



Let's Talk: Personal Finance

Keys for Financial Success

Speakers:

Frederick Mannion and William Sump

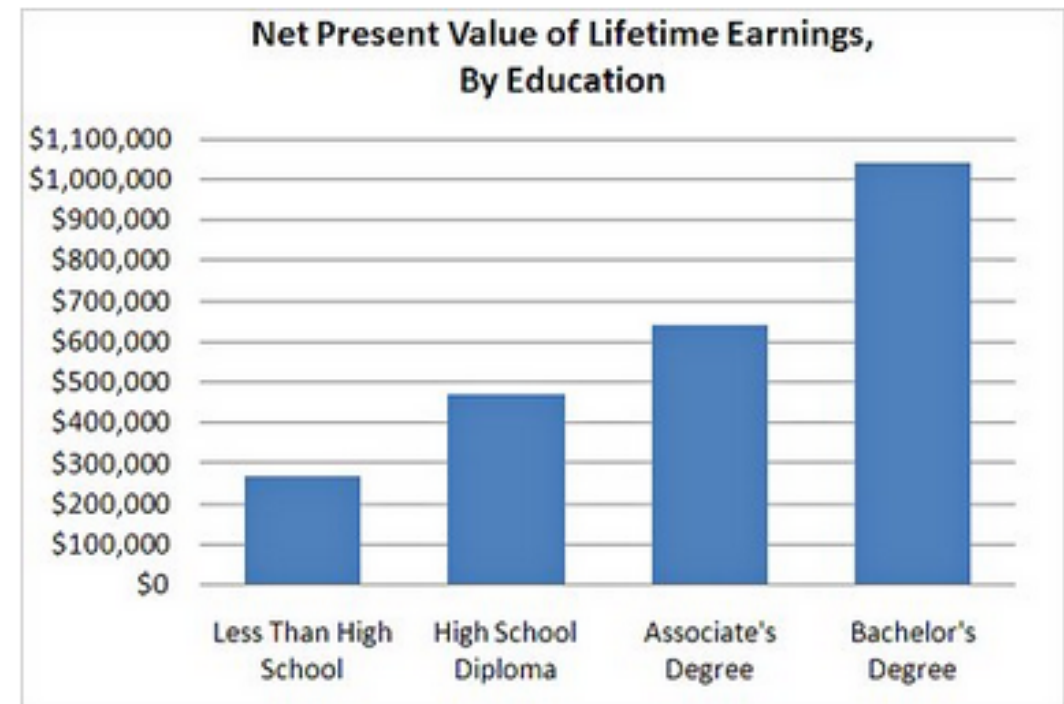
Special Thanks to Professor Pommerenke

Department of Economics
University of California, Santa Cruz
March 9th, 2017

The Importance of Education

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- Go to College
 - Bachelor Degree has a Positive NPV
 - Lifelong Learning
- Choose your Job Wisely
 - Associate (\$20K): PV=\$343K
 - Manager (\$60K): PV=\$1M
- Negotiate a Higher Salary
 - Be Aggressive when being Hired
 - Adaptability



The Hamilton Project

Increase
Income

Decrease
Expenses

Save Enough

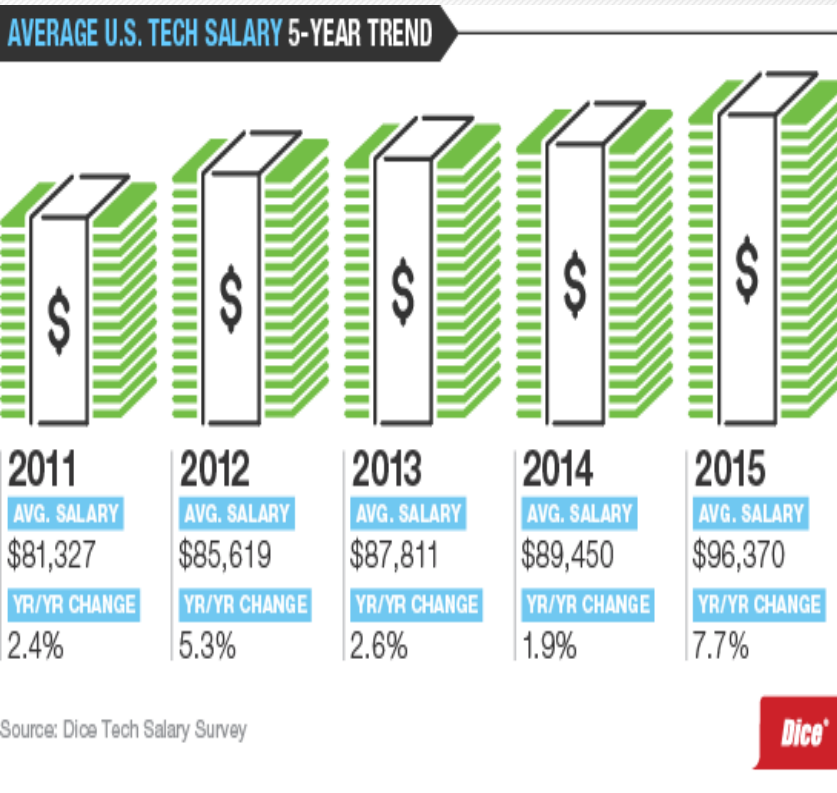
Buy or Rent

Invest Wisely

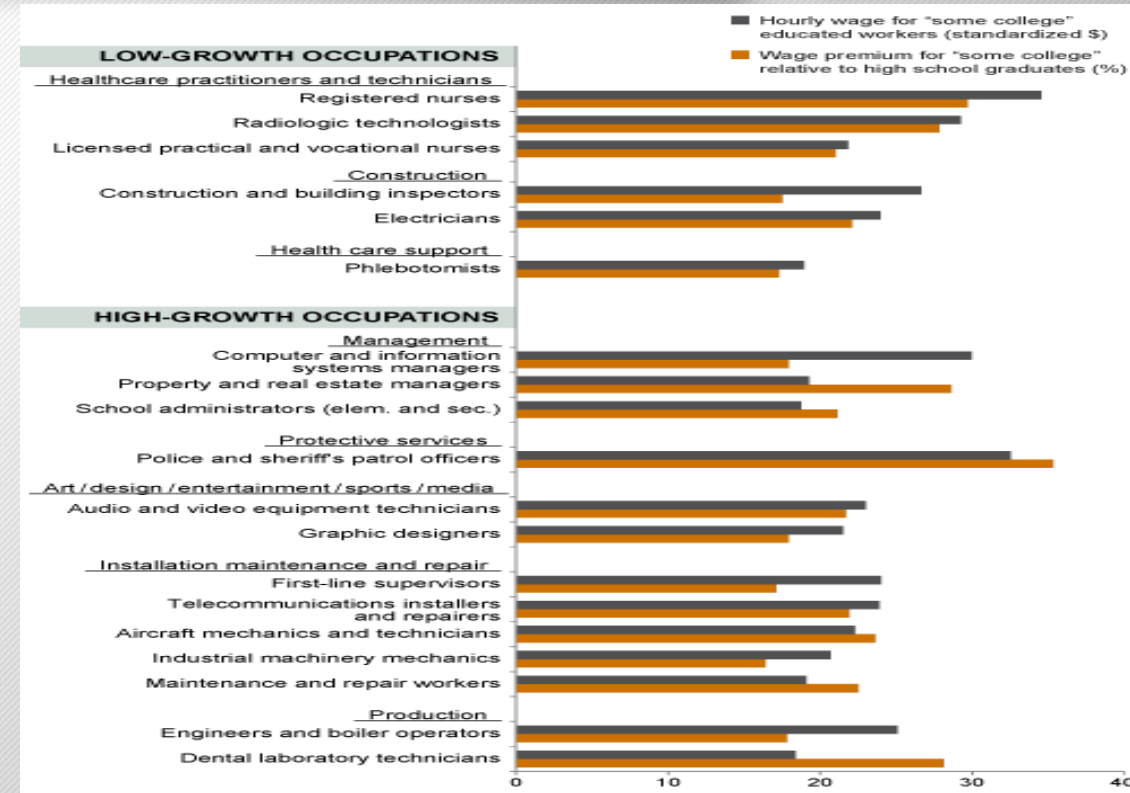
Manage Risk

Average Salaries

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If
You
Learn
You
Will
Earn



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Invest Wisely

Manage Risk

Pair up Wisely

3



- Finding the Right Spouse
 - Twice the Income with Less than Twice the Expenses
- Relationship Survival
 - Decrease Financial Stress
 - Ask for credit score



Increase
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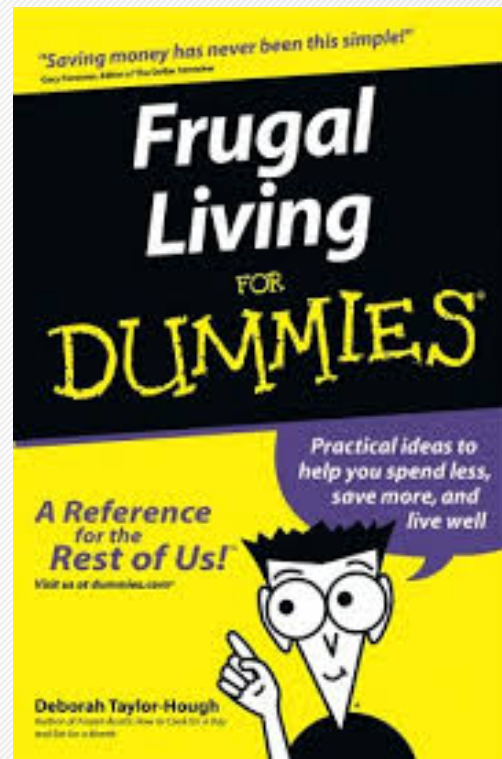
Invest Wisely

Manage Risk

Lower Your Expenses

4

- What you will Remember
 - Experiences vs. Things
- Learn to live frugal
 - Income > Expenses
 - Can I buy this three times?
 - Buying Used



“Annual income twenty pounds, annual expenditure nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pound ought and six, result misery.”

Charles Dickens, David Copperfield, 1849

Increase
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Invest Wisely

Manage Risk

Credit Score

5

- The Grade that Matters the Most
 - Build up your Credit
 - Use a couple Credit Cards
 - Pay all Bills on Time
 - Keep your Credit Usage Low
- Advantages
 - Qualify for Loans
 - Get Lower Rates
 - Get Cash Back Cards
- Check your Credit
 - Creditkarma.com
 - Annualcreditreport.com



Increase
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Decrease
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Save Enough

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Invest Wisely

Manage Risk

Manage Your Debt

6

- Use Savings to Pay Off Debt
 - The rate of Return on Assets
 - The rate of Return on Debt
- Mortgage Debt can be Ok
 - Invest in the Future
 - Tax Deductible Interest
- Don't Loan to Family and Friends for Free



Increase
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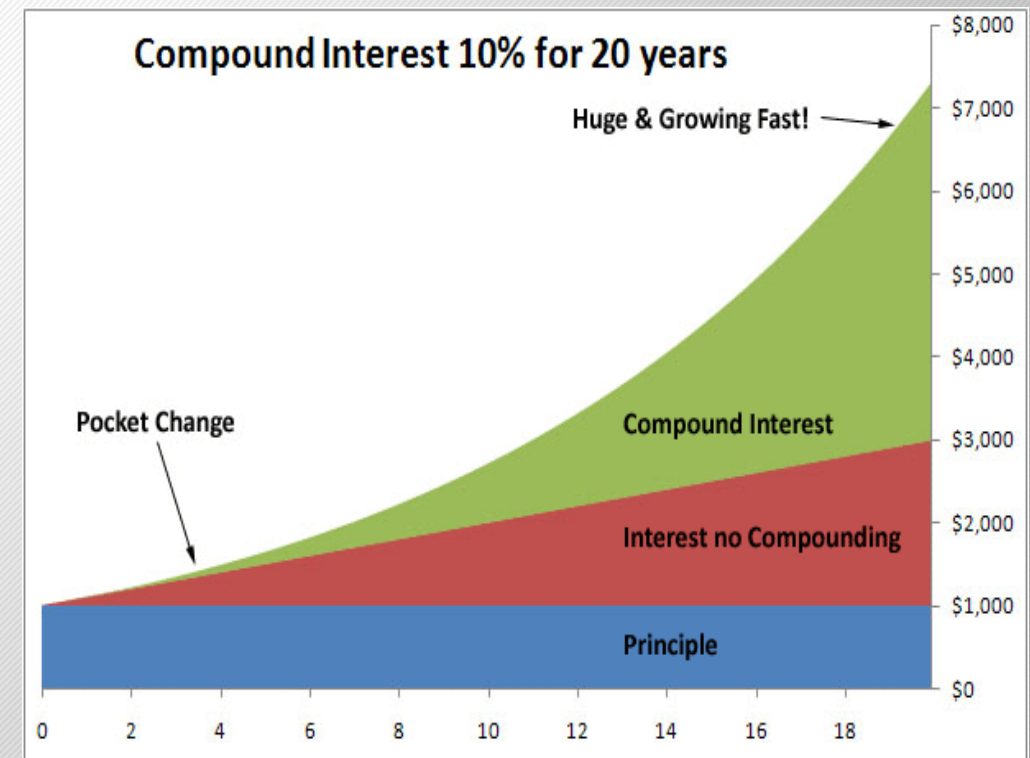
Invest Wisely

Manage Risk

Save For Retirement

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- Start Early and Focus on the Long Term
 - Compound Interest is the Key!
 - Always the winner in the Long Run
 - Technology Makes This Easy
 - Automatic Deposits into Savings Accounts
 - Can see savings on Mobile Apps – Incentives!
- Use Employer Benefits
 - Firms have 401(K) Compensation Plans
 - Some firms match up to 50%
 - Earned Income Tax Credit



Increase
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Manage Risk

Compounding Alone Is Not Enough

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- The Long Run and Compound Interest isn't Enough
- The Market Fluctuates
 - Historic Averages are Highly Unlikely to Occur Again
- Investors must Plan for This
 - Balance the High and Low Return Years
 - Hard to Beat the Market Average After Transaction Costs
- There are many assets to invest in for Retirement
 - Cash
 - Government Bonds
 - Property
 - Equities

Buy the numbers

Projected ten-year inflation-adjusted returns
Dec 31st 2012, annual % change, low/high range

Asset	United States	Europe	Britain
Cash	-0.25/1.50	0.50/1.75	0.75/2.50
Gov't bonds	-4.00/1.25	-2.50/1.25	-3.75/0.50
Credit*	-3.00/3.25	-2.75/3.00	-3.50/2.50
Equities	-1.00/8.00	0.75/9.50	1.00/9.00
Property	0.25/8.75	1.00/9.50	nil/8.00

Source: Standard
Life Investments

*Investment-grade
corporate bonds

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Current Outlook for the U.S. Stock Market

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Manage Risk

A home is your Largest Investment

10

- When Purchasing
 - You are buying on Margin
 - Finance with debt
- Purchase Price is the most important part
 - A House is an Investment (Not a Home)
 - Price/rent ratio should be less than 20 to justify the purchase



Increase
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Save Enough

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Invest Wisely

Manage Risk

Advantages of Buying and Renting

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Buy

- You Own It
- Can Deduct Mortgage Interest from Taxes
- Fixed Payments on the Home
- Price Appreciation

Rent

- Can Invest the Down Payment
- Landlord Responsible for Extraneous Repairs
- No Property Taxes
- Freedom to Move

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What Determines the Decision to Buy?

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- Price
- Expected Appreciation
- Closing Costs
- Insurance
- Repair Costs
- Property Taxes
- Return on Invested Assets
- Mortgage Interest Rate

https://www.nytimes.com/interactive/2014/upshot/buy-rent-calculator.html?_r=0

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Your Home is Not Actually an Asset

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- You're Naturally Short Housing
- If you buy a house, you are not long housing, just covering the short
 - If House Prices Rise, so Does the Cost of Shelter you Need When you Sell
 - If House Prices Fall, so Does the Cost of Shelter you Need When you Sell
- Don't Over Leverage



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Mortgages

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- Types
 - Interest Only (Never a Good Idea)
 - 5/1 or 7/1 ARM
 - 15 of 30 Year Fixed Rate (Most Common)
- Providers
 - Banks, Credit Unions, and Mortgage Brokers
- Tip
 - Points
 - 1 point = 1% of loan amount
 - Pay it on closing to get a lower rate



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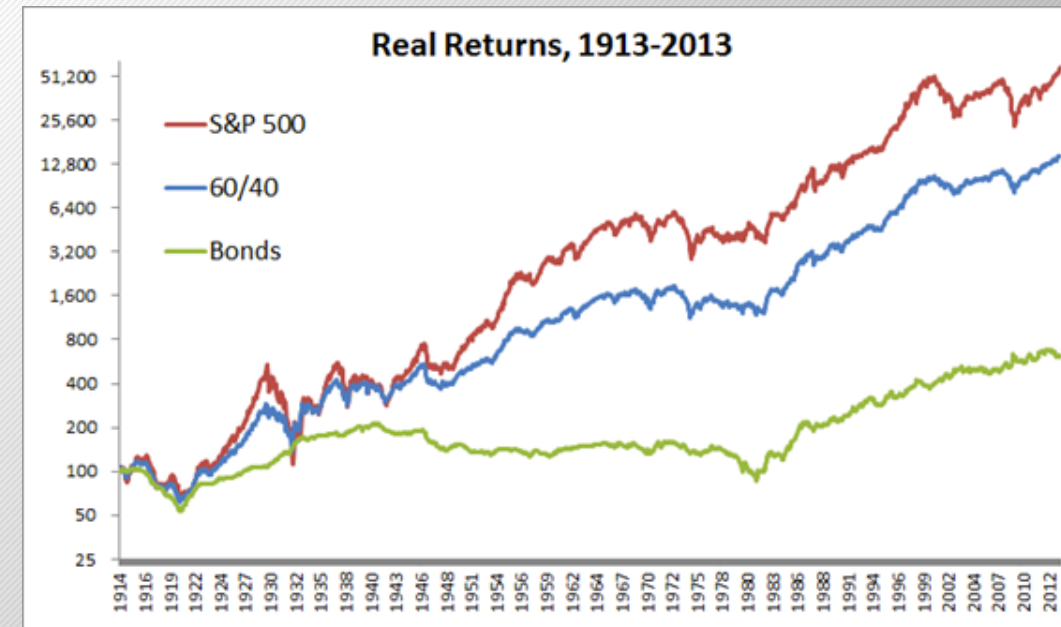
Invest Wisely

Manage Risk

Focus on the Long Run

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- Bonds
 - Fixed annuities
 - Less risk
 - “Risk Free” Treasury Bills are Subject to Inflation Risk
- Stocks
 - Partial Ownership in a Company
 - Riskier
 - On Average, Stocks outperform T-bills in the Long Run



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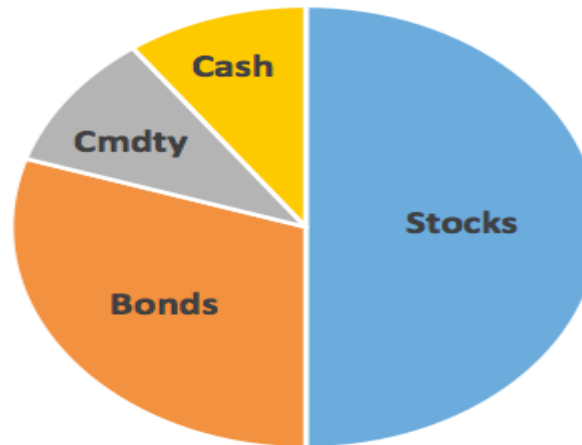
Manage Risk

Reduce Risk

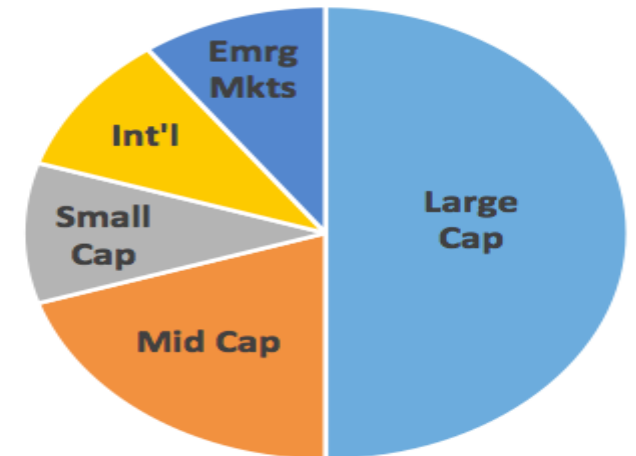
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- Diversify
 - In Types of Equities
 - Cash
 - Commodities
 - Business Sectors
 - Different Companies
 - Different Indexes
 - International Securities
 - Emerging Markets

Example Asset Allocation of a Typical Investment Portfolio



Diversification within the Stock Allocation



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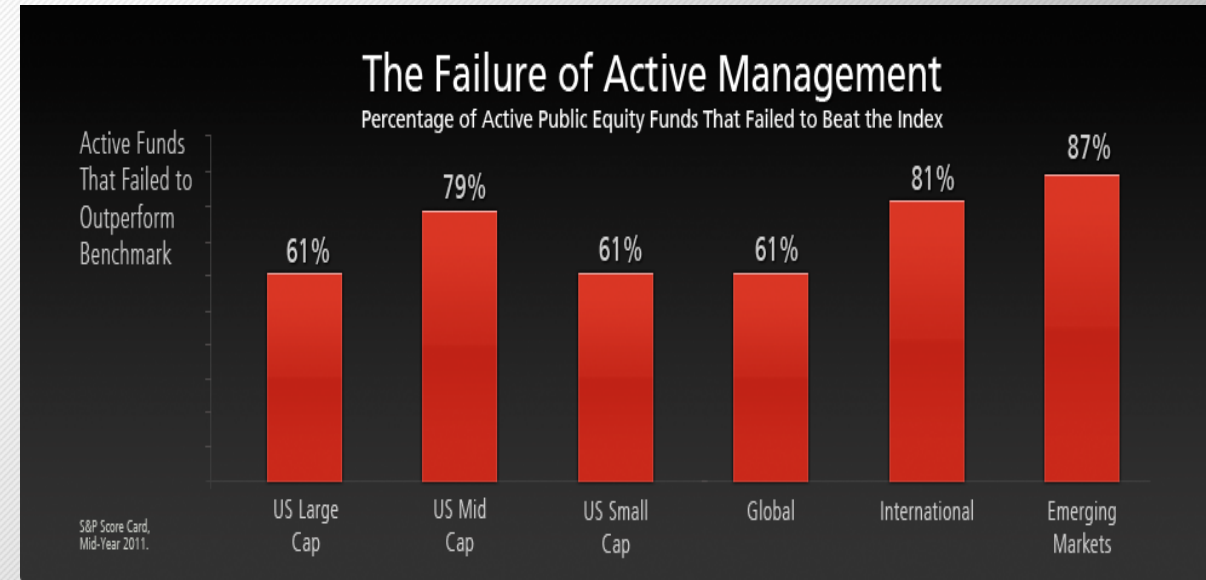
Invest Wisely

Manage Risk

Active vs. Passive Mutual Funds

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- Hire Someone Else to do it for you! (or at least get Professional Advice)
 - Actively Managed Funds
 - More Fees
 - Tries to Beat the Market Average
 - Higher Returns in Some Years, Lower in Others
 - Passively Managed Funds
 - Less Fees
 - Moves with the Market Average
 - Holds the market portfolio with equal weights to market share
 - Outperforms Actively Managed Funds in the Long Run because of Transaction Costs



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Manage Risk

Investment Costs

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- Reduce Fees
 - Keep Portfolio Churn Low
 - Trading Costs are Reduced
 - Indexed Funds
 - Tracks Market Index
 - Exchange Traded Funds (ETFs)
 - Can Represent an Entire Sector of the Market
 - Actively Managed Funds are Approximately 2.26% more Costly than Passively Managed Funds.
 - These costs stem from
 - Brokerage Commissions, Trading Costs, Taxes on Returns, Cash Drag
- Reduce Taxes
 - Use Employer Retirement Program
 - Tax Deferred Retirement Accounts
 - Tax Loss Harvesting



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Individual Retirement Accounts

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- Traditional IRA
 - Contributions are Tax Deductible
 - Earnings are Taxed only at Withdrawal
- Roth IRA
 - Contributions are not Tax Deductible
 - No Withdrawal Taxes
- Defined Benefit Plans – Pension Plans
 - Risk is on the Employee
 - Employer Pays out Predetermined Benefit to Employees
- Defined Contribution Plans – 401K
 - Employer and Employee Agree on a set Contribution to an Investment Plan
 - Depends on the Investment Performance
 - Follows the same Structure as a Traditional IRA



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Investment Tips

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- Rebalance your Portfolio Every Year
 - Buy Assets that are Below Target
 - Sell Assets that are Above Target
 - Most Passively Managed Funds use a 60/40 split between S&P Indexed fund and bond Index fund
 - Using this Technique can add 0.25% to Yield per year
- Dollar Cost Averaging (DCA)
 - Fixed amount of Money Allocated to a Certain Investment at Intervals Regardless of Price
 - More Shares Bought when Prices are Lower
 - Less Shares are Bought when Prices are Higher
 - This Results in a Lower Average Price per Share and Reduces Risk!

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Active or Passive?

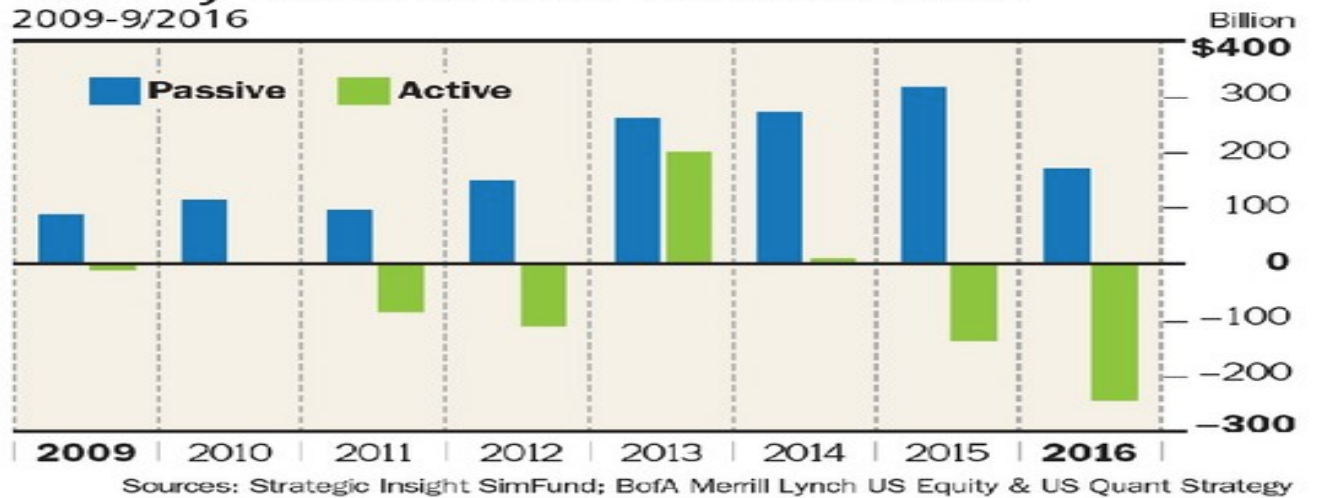
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- Actively Managed Funds are Not Worth it
 - Fees are too High
 - Efficient Market Hypothesis
 - Technical Analysis is Limited
 - Fundamental Analysis is too Slow
 - Market Timing is Nearly Impossible
- Invest in Passive Funds!
 - Low Cost and Fees
 - Diversified with ETFs
 - Rebalancing
 - DCA
 - Focus on the Long Term

PASSIVE-AGGRESSIVE

Money has been pouring into index funds and out of actively managed ones since the financial crisis.

Flows by Year Into Active vs Passive Funds
2009-9/2016



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Options for Investment

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- Diversify Over Several Assets:
 - Bank Accounts
 - Money Market Accounts
 - US Bonds
 - International Bonds
 - US Stocks
 - Developed Market Stocks
 - Emerging Market Stocks
 - House
 - Real Estate Investment Trust



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Optimal Risky Portfolio

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- Diversify
 - Across Securities
 - Across Asset Classes
 - Across Geographies
- Invest Against your Income
 - Don't buy Employers Stock
 - High Beta Job ==> Low Beta Portfolio



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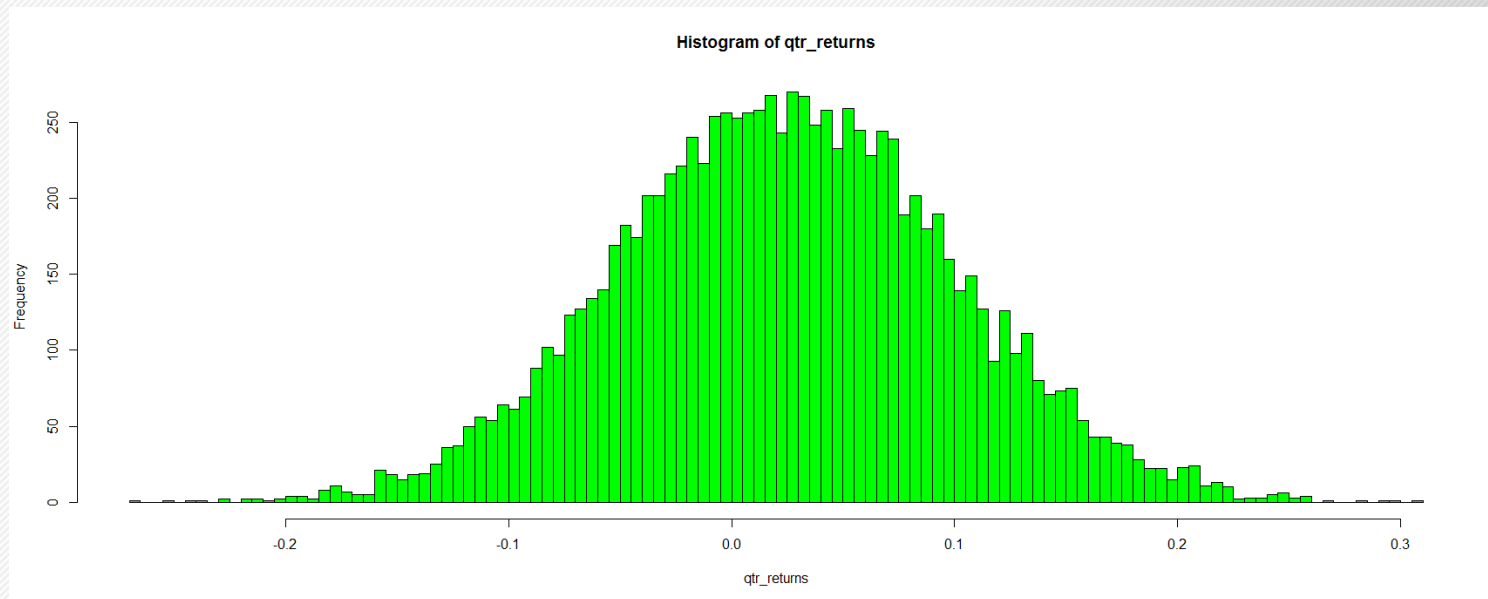
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Manage Risk

Monte Carlo Simulation

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Iterate N times with a Normal Distribution of Parameters to Estimate Risk



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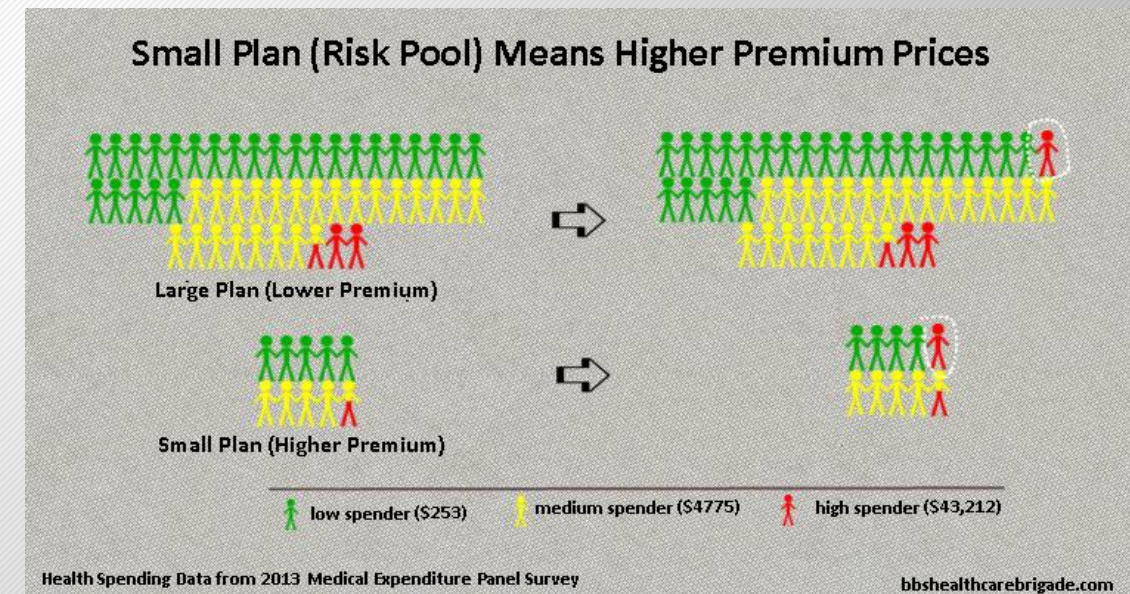
Invest Wisely

Manage Risk

Only Insure Against Large Losses

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- Get Insurance for Medical, Auto, Umbrella Liabilities
 - Aggregate with a Risk Pool
- Get Term life Insurance for Kids
- Life Annuity upon Retirement
- Self Insure Against Small Losses
 - No Need to Aggregate the Risk
- Save for an Emergency fund of 6 Months of Expenses



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Asymmetric Information

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- Caveat Emptor
 - The Principle that the Buyer Alone is Responsible for Checking the Quality and Suitability of Goods before a Purchase is Made.
- Be Careful of Conflicts of Interest (Commission)
 - Stock Brokers
 - Financial Advisers
 - Real-Estate Agents



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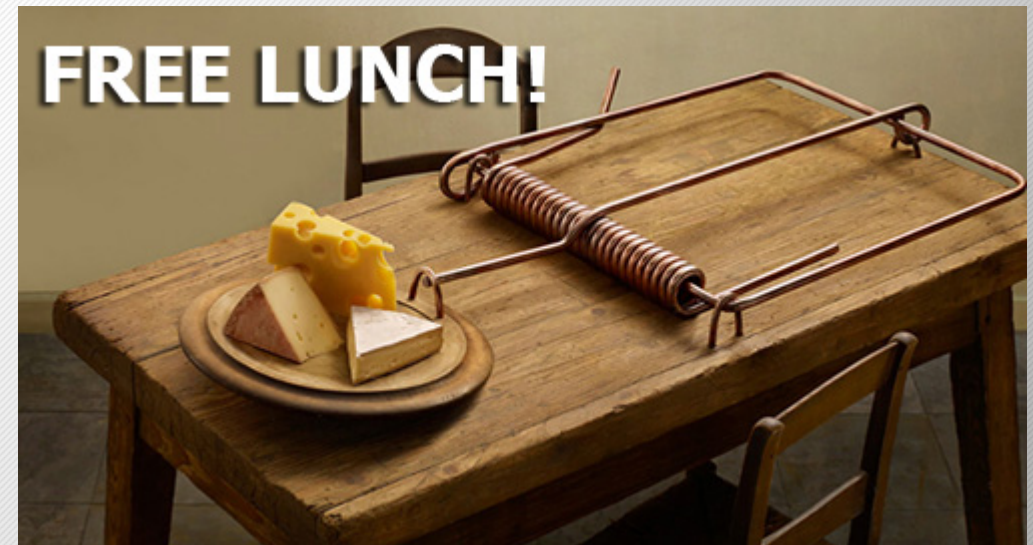
Invest Wisely

Manage Risk

There is no Such Thing as a Free Lunch

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- There is Always A Risk-return Trade Off
- Be Wary of Trying to Beat the Market
 - Low expense fees
 - Index funds
- Avoid Scams
 - Ponzi Schemes (Bernard Madoff)
 - The Lottery
 - Casinos



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Understand Your Options

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- Mortgage Default Options
- Refinance High-Interest Loans
- Start your Homework Early
- Try Different Jobs/Activities
- Learn Different Skills
- Consider Graduate School



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Thank You for Your Attention!

