mortgages have a mortgage payment that doesn't change over the life of a loan while adjustable-rate mortgages can go up or down over time. If there's a good chance that you'll either move or pay off a mortgage in the first decade, then it makes sense to consider an adjustable-rate mortgage. Of course, adjustable-rate mortgages can go up; some households have more budget flexibility, and it may make sense for them to take this risk.

- You can also buy points on a mortgage. Points are a percentage of the loan value that you pay up front in order to reduce the loan payment. They do not reduce your loan balance like a bigger down payment does; paying points simply lowers the interest rate on a loan. Unlike adjustable-rate mortgages, points make more sense

if you think you'll keep your mortgage for a long period of time. That's because you're paying money up front to reduce mortgage payments over time.

When and Why to Buy a House

- When is the right time to buy your first home? Don't buy a house if you can't set aside the money to pay for repairs. In addition, renting for a while keeps you more mobile and saves you thousands of dollars in transaction costs.

- You should think about the costs of renting versus ownership when you buy a house. One of these costs is property tax. Property taxes are a percentage of the assessed value of a home. Most property tax rates in the United States cluster around one percent. Property tax is an expense that is, in a way, very much like a rental payment for homeowners—it's just money that you never see again for the privilege of living in a home.

- Homeowner's insurance is also a significant cost. Renters pay renter's insurance, but this only covers their belongings and is usually very cheap—often around 100 dollars per year. Insuring a home is much more expensive because you have much more to insure, including the house, its contents, and even some liability protection. Most homeowner's insurance is about 100 dollars per month.

- When you borrow money using a mortgage, you gradually pay down the balance of that mortgage over time. At the beginning of the mortgage, the balance will be very large, and you'll owe interest on this very large amount.

- Why might you still buy a house, despite all of the costs? There are two very good reasons and one pretty good reason. The first good reason is that you like having control over your own space. Research shows greater life satisfaction among owners as compared to renters, at least until they hit their 70s.

- The second good reason is that the home is a powerful savings tool, because when we make a mortgage payment, a little bit goes toward paying off our loan balance, or principal. This means that we own a little more of a home each time we make a payment. But it doesn't feel like saving; we're just making a mortgage payment every month. Because it doesn't show up in a bank account, we're not tempted to spend it.

- A pretty good reason for owning a home is that the government wants us to own, so they provide some incentives that renters don't get. We may be able to deduct some of our mortgage interest from our taxable income. The savings are often oversold, though, especially for average-income homeowners who don't have a big mortgage. The mortgage interest tax deduction tends to primarily benefit high-income people with expensive houses.

- The home equity that builds up from paying a mortgage adds to a household's net worth. This home equity shows up on the balance sheet as the difference between the market value and the mortgage size. This value isn't just theoretical—you can get access to it in a number of ways. First, you can just get a new mortgage. You can also get a home equity loan to serve the same purpose. Either way, you'll have a larger mortgage payment than before, and you'll have to pay off the new loans over time. But one advantage of a home equity loan is that the interest can be tax deductible.

- Another way to tap into home equity is through a home equity line of credit, which is an open credit line that is secured by home equity, so interest rates are low. You will have some initial expense to set up the home equity line of credit, but it will allow you to tap into home equity whenever you have a large unexpected expense. In fact, a line of credit on home equity can be a valuable alternative to holding a large emergency fund.

- Using your house as a piggy bank can get you in trouble. Financial products that help consumers get access to home equity can unlock

a lot of low-interest borrowing, but they can also drain one of the largest sources of emergency wealth for most American families.

- Don't start borrowing against home equity if you have a bad history of controlling spending or paying off debt. You might end up with more debt than you can repay—and this leads a homeowner down the path to losing his or her home to foreclosure.

Suggested Reading

Bray, Schroeder, and Stewart, *Nolo's Essential Guide to Buying Your First Home*.

Dietz and Haurin, "The Social and Private Micro-Level Consequences of Homeownership."

Questions to Consider

1. Homeownership is consistently one of the strongest predictors of household wealth, even when controlling for income and education. Why do you think homeowners are wealthier than renters?

2. Many Americans borrowed too much during the mid-2000s, particularly in variable-rate mortgage products. Why do you think so many people were willing to risk buying homes after prices had risen so quickly, and why did so many use ARMs to finance their homes?

Managing Risk with Insurance

Lecture 8

Risk is the possibility that something valuable we own could suddenly become worth much less. Our most valuable asset is ourselves and our ability to earn income. If we lose our ability to earn income, we've suffered a devastating loss. Other valuable assets include our home, savings, car, and other assorted things like boats, art, or even gold. All of these things of value can be gone if something bad happens. In this lecture, you will learn about insurance and risk management.

Insurance

- The first lesson you need to learn about insurance involves accepting the possibility of bad events, or perils. Actuaries estimate how likely you are to experience any of these perils. They ask you questions and then determine the probability that you'll experience a loss. Smokers are more likely to die early, and a teenage male is most likely to get into a car accident. Your insurance premium will be based on these types of probabilities.

- Most of us tend to think that bad stuff won't happen to us. We become overconfident of our vulnerability to risks. But that's not the way the world works. Statisticians know that perils occur regularly and are random; the world is governed by randomness, and we all need to accept that.

- We also tend to overestimate risks that may have recently occurred. This so-called availability bias means that if we've just experienced an earthquake or seen a disaster on the news, we're much more likely to think that we're vulnerable. But the truth is that many of these events are completely random and we're no more likely to experience a loss after a recent disaster than we were before the disaster occurred.

- The second bias that causes a lot of bad risk-management decisions is loss aversion. We hate losing money, so we'll be tempted to buy insurance products to prevent any sort of a loss. If you can control your emotions after a loss, then you will be wealthier over time. That's because insurance is expensive. Every time you buy insurance, you reduce your expected wealth. Accepting that insurance is never wealth maximizing is the first step to making good insurance decisions.

- Why do we buy insurance? We're happier if we are able to smooth our spending over time. If you become disabled or lose your house, this will have a big impact on your happiness because your spending will drop. This drop in spending is what we're trying to prevent by buying insurance. You accept a small loss through the insurance premium in order to avoid a big loss from an unexpected peril.

- Don't worry about occasional losses. If you buy insurance every time you buy a new product, in the long run you'll have much less money than if you'd just retained that risk. Risk retention means that you know that a risk exists, but you decide rationally that you're not going to buy a financial product to insure yourself against that risk.

When to Buy Insurance

- It is rational to consider buying insurance when the probability of a loss is low and when the size of a loss is high. A good strategy is to create a risk retention limit, which is a dollar amount below which you will retain all risks. It's a good strategy to make sure that you let the small ones go so you can focus on insuring bigger losses. This limit should be based on your wealth and your ability to cover a loss if it happens. This may mean keeping a little bit more money in a liquid savings account just in case.

- The average cost of most insurance is the difference between the premium and how much the insurance company pays out on average in claims. If you pay 1,000 dollars for car insurance, you can expect to get about 600 dollars back in claims, on average. So,

if insurance were an investment, you'd get a −40 percent rate of return on your premium investment. By retaining that risk, it's like earning an average return of 40 percent. You're not going to get that kind of return in an investment portfolio; this is how you build wealth over time through risk retention.

- An insurance deductible is the amount the insurance company subtracts from your claim when a loss occurs. The reason for deductibles is to ensure that you have some incentive to avoid a loss. Because the claims process is costly, the insurance company would like to avoid having to deal with a bunch of small claims. The deductible reduces the frequency of claims.

- In addition, the deductible reduces what's known as moral hazard, which occurs when people behave a little more carelessly when they're insured. You might not choose to drive to work on an icy day if you have a big insurance deductible, but you'll take a chance if you have a small one. By making sure that customers have some skin in the game through a deductible, insurance companies can reduce moral hazard costs. That works out for you, too, because you might be able to save a lot on your insurance premium by choosing a higher deductible.

Life Insurance

- The most important form of insurance protects your human capital, or your ability to earn money. Life insurance protects you against the loss of your ability to earn money by dying prematurely. That's why you should only buy life insurance on earners within a household—because the purpose is to replace their ability to earn income.

- Term life insurance, or life insurance that provides coverage for a specified number of years, is probably the most attractive insurance product in the marketplace today. Prices for term life insurance have dropped significantly because of price competition on the Internet, so it's cheap. And it is cheapest for young families, who need it the

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It is important to have life insurance because it protects your family in the event of your death.

most. Term life insurance is a good investment compared to other insurance products.

- Many employees have the option to buy group term life insurance policies through their employer. These can be a good deal, but shop around first. You want to make sure you have adequate coverage. Simple rules of thumb say that workers need 10 times income in term life insurance. But this number will be lower later in the life cycle if the needs of survivors are less. And it may be larger early in the life cycle.

- One strategy is to estimate the amount needed to fully fund educational expenses, pay off a mortgage, and pay for 15 years of after-tax household expenses. For younger families, use a larger multiple, and for older households, use a lower multiple of earnings.

- Whole life insurance is meant to provide coverage for your whole life. Because coverage later in life is more expensive than coverage

early in life, your premiums for the same amount of coverage will be significantly higher. As you get older, both term insurance and whole life insurance get more expensive because your risk of dying increases each year.

- You don't really need life insurance when you're old and don't have any dependents. So, it doesn't make any sense to pay for it when you're young. Commissions on whole life products are higher, so if you see an insurance agent, you may find yourself being sold some type of whole life product—there are many different names for them. For most households, forget them all and buy term.

Disability Insurance

- The second type of insurance for protecting human capital is disability insurance. A big problem with disability insurance is that many people who think they might become disabled buy the product and then file a claim. This is known as adverse selection: If the insurance buyer knows more about their true risk of loss than the insurance company, then buyers with the highest risk will buy more insurance. This raises costs and makes disability very expensive in the private market.

- The best way to buy disability is in a group policy through your employer. You'll need to check with your employee benefits office to sign up for group disability, but if you have the option, then you should definitely have the disability premiums withdrawn from your paycheck to provide disability coverage. Think of a loss from disability as being equivalent to a loss from premature death, except the worker is still alive. So, disability needs are every bit as significant as life insurance needs.

- The government provides disability insurance through Social Security. The amount of money paid is very small, and the definition of disability is very strict, so most workers shouldn't rely entirely on Social Security disability. You have to be completely disabled to qualify—that means unable to work in any job.

- Insurance products like disability that provide a regular payment over time have a deductible feature known as an elimination period, which is how long you have to wait before you get the first payment. A longer elimination period will mean lower insurance premiums, just like a deductible. Think about your ability to retain risk and go for the highest elimination period you can afford.

Homeowner's Insurance

- Your home is your second most valuable asset. The good news is that, after term life insurance, homeowner's insurance is probably the second most efficient insurance product available. In fact, a homeowner's insurance policy has evolved into an extremely important insurance product that covers not only the value of your home but also the property inside and outside your home and protection against lawsuits.

- For most homeowners, it makes sense to stick with the basic homeowner's policy, also known as the HO-3 policy. There are three basic parts of a homeowner's policy: coverage of the dwelling, coverage of the contents, and liability protection.

- A homeowner's policy is known as an open-peril policy, which means that it covers losses from any cause other than those specifically excluded. The most important excluded perils are floods and earthquakes. If you live in an area where these perils are a risk, then you'll need to get a separate policy called an endorsement to provide coverage.

- Your dwelling is covered, as are unattached buildings, such as a garage, up to 10 percent of the value of the home. If you can't live in the house after an incident, living expenses are covered up to 20 percent of the home value.

- Your stuff, or personal property, is covered up to 70 percent of the home value. That's a lot, but most policies cover only the actual cash value of the property. So, you'll be covered for the depreciated value of your old electronics and furniture, not what they cost when

they were new. You can also get replacement value insurance, which will cover the cost of buying a new item. Make sure that you take a video of all the stuff in your house so that you have evidence of your home's contents in the event of a disaster.

- Your homeowner's insurance provides coverage for personal liability up to 100,000 dollars. But that's probably not enough. You need what's known as umbrella insurance to provide additional coverage against liability. Umbrella insurance is big—a million dollars or more—and it's cheap. Getting sued is a big risk, so you absolutely need umbrella insurance. A good strategy is to increase deductibles and use the proceeds to buy umbrella insurance.

Car Insurance

- Car insurance can be just as important as homeowner's insurance, but not because it protects the value of your vehicle. Driving presents the most common exposure to liability risk. Most states require a minimum amount of liability protection, but these minimum requirements aren't nearly enough for anyone that has assets they want to protect.

- When you buy umbrella insurance, your insurer will make you get much higher liability limits on your auto policy—usually a half million dollars. That may increase your car insurance rates, but it is essential.

- Coverage on your own car is actually less essential. Collision insurance covers any loss from a collision, regardless of fault. Comprehensive insurance covers losses that occur from damage to your car outside of a collision, such as hail damage or a flood.

- As with other types of property insurance, use your risk retention limit when deciding whether to buy coverage and maximize your deductible. Most people need more liability protection that they can pay for with higher deductibles and dropping collision and comprehensive on older cars.

Suggested Reading

Cutler, D. M., and R. Zeckhauser. "Extending the Theory to Meet the Practice of Insurance."

Kunreuther and Pauly, "Insurance Decision-Making and Market Behavior."

Questions to Consider

1. What is the goal of risk management for an individual, and how is managing household risk different from managing risk of a corporation?

2. Why don't people buy the insurance they need the most, and why might they be attracted to insurance that is least valuable according to a life cycle framework?

Essential Tax Principles

Lecture 9

The purpose of this lecture is to give you a better understanding of how the U.S. tax system works. You don't need to be an accountant to figure out the basics of the tax system. For most people, the most important tax rules aren't that difficult if you understand some basic principles. This lecture will focus on the federal income tax system, because it makes up about half of all federal revenue and is used to calculate state income taxes. Payroll taxes make up a third of government revenue, but they're not so easy to reduce through tax planning.

Federal Taxes

- In the United States, the average household pays about 12 percent of their income in federal taxes. Even the highest one percent of households only pays about 25 percent. We do have other taxes, including sales tax, payroll taxes like Social Security, and property tax, as well as state income tax—so taxes are still a significant expense for most households.

- The tax system in the United States is progressive. That means that, even for millionaires, we pay a very low tax rate on the first dollars that we earn up to what's known as a tax bracket, and then a slightly higher tax rate for the next tax bracket, and so on. Most taxpayers won't get anywhere close to the highest tax bracket (39.6 percent).

- Progressive taxation means that higher-income citizens pay a higher percentage of their income in taxes. Because they also make more money, that means that higher-income Americans pay most of the taxes the federal government receives through the income tax system. The top 10 percent of earners pay over 70 percent of taxes. That also means that top earners have the most to gain by reducing their taxable income.

- Gross income is generally any money that comes to you as a flow, and it can be earned or unearned. Earned income includes wages, salary, money you've made part-time as a consultant, tips, or any other compensation you received for your time. Unearned income includes things like interest earned on a savings account, rent from an investment property, or a pension.

- The government has become far stricter about reporting small amounts earned as miscellaneous income, so you may find yourself with more tax forms at the beginning of the year. Also, if you own your own business, then you'll need to fill out a special form called a schedule C, where you list your revenue and business expenses. If you have a hobby or online side business that produces income, you should file a form schedule C and make sure you keep track of all your expenses and sales.

Deductions

- A deduction reduces the income amount we use to calculate our taxes. Above-the-line deductions are taken before we start calculating the amount of income we use to estimate federal income taxes and eligibility for other types of deductions—also known as the adjusted gross income. The government is increasingly starting to phase out deductions and exemptions for high-income households, so reducing your adjusted gross income is probably going to be even more important in the future.

- The most common above-the-line deduction is the amount you save in a retirement account like a 401(k) or an IRA. By saving in a tax-sheltered retirement account, you can reduce your income today by the amount you save. Keep in mind that you will be taxed on your retirement savings as income when you pull it back out after you retire, so the primary advantage of these accounts is the ability to shelter them from taxes during your working years, when you're most likely in a higher tax bracket.

- Other above-the-line deductions include interest on student loans, moving expenses, alimony, health insurance, and self-employment

taxes for business owners. Your gross income minus these deductions is called your adjusted gross income. Now you can move to below-the-line deductions.

- The government really just wants to tax you on the amount of money you earn above the most basic living expenses, so it will let you reduce your income by this amount. Everyone gets a standard deduction of about 6,000 dollars for a single person and 12,000 dollars for a married couple filing jointly. Then, you get an exemption—which is really just a different word for an additional deduction—for each taxpayer and for each dependent of about 4,000 dollars.

- Instead of taking the standard deduction, 30 percent of Americans get even more tax-free income by itemizing their deduction—that is, reporting their deductible expenses item by item if the total exceeds the standard deduction. The biggest itemized deductions are your state and local income taxes, your mortgage interest deduction, property taxes, and charitable donations.

- If you don't own a home and have a modest income, you're likely better off taking the standard deduction. But the reason why so many Americans pay too much money in taxes is because they don't itemize when they should.

- If your income is under 100,000 dollars and you have no dependents, then you can fill out a special tax form that just uses the standard deduction. It's called a 1040EZ, and it really is easy to fill out—there's no need to go to a tax preparer. In fact, the biggest tax software companies have free versions of the 1040EZ you can file online. If your income is below 58,000 dollars, you can even go directly through the IRS Free File online system, type in a few numbers, and get your refund direct deposited in a week or so.

- The 1040A is also a pretty simple two-page tax form. The 1040A is also for taxpayers who earn less than 100,000 dollars and who don't itemize, but you can have dependents.

- If you do itemize, you'll use the form 1040, also known as the long form. Actually, the 1040 isn't any longer than the 1040A; it's still only two pages. But it lets you include one of the 11 possible schedules that can be added to the 1040. This is where computer programs come in handy to figure out which schedules you need, help you fill them out, and then put the numbers back into the 1040.

- Schedule A is what we use to estimate deductions. Other schedules primarily help you estimate other sources of income. For example, schedule B is for interest and dividend income, while schedule C is used to estimate self-employment income. If you have rental real estate, you'll fill out schedule E, and so on.

- After we've estimated the deductions from schedule A, we subtract that amount and our exemptions from the adjusted gross income. That gives us our taxable income. The relevant tax bracket is the percentage of income you'll pay in taxes on the next dollar you earn. Any dollar of income earned through work or in interest will be taxed at this rate.

Tax Credits

- A tax deduction lowers your taxable income by the amount of the deduction. A tax credit is a straight reduction in the dollar amount of taxes you owe. Tax credits are very strong incentives given by the government, because every dollar we get in a tax credit is like a dollar in our pocket.

- Other tax credits include the Lifetime Learning Credit and the American Opportunity Credit for educational expenses. The Saver's Credit, formerly known as the Retirement Savings Contributions Credit, can be great for workers with a moderate income.

- Another tax credit that's very important for lower-income workers is the Earned Income Tax Credit, which gives you a credit for each dollar you earn. The idea is that it encourages you to work by providing an increasingly generous credit up to a certain income level, around 15,000 to 25,000 dollars for a single parent with

two children. The incentive declines for each dollar earned after this amount.

- Tax credits can be refundable or nonrefundable. Refundable means that the government will let you essentially pay negative taxes, meaning that the government will give you money. If your tax bill is nothing, then you can't take off nonrefundable tax credits like childcare and the retirement saver's credit. Just to make it more complicated, some credits are partially refundable. But a tax program will figure this out for you.

Paying Taxes

- After you've subtracted the tax credits, you will finally have your tax bill—or, if you have refundable credits, the government may actually owe you money. Most Americans won't have to pay taxes, because taxes get withheld from your paycheck every month by an employer. But you choose how much money is withheld every month.

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Nobody likes paying taxes. If you choose to withhold more of your paycheck throughout the year, you probably won't have to.

- If you find that you're consistently getting a big refund, you can change your W-4 form, which tells your employer how much to set aside from a paycheck. It might be best to get some help doing this, because you'll be penalized if you don't withhold enough. Many people don't mind getting a refund because it's a forced savings device, and there isn't much of a trade-off to letting the government keep your money when interest rates are low.

- Because most workers have more money withheld than they owe in taxes, they'll get a tax rebate. If you have your refund direct deposited, then it will take about one to two weeks for the money to show up in an account. It might be a good idea to plan in advance for how you will spend a refund if you need a forced savings device.

- Other households may have to pay extra because they make money in addition to the salary they received from an employer. In this case, you will need to estimate your tax bill and make regular quarterly payments in order to avoid interest charges and penalties for underpayment. If you have rental or other self-employment income, an easy solution is to have your primary employer withhold a little more from your paycheck by using the W-4 form.

- Once you've finished your federal tax form, you'll have the numbers you need to fill out the state tax form for most states. Another advantage to having a lower adjusted gross income is that many states use that number to estimate state taxes. There is a lot of variation in state income taxes.

Payroll Taxes and Property Taxes

- While taxes make up half of federal revenue, payroll taxes make up about a third. Payroll taxes are withdrawn to pay for Medicare and Social Security. Payroll taxes are less progressive than income taxes because everyone pays the same percentage.

- For Social Security, we pay 6.2 percent of our gross wage income, and so does our employer. So, things like putting money in a 401(k) won't reduce the amount you pay into Social Security. The Social

Security tax actually goes away after you reach an income of about 120,000 dollars.

- Medicare taxes are 2.9 percent on all earnings, with half paid by the employer. There is no income phaseout for Medicare. In fact, if you make more than 250,000 for married couples, then you have to pay an additional 0.9 percent. Medicare is in worse shape than Social Security at the moment, so don't be surprised if this number creeps up in the future.

- Think of payroll taxes as a form of forced saving: The government taxes Social Security retirement savings out of your paycheck, but then gives it back later in life. Lower earners will get a higher rate of return on their Social Security savings, while higher earners will get about what they put in. Medicare works the same way.

- The other significant tax that we pay is property tax, which we either pay through our mortgage company or, once we've paid off a mortgage, directly to the city we live in. That means that property taxes, especially in places with older homeowners with no mortgage, are more salient than income taxes. We tend to notice them more, and we tend to complain when they go up. Income taxes have a tendency to creep upward over time at a faster rate than property taxes.

Suggested Reading

CCH Tax Law Editors. *U.S. Master Tax Guide (2015)*.

TIAA-CREF Tax Guide (current year).

Questions to Consider

1. Why are above-the-line deductions so valuable?

2. What are the welfare consequences of a tax code that includes many deductions and is often difficult for an average taxpayer to understand?

Saving for Retirement

Lecture 10

The purpose of this lecture is to demystify the retirement savings process. Most of us have an idea of retirement as turning a certain age and walking away from our job into a life of bliss. But in order to understand why we should save for retirement, it's important to first think about why we want to retire, what a good retirement age is, and what we should do when we retire. In this lecture, you will learn how to determine how much money you will need in retirement and how to invest to reach your retirement goals.

Retirement

- Retirement is what you make it. We can make it a lot worse by saving too little or investing badly, or we can make it better by saving the right amount and investing wisely. The good news is that it's not as difficult as it seems.

- The first step is to decide on your income replacement rate. In other words, how much of your preretirement income do you want to spend each year after you retire? The income replacement rate comes directly from the life cycle concept of consumption smoothing.

- A simple retirement income plan would maintain our standard of living after retirement. Most of us don't spend 100 percent of what we earn every month. First, part of our income goes toward retirement savings. If we save 10 percent of income every month in a 401(k), then that's money that never makes it into our paycheck. Our replacement rate is now down to 90 percent.

- What other expenses do you have now that you might not have in retirement? Consider a mortgage. Most new retirees, even most older baby boomers, have paid off their mortgage. If you're paying 15 percent of your income now toward a mortgage, that's an expense you probably won't have in retirement. Don't include

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Retirement requires a lot of financial planning, but most people do not start saving for retirement until later in life.

homeowner's insurance and property taxes, because you'll still have those in retirement. After losing the 15-percent mortgage payment, we're now down to a 75-percent replacement rate.

- You might also have other expenses during your working years that you won't have in retirement. You won't have to spend as much on clothing, and you won't be commuting to work every day. You may also be spending money on your children today that hopefully you won't be spending in retirement. An obvious expense that you won't have is Social Security and Medicare payroll taxes, which are just under eight percent of your income.

- But some expenses increase in retirement. You might want to do more traveling, and later you'll probably have higher health-care costs. A good rule of thumb for an income replacement rate is about 65 to 70 percent of your preretirement income—any more and you'll be living better in retirement than you did during your

working years. Workers who live on a more modest income don't need to save as much for retirement to smooth their spending.

How Much Money Will You Need?

- There are a few rules that financial experts use to estimate how much you need to save to generate a dollar of retirement income. But first you need to understand that there are two basic sources of funds that most people draw on in retirement: investments and annuities.

- If you plan to spend money from your investments, then many financial advisors suggest basing your plans on the four percent rule, which is based on research that estimates a safe withdrawal rate using historical investment return data. According to these studies, a retiree can withdraw about four percent of his or her investments each year, adjusted for inflation, and be reasonably certain that he or she won't run out of money after 30 years if he or she starts at age 65.

- The arithmetic changes if you wait a few years to retire. Each year you defer Social Security you get a bigger check—about an eight percent increase per year. And unlike a lot of pensions, a Social Security check goes up each year with inflation. Claiming it later is a very valuable retirement income strategy. Even if you retire earlier, you can live off of your savings for a few years and still claim Social Security when you're older to get a higher payment.

- Also, by retiring a year later you have one less year of expected longevity. Because you save in order to cover nonworking years of spending, you'll need to save less. If you haven't saved enough for retirement, your best option is probably to wait a few years. You can save a little more, and you'll need a lot less.

- The other option for ensuring that you'll have enough funds in retirement is to buy a private annuity. Buying a fixed immediate annuity is just like buying your own pension or a bigger Social

Security check. It's an insurance company's guarantee to provide an income each month from now until you die.

- Annuitizing part of your retirement wealth is the easiest way to create a stable income in retirement. Most economists believe that retirees would be better off annuitizing a big chunk of their retirement savings rather than withdrawing money from savings every year.

- Annuities are some of the most abused financial products in the business. Fixed annuities may be a viable option, but there are issues with variable annuities, which are investment accounts that allow people who may have exhausted other tax-sheltered savings options. Very few financial experts can confidently choose a good variable annuity product. Look for fixed annuities only and shop around to make sure you get a competitive income quote.

- Whether you buy an annuity or use the four percent rule, for every dollar above your pensions and Social Security that you want to be able to spend per year in retirement, you need to save 25 dollars. By retiring closer to age 70, you can lower this to perhaps 20 dollars.

- Saving 25 times your income needs is being conservative—some would say too conservative. Studies of retirement spending do show that we tend to spend less as we age. We tend to be most active during the first decade of retirement. Generally, spending declines in our late 70s and 80s and only increases if we experience a negative health event.

How to Invest

- Whether you work for a company or you're self-employed, you have the option of investing in a 401(k). The great thing about a 401(k) is that you won't have to pay any taxes on investment earnings until retirement. This is a big savings—the government estimates that it loses about 60 billion in tax revenue each year from sheltered retirement plans.

- What's bad about 401(k)s is how people use them. The first problem is that most workers don't save enough. Amazingly, many American's don't take advantage of an employer match. With a match, the company will chip in the same amount of money that you put into a 401(k) up to a percentage of your income. It's free money—no strings attached.

- If you're like most Americans, you need to increase the amount that goes into your 401(k). Young or low-income workers might only need to save five or six percent, but most middle-aged workers should be saving twice that amount or more once kids become independent and housing expenses fall. In general, your contribution rate should rise over time.

- When you do decide to contribute to a 401(k), you'll need to choose how to invest. The default investment is generally something known as a target-date fund. It's called this because it has a target retirement date. This type of investment is a diversified mix of stocks and bonds, it rebalances automatically when stocks go up or down in value, and it gradually moves toward a higher percentage of bonds as you get old so you're not as vulnerable to a market crash right before retirement.

- Choose the lowest expense ratio target-date fund. And if you're the kind of person who will worry when your portfolio loses money, choose a target date that isn't so far away. For example, a 2020 target-date fund will have more bonds and fewer stocks than a 2040 target-date fund. As retirement approaches, reduce your percentage of stocks and increase your percentage of bonds. Target-date funds make choosing a retirement portfolio easy; just make sure you choose one with the lowest fees.

- Another way to shelter investments from taxes is in an individual retirement account (IRA). The difference between an IRA and a 401(k) is that you can choose to invest through an IRA where you want—not just in the options that are available through your

employer. Another advantage is that you can aggregate all of your 401(k) accounts from previous jobs into a single retirement account.

- Before you open an IRA, choose an investment company that offers low-fee investment options. Then, fill out a rollover form to transfer retirement savings into an IRA. Make sure you get someone to help you, and never have the 401(k) company send you a check, because you'll be taxed on the amount of the check as if you had withdrawn it. Just transfer the funds directly from one tax-sheltered account to another.

- The benefits of a Roth IRA are back-loaded; they mainly occur in the future. Unlike a traditional IRA, you do not get to deduct the amount invested in a Roth from your income today. So, your contribution is taxable today. But when you take the money out, you won't owe any taxes. You will have to pay income taxes when you take money out of your traditional IRA or 401(k). Mathematically, it works out the same if you pay the same federal income taxes before and after retirement. Both types of IRA are sheltered from taxes over time.

- In any type of sheltered retirement account, you can take the money out without penalties starting at age 59 and a half. But with a traditional IRA or a 401(k), you *have* to begin taking money out of the account at age 70 and a half. That's so the government can be sure that you'll pay tax on the money eventually. The money you have to take out of a retirement account is called a required minimum distribution (RMD). It's a percentage of your total savings based on expected longevity.

- You'll pay income taxes on the RMD. You can do whatever you want with the money; you can spend it, or you can put it back into an investment account. But you do have to pay income taxes. With a Roth IRA, you don't have any RMDs. You can keep sheltering the money as long as you like, you can choose when and how much to take out, and you don't have to pay taxes on what you take out after age 59 and a half.

- This is a big advantage of a Roth. Another is that you're protected against increases in future tax rates. Moreover, Roth IRAs have income limits that are nearly twice as high as traditional IRAs, so upper-middle-class households that are no longer eligible to contribute to an IRA can put money in a Roth. You can roll traditional 401(k) money into a Roth, but you'll need to pay income taxes today.

Suggested Reading

Beshears, Choi, Laibson, Madrian, "The Importance of Default Options for Retirement Savings Outcomes."

Larimore, Lindauer, Ferri, Dogu, and Bogle, *The Bogleheads' Guide to Retirement Planning*.

Questions to Consider

1. What impact do government tax incentives for retirement planning have on life cycle savings and spending?

2. How do you think the shift from defined benefit to defined contribution plans has changed retirement savings adequacy in the United States? How has this change affected retirement policy goals, and how might the system be improved?

Fundamentals of Estate Planning

Lecture 11

In this lecture, you will learn the basics of estate planning. There are a few important facts that you need to know in order to make sure that your wishes are carried out after your death and to help your heirs avoid wasting time and money. The main objective in leaving a bequest is to make recipients better off, and a little bit of planning on your part can pay big dividends for those you leave behind.

Wills

- As you go through life, you accumulate stuff—financial assets, tangible assets like homes and other property, and maybe even a business. You also incur some debt, and you have obligations to care for others who depend on you. When you die, something has to happen to your assets and obligations. A legal process known as probate exists to sort out your affairs.

- Unless your assets are transferred automatically to a surviving spouse, other beneficiary, or a trust, your estate will have to go through probate. Probate is the legal process to establish that your will is valid, after which the court will transfer your assets, following the instructions you specified in your will, to your named beneficiaries. If you leave no will, probate will sort out who gets what according to the laws that apply.

- Going through the probate process typically takes at least nine months but may be drawn out for several years, depending on the complexity of the estate. In probate, the court grants legal authority to a personal representative (technically called an executor if appointed in the will, or an administrator if appointed by the court) who will oversee the distribution of your assets according to your wishes as stated in your will. If you don't have a will, your nearest relatives get your money—and who those relatives are can be different depending on which state you live in.

- Personal representatives, or executors, are generally paid about one to five percent of the estate for their services, although relatives might do it for free. You can select an attorney, or a relative or family friend. Being an executor can be a difficult and time-consuming job, so you'll need to select someone with the skills and the ability to navigate the process of selling assets and distributing the proceeds to beneficiaries.

- The executor has to follow the instructions set out in the will to ensure that your intentions are carried out. Many times there are gaps, in which case the executor may have to look to state law. It's important to make sure that the executor gets along well with your heirs and is trustworthy. A good choice is to name a third-party professional, such as an attorney, the executor who can be neutral and who has experience with the process.

- There are also costs associated with going through probate. The attorney who takes care of your estate in probate is paid a base fee plus expenses. Each state has its own fee schedule. Attorneys may also charge the estate additional expenses, and if someone contests the will, that will add on additional expenses.

- Filing an inventory is part of the probate. An inventory is basically just a balance sheet—a listing of assets, their value, and any defining characteristics, such as a vehicle identification number for a car. Many people would prefer that this information not become public.

- This process takes time and can be expensive. Why else might you want to avoid probate? In all states, you have to go through the court system to settle a will. If you own real estate in multiple states, you'll have to go through probate in each state. Probate is also public, and sometimes people don't want everyone to know what they own.

- There are a few options to avoid probate. You can title assets so that they're not owned solely by the deceased, or you can transfer

assets to a trust. Jointly titling assets or creating a transfer on death provision on financial accounts is very easy to do, and it ensures that when you die, someone else will immediately be able to access the asset.

- The most common type of joint asset ownership is joint tenancy with right of survivorship. All of a married couple's accounts can be titled this way, and either spouse will have access to each account. This is very helpful because if one spouse dies, the other won't have any trouble accessing accounts to pay for expenses. Also make sure that you have a named beneficiary on all of your investment and retirement accounts to ensure a smooth transition of assets outside of probate.

- There are some significant drawbacks of jointly owning assets, including liability and a loss of control over assets. An easy solution is to set up accounts with a transfer on death provision. For example, you can set up an investment or bank account that is transferred to your heirs upon death. You specify who will receive the money, and the funds will be split into equal shares.

Living Trusts

- An alternative to using a will is to create a living trust, which is similar to a corporation in that it is an independent entity to which you transfer assets. It avoids probate, and you can put very detailed instructions on what to do with the property. The trust legally owns the assets, so you need to retitle your assets in the trust's name.

- In essence, you're taking assets out of your own accounts and transferring ownership to the trust. But you can retain control over your assets by appointing yourself the trustee—that is, the administrator of the trust—or choose a loved one to play that role. In a revocable trust, you can even decide to change the terms of the trust, including the right to retitle the assets in your own name. Revocable trusts are good alternatives to a will and avoid probate but may not avoid estate or inheritance taxation if you have a sizable estate when you die.

- Many have criticized the use of living trusts because they can be costly to create and, in some cases, are more expensive than simply transferring assets through the probate process. One benefit, however, is simplicity and the use of a trustee who can immediately give money to heirs according to the wishes of the donor. If you'd carefully listed out everything on a will, it may accomplish the same thing. But most people don't do it.

- Wealthy individuals will often have a corporate trustee who charges a fee, usually as a percentage of assets under management. Unless the surviving spouse or heirs have extensive investment experience, it may be wise to place assets in the hands of a trustee who manages assets before and after death. But that also requires that the beneficiaries ask for permission when they need some money.

- Trusts can be used to make sure that money passes from the estate to the people you think deserve it. For example, a so-called Q-tip trust provides an income stream for your surviving spouse during his or her lifetime while allowing you to decide in advance who will receive the remaining funds after your spouse dies.

- Trusts that go into effect after death, also known as testamentary trusts, can also be used to help take care of those who otherwise might not be able to take care of themselves—and that includes you. You can establish someone to make decisions on your behalf in case you suffer from senile dementia or get Alzheimer's or become otherwise unable to care for yourself.

- In general, establishing guardianship can be a lengthy legal process—and expensive. But a guardianship agreement can avoid this problem. Establishing guardianship for yourself is easy: Each state has a form that lets you transfer responsibility for your care to someone else under specific circumstances. If you don't have it, a springing power of attorney document can help someone take over.

- Obtaining guardianship of minors or disabled adults is an expensive and lengthy process. Usually, the surviving parent will be named as

the guardian, but you can use your will or trust document to specify who you would prefer to take care of your child. If you don't have a will, then it's up to the courts. Even if you don't have sizable financial assets, you should consider executing a will to provide for guardianship of your children in case you pass away before they reach the age of majority.

Estate Taxes

- Federal estate taxes today are only relevant for the very rich, but some states impose inheritance taxes on smaller estates. The original purpose of the estate tax was to avoid creating dynasties in America where wealth was handed down from generation to generation. The government is okay with you giving your riches to charity, but it doesn't necessarily want you to give it to your kids.

- There is what's known as a tentative tax applied progressively on the first million dollars of the taxable estate. It starts out at 18 percent and moves up to 40 percent as the taxable estate rises to a million dollars or more.

- The estate doesn't become taxable until you've used up your unified credit, which in practical terms is the amount of the estate that can transfer tax-free. This amount is now about 5.5 million dollars and is referred to as the applicable credit amount. When a first spouse dies and does not fully utilize his or her applicable credit amount, the executor of the estate can elect to transfer the unused exemption to the surviving spouse.

- There are some basic estate tax minimization strategies that are often employed in the financial planning process. The most common is the gift tax exclusion. You can give 14,000 dollars per year to anyone you want without having to file a gift tax return or pay a gift tax. In addition, you can pay medical or educational bills for someone directly to the institutions providing those services without having it count against your 14,000-dollar limit. You can also give money to charity. Whenever possible, give appreciated securities and not cash.

Advanced Medical Directive Documents

- The last part of the estate planning process involves documents that give others instructions on how to care for you if you become incapacitated. These types of documents can be the most difficult to fill out, but they are arguably the most valuable steps you can make to reduce the emotional and financial burden of dying.

- Later life care is very expensive both for the government and for individuals who have to pay out of pocket for long-term care. It makes sense to give others the option to provide the amount of care you want. You can provide these instructions through advanced medical directive documents. There are three basic types.

- The first document is a health-care proxy, sometimes referred to as a general power of attorney for health care, which grants another person the authority to make health-care decisions on your behalf. The person holding the health-care proxy has the same powers as

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Wills, living trusts, estate taxes, and advanced medical directive documents are important things to consider as you grow older.

you—he or she can look at your medical record and choose which procedures you receive.

- The second document is a living will, which provides instructions about desired medical treatment to health-care professionals. Living wills can be general or specific in phrasing. There are a number of forms available to specifically list the conditions under which you would prefer that care be withheld from you.

- The third document is a general power of attorney. These can be durable or springing. A durable power of attorney gives someone else the powers to act on your behalf in financial matters such as managing accounts while you are sick, applying for insurance, and making legal decisions when you become incapacitated. A springing power of attorney can come into effect when you become incapacitated.

- Advanced directive forms vary from state to state, and hospitals will want a copy before providing care. Filling them out can be challenging, but you do it to make it easier for loved ones not to carry the emotional guilt of having to make difficult decisions on your behalf.

Suggested Reading

Clifford, *Estate Planning Basics*.

Dalton, *Estate Planning for Financial Planners*.

Questions to Consider

1. Explain why we might want to restructure ownership of our assets to avoid probate.

2. Many people have criticized the estate tax in the United States. Provide arguments for and against the estate tax, and explain how the existence of estate taxes affects life cycle savings and spending decisions for donors and potential recipients.

Putting Your Financial Plan Together

Lecture 12

Once you understand the basics of financial planning, you can put together your own financial plan. Research has shown that simply going through the process of assessing your current financial situation and creating long-term financial goals can have a big impact on your financial behaviors. If you want to reach your financial goals, you'll need to know how to get there. And that's the purpose of a financial plan. In this lecture, you will learn a few simple steps that can help you build a customized financial planning roadmap.

Cash Flow Statement

- The first step of creating a financial plan is to gather financial information. This information is then used to generate three important documents: a cash flow statement, a budget, and a balance sheet. A cash flow statement lists your income and all regular fixed and variable expenses you incur each month. Fixed expenses don't change from month to month—for example, a mortgage, a student loan payment, or a cable bill. Variable expenses can include things like food away from home, travel, or clothing.

- To create a cash flow statement, gather bills and your checking account statement from the last few months and estimate how much you spend on each category. If you have the discipline to pay off your credit card each month, then a credit card bill can be a great way to keep track of spending.

- Once you've estimated your spending, or cash outflows, you need to collect some pay stubs that show your cash inflows. To do it accurately, use your gross income and include income and payroll taxes as an expense, and also account for any money that you're currently saving in a 401(k). Although it may not feel like saving, money deposited in a retirement account is increasing your net worth.

- When you subtract expenses from income, you'll come up with net saving or a net deficit. Deficits end up getting funded by borrowing, and savings go into an account like a 401(k) or savings and build up over time.

- For those who don't have difficulty saving and are later in the life cycle, the cash flow statement may not be essential. But even if you are disciplined, a cash flow statement can provide a much clearer idea of how much you spend and save. The goal is to come close to smoothing spending over time, and a cash flow statement can tell you exactly how much money you spend during an average month or year.

- If you're like most people, you tend to spend close to what you earn. A little more, and you'll see the credit card balances start to build up; a little less, and you'll see a bump in your checking account balance. If your cash flow statement is positive but you're accumulating debt over time, then check your numbers. Remember to include things like cash expenses and credit card interest.

- The cash flow statement provides information about budget flexibility. If you aren't saving enough for retirement, or if you have a tough time paying off credit card debt, you'll be able to see your options for reducing spending. This is also why it's important to differentiate between fixed and variable expenses. Variable expenses can be more easily cut than fixed expenses.

- When you're cutting spending, an economist would suggest using the marginal utility method, in which we compare the amount of happiness we get from spending on each item in the budget and cut those items that we enjoy the least. But the truth is that we often aren't very good at understanding the marginal happiness we actually get from some forms of spending. So, when you're deciding what to cut, be honest with yourself: Does spending that much money each month really make you that much happier?

Budget

- A budget is a cash flow statement for the future. To create a budget, start with the cash flow statement and imagine how you'd like to spend your money next month in order to meet your long-term goals. This also means that you'll need to know what these long-term goals are going to be. Creating specific goals can be the most valuable outcome of the financial planning process. It forces you to think about the future.

- Goals will be different at different life stages. Short-term goals may include saving for a down payment on a house, a vacation, or paying off credit card debt. You're less likely to succeed if you set nebulous goals, or goals that you make to avoid a negative behavior, especially if you're relying on self-discipline in the present to accomplish your goal. And passive saving is much more successful than active saving, so set up automatic withdrawals from your paycheck or checking account to save for retirement or pay down debt.

- An effective strategy is to create savings accounts that are used for a specific long-term goal. Framing is a powerful force, and if you frame money in that account for a specific purpose, you're less likely to raid that account to buy something else. So, find an online bank that pays a decent interest rate and create named savings accounts. Figure out how much you can fit into your budget each month, and have it withdrawn automatically a few days after you get your paycheck.

- Once you've identified your goals, you simply need to estimate how much you need to save each month. You'll need to come up with an expected rate of return on investments to get there. In the future, you may see lower rates of return on stocks and bonds than in the past, so be realistic.

- Over time, you'll move through the life cycle and your goals will change. Unexpected things will happen that affect your finances.

It's important to revisit your plan and make changes when needed to make sure that you're headed in the right direction.

Balance Sheet

- In order to figure out the current state of your finances, you should create a balance sheet. Creating a balance sheet can also be an important part of the estate planning process, because you'll need to identify all your assets and their value, as well as your debts.

- A balance sheet generally consists of a ledger with all assets listed at their current net market value, sorted into three categories: monetary assets that can be liquidated for short-term spending needs, investment assets whose primary purpose is to fund future goals, and tangible assets (such as houses and cars). Tangible assets will often be the most difficult to liquidate in a short amount of time and often involve high transaction costs to sell.

- Liabilities are any debts currently owed. They are often split between short-term liabilities that can be paid off within the next year or so and long-term liabilities that will be paid off in the future. Short-term liabilities will include outstanding credit card debt or other consumer debts, while long-term liabilities include a mortgage, car loan, or student loan debt.

- Once you've listed all your assets, calculate the total amount. Then, add your liabilities and subtract that amount from total assets. This number is your net worth. Net worth in the United States is not uniformly distributed; it's what statisticians call right skewed. There are a lot of people with near-zero net worth and a few people with very high net worth.

- Your balance sheet is useful for a number of reasons. First, it helps show your progression toward goals. Changes in the balance sheet should reflect savings and borrowing decisions made when you create a budget. If you aren't moving toward savings goals, then you may need to adjust the budget to stay on track. The balance

sheet also provides a window into possible risk exposures. How much would the loss of an asset affect your overall wealth?

Investment Policy Statement

- Another valuable tool used by financial planners is an investment policy statement. Creating an investment policy statement is valuable because it forces you to identify your goals and then create an investment plan that's appropriate for each goal. It also serves as a commitment device, because you decide ahead of time how much risk you're willing to take. After you've decided to accept risk, this makes it easier to accept the inevitable ups and downs in the market.

- The advantage of using an investment policy statement is that it takes the emotion out of investment decision making. You decide how much risk you can take when you're in a rational state of mind—people are always more rational when thinking about the future. Then, when markets crash, you can refer back to the investment policy statement for guidance. In a bull market when you might be tempted to take more risk, you simply follow the plan and buy more bonds with your stock gains to rebalance the portfolio.

Financial Planners

- Many people can benefit from seeing a qualified financial planner to develop a financial plan and get advice. So many people make so many decisions that result in losses from bad investing, expensive and unnecessary financial products, or failure to take advantage of tax incentives. Even financially savvy investors can benefit from having a planner who can serve as a rational sounding board or can provide insight into changes in financial products and tax law.

- It's not easy to choose a good financial planner. Unlike many professions, such as law or medicine, planners aren't licensed by the state, and there are no standards for education or knowledge to call yourself a financial advisor.

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Financial planners can help you figure out what your financial priorities are while helping you plan for the future.

- There are some basic differences among people who call themselves financial advisers. Registered representatives of broker dealers are different from registered investment advisors. Brokers are regulated by the Financial Industry Regulatory Authority and owe a duty of loyalty to the firm they work for. Their primary job is to broker the sale of financial securities.

- Brokers generally receive compensation from commissions on the sale of financial products like mutual funds. According to the law, the broker makes recommendations that meet a suitability standard, meaning that the mutual fund needs to be suitable for the client. Brokers are primarily motivated to sell products for which they will receive a commission. Brokers also have an incentive to sell products more frequently in order to maximize commissions, rather than encouraging a long-term strategy.

- Brokers also have an incentive to encourage active investments, because they more often pay higher commissions. These so-called broker channel mutual funds consistently underperform direct channel mutual funds, which is why many financial economists wonder why so many investors buy them. The reason is because they are often packaged with investment advice, which most people do need.

- Registered investment advisors are regulated by the Securities and Exchange Commission and are legally fiduciaries, which means that they are supposed to make recommendations that are in your best interest. If they don't, you can sue them. This creates an incentive to make recommendations that can be defended in court. Registered investment advisors are generally compensated as a percent of assets under management.

- You're likely to get different recommendations from a registered investment advisor than from a broker. Registered investment advisors are more likely to prefer passive investments, for example, because they don't get compensated from recommending active investments. Registered investment advisors also tend to deal with wealthier clients. This leaves many registered investment advisors out of reach for many investors.

- But there are qualified advisors who will charge an hourly fee to help put together a financial plan. A good source for information for locating fee-only planners is the National Association of Personal Financial Advisors. There is also an increasing number of online financial planners who will charge a monthly fee or a fixed fee to create a financial plan.

- Finally, there is no consistent training among professionals within the financial planning industry. The most rigorous certification of comprehensive financial knowledge is the Certified Financial Planner (CFP) designation. CFPs have to pass a 10-hour exam with about a 50-percent pass rate on a range of financial planning topics—not just investments. They also have to fulfill continuing

education requirements. This certification is no guarantee that you’re going to get great advice, but it tells you that the advisor has a minimum level of knowledge and has agreed to follow a standard of ethical advice.

Suggested Reading

Garman and Forgue, *Personal Finance*.

Lytton, Grable, and Klock, *The Process of Financial Planning*.

Questions to Consider

1. How might establishing specific goals and creating a plan for reaching those goals over time lead to better financial outcomes?

2. Many people select a financial advisor because he or she is an acquaintance or was recommended by a friend. Why is that trust important?

3. What would the medical profession look like if doctors were paid by medical device manufacturers and pharmaceutical companies?

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