Personal finances and investing for the physician: a Boglehead's approach

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Disclosures

- I am not a financial advisor
- The information presented is for educational purposes only
- This a is a non-CME presentation



Why is this even important?

- Doctors start their first real job relatively late in life
- Little or no financial experience
- High student debt load (median = \$180,000)
- Trusting by nature, we assume that financial advisors have our best interests in mind
- NOT ALWAYS TRUE...

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Who is a Boglehead?





Who is a Boglehead?

- Disciple of John Bogle, founder and retired CEO of The Vanguard Group, the world's largest mutual fund company
- > \$5.1 trillion in assets under management
- Created the first index fund available to retail investors
- Credited for driving costs down across the mutual fund industry



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What do we believe?

- Live below your means
- Use low cost, index mutual funds to invest
- Diversify your investments
- Invest appropriately for your age and risk tolerance
- Maximize tax efficiency
- Develop a simple plan and stick to it



- Save at least 15% of your gross income every month
 - Emergency fund (fully fund first)
 - Retirement fund (10%)
 - Big-ticket items (5%)
- Develop a sensible household budget that accounts for needs & wants
- Median US household income: \$59,039 (2016)

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#1 Live below your means

Needs

- Emergency fund (6 mo. of expenses)
- Basic groceries, clothing, housing
- Basic transportation
- Health insurance
- Disability insurance
- Life insurance (term)
- · Retirement fund



Wants

- Everything else
- Money does not buy happiness
- Nobel laureate Daniel Kahneman and economist Angus Deaton's 2010 study found no correlation between income and emotional well-being beyond an annual household income of \$75,000

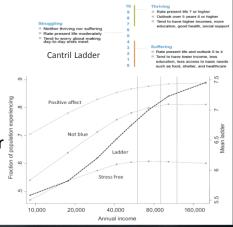
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High income improves evaluation of life but not emotional well-being

Kahneman D, Deaton A. Proceedings of the National Academy of Sciences of the United States of America. 2010;107(38):16489-16493.

- 450,000 Americans polled by Gallup and Healthways in 2008 and 2009
- Participants were asked how they had felt the previous day (emotional well-being) and whether they were living the best possible life (Cantril ladder)





- Do not consider your home as an investment
- After factoring in property taxes and maintenance costs, home values have historically remained flat throughout most of the past century

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#1 Live below your means

Case-Schiller home price index (inflation adjusted 2018 dollars)

240

220

200

180

190

1910

1910

1920

1930

1940

1950

1960

1970

1980

1990

2000

2010



- How much money do you need to retire?
- Trinity Study (1998) suggests a 4% safe withdrawal rate in a 50/50 stock:bond portfolio over a 30-yr period
- Due to low bond yields, recent studies suggest a 3% safe withdrawal rate
- \$2M portfolio gives you \$60,000 per year (inflation-adjusted) for 30 yrs
- \$4M portfolio gives you \$120,000 per year (inflation-adjusted) for 30 yrs

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#2 Invest early and often

- Money invested early in life is greatly more valuable than money invested late in life
- "Magic" of compounding



#2 Invest early and often



Ages 22-32 Ages 40-50

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#2 Invest early and often

- Work-around for physicians: live on a resident's salary for the first 3 years post-training
- Average salary increases from \$60,000 to \$160,000/year
- Assume you invest the extra income: \$100,000 x 3 yrs x 5% annual rate of return (inflation-adjusted)
- =\$1.2 M in 30 yrs
- =\$1.5 M in 35 yrs

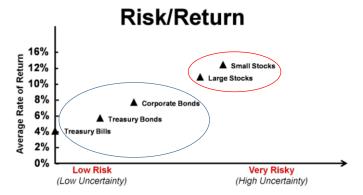


- Investing = earning a return in exchange for shouldering risk
- 2 major classes of assets
 - Stock: ownership in a company
 - Bond: loan made to a company (or government)
- The higher the risk, the higher the expected return

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#3 Never bear too much or too little risk



Capital asset pricing model (CAPM) is a model that describes the relationship between systematic risk and expected return for assets

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- Overall risk of a portfolio is determined by the stock:bond ratio
- Applies to diversified portfolios not individual stocks or bonds



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#3 Never bear too much or too little risk

- How much risk should you bear?
- Ability to take risk
- Willingness to take risk
- Need to take risk

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How much risk should you bear?

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#3 Never bear too much or too little risk

Ability to take risk is determined by your investment horizon

If money is needed in Invest in

• 1-5 years Treasury bills

Bank CDs

Money market

• 6-20 years Bonds

• 20 years+ Stocks



- How much risk should you bear?
- Ability to take risk
- Willingness to take risk
- Need to take risk

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#3 Never bear too much or too little risk

• How much potential loss can you live with?

	Asset Allocation Percentage Stock/Bond	Exposure to Maximum Loss
Sweet spot →	20/80	5%
	30/70	10%
	40/60	15%
	50/50	20%
	60/40	25%
	70/30	30%
	80/20	35%
	90/10	40%
	100/0	50%



- How much risk should you bear?
- Ability to take risk
- Willingness to take risk
- Need to take risk

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#3 Never bear too much or too little risk

 Need to take risk is determined by your financial goals, time horizon, and the rate of return required to achieve them

Asset Class Returns and Risk 1973-2013

Asset Class	Return	Risk
Government Bonds	2.9%	1.2%
High-yield Bonds	4.8%	8.4%
Long-term Bonds	3.9%	10.1%
Large-cap Stocks	8.5%	15.7%
International Stocks	9.1%	17.6%
Real Estate Funds	7.4%	19.1%
Commodities	2.0%	19.9%
Small-cap Stocks	9.3%	21.6%

Source: Bloomberg



#4 Diversify

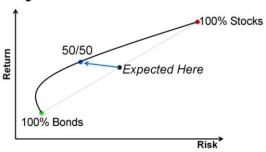
- Buy index funds that hold large market segments
- Broad diversification ensures average returns (as opposed to below average returns)
- Hold investments whose performance correlates poorly (e.g. stocks vs. bonds, US stocks vs. international stocks) → increases returns while decreasing risk

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#4 Diversify

Poorly Correlated Investments



Efficient frontier (modern portfolio theory)



#4 Diversify

How?

Single-fund

• Buy a single fund that is in itself diversified (i.e. target retirement fund)

Multiple funds

 Buy a few index funds that cover the entire market in their cap-weighted proportions (i.e. Total Stock Index, Total International Stock Index)

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#4 Diversify

Suggested asset allocation:

Stocks (60%)

- Total US stock (60%)
 - Large cap, mid-cap, small cap
 - Value, blend, growth
- Total international stock (40%)
 - Europe, Pacific, Emerging Markets, North America



#4 Diversify

Suggested asset allocation:

Bonds (40%)

- Total US bond
 - Short-term, medium-term, long-term
 - Treasury, investment-grade, below investment-grade
- Inflation-indexed bonds (TIPS, I Bonds)
 - Principal and interest payments are indexed to the rate of inflation

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#5 Never try to time the market

- Between 1982-2007, the US stock market index fund provided an annual return of 12.3%
- The average equity fund earned an annual return of 10.0%
- ...but the average investor earned an annual return of only 7.3%





#5 Never try to time the market

Mistake #1

- Attempting to predict the future direction of the market
- Fool's errand

Mistake #2

- Investing in yesterday's winners
- Regression towards the mean

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The Callan Periodic Table of Investment Returns

Annual Returns for Key Indices Ranked in Order of Performance (1995-2014)



#5 Never try to time the market

- Asset allocation determines 90% of a diversified portfolio's return
- People who chase after performance ultimately lose money from poor market timing and increased transactional costs
- Rather, periodically rebalancing your portfolio ensures that you are selling "high" and buying "low"

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#6 Use index funds when possible

Active fund Index fund

Try to beat the market Match the market

High expense ratio Low expense ratio

Diversified Extremely diversified

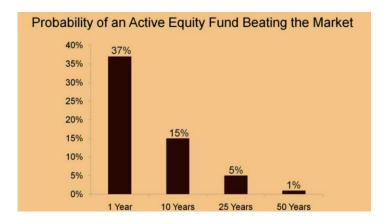
Tax-inefficient Tax-efficient

Risk of style drift No style drift

Change in managers No managers



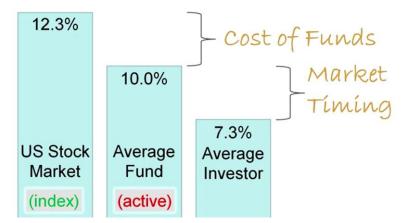
#6 Use index funds when possible



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#7 Keep costs low





#7 Keep costs low

- An expense ratio of 1% might not seem like much, but if compounded over a lifetime, it is enormous!
- 1% expense ratio over 50 years will reduce your total net return by 40%
- In addition to expense ratios, some funds charge front-end and backend sales charges

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#8 Minimize taxes

- Taxes on investment income directly reduce investor returns
- Take advantage of tax-deferred retirement plans: 401(k), 403(b), profitsharing, IRA
- These allow your investments to grow tax-free until money is withdrawn



#8 Minimize taxes

Roth IRA

- Money goes in "after-tax" (\$5,500 limit)
- After age 59.5, withdrawal is completely tax-free
- Ideal for new physicians because they start in a low tax bracket but will end up in a high tax bracket in the future
- Contribution phase-out if income > \$120,000 (single) or \$189,000 (married)

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#8 Minimize taxes

Work-around

- Open a traditional IRA
- Make a nondeductible contribution to the traditional IRA
- Convert the traditional IRA into your Roth IRA (income thresholds do not apply to conversions)
- Repeat this process every year that your income is too high



#9 Invest with simplicity

- "Simplicity is the master key to investment success." -- Jack Bogle
- Advantages of a simple portfolio:
 - Low costs
 - Easy to analyze
 - Simple to rebalance
 - Simple tax-preparation
 - Simple record-keeping

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#10 Stay the course

- Once you have set long-term investment goals, established an asset allocation and invested assets, stick to your plan
- Tune out all the media noise
- Doing nothing is often the best course of action

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Personal application

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My personal scenario

- 42 yrs old, married, 2 children (ages 8 and 6)
- Spouse does not work



My investment goals

- Objective 1: To retire by the age of 46
- Objective 2: To have an annual allowance of \$120,000 (for living expenses and mission work)
- Objective 3: To pay for our children's college education
- Objective 4: To get involved in Christian mission work overseas (not necessarily medical)

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My personal scenario

- Joined Allergy, Asthma & Immunology Associates in 2007
- Starting associate salary: \$132,000/year
- 3-year partnership track
- Lived like a resident the first five years (saved 50% of my disposable income)
- Procured life, disability and high-deductible health insurance
- Bought a "starter" townhouse



My personal scenario

- Fully funded an emergency fund
- Fully funded 401(k), ROTH IRA and Health Savings Accounts yearly
- 2010: became full partner substantial salary increase
- Entitled to profit sharing plan
- 2011: paid off my "buy-in"

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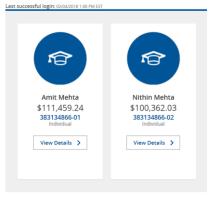
My personal scenario

- Began to contribute to our children's 529 plans
- Began to save for a "doctor's" home
- 2014: paid for said "doctor's" home in cash (no mortgage)
- 2017: announced my retirement in 2022
- Current net worth (excluding home): \$2.9M
- Current liabilities: none



My personal scenario

Welcome back, Vinay — My Accounts

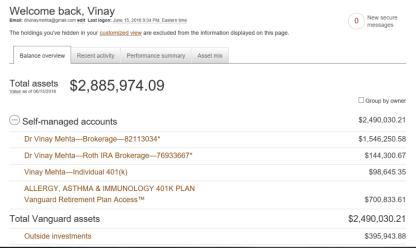


Total Assets: \$211,821.27

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My personal scenario

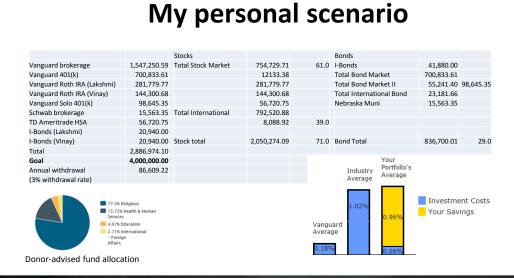


Current allocation*
My Account View

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Concluding remarks

- Good financial planning is important for late career starters such as physicians
- Living below your means and investing early practically guarantee a secure retirement
- Consider living on a resident's salary for the first few years post-training
- Asset allocation determines 90% of a diversified portfolio's return



Concluding remarks

- Consider implementing the Boglehead philosophy
- If you need help, consult a fee-only advisor (flat fee or hourly rate)

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Stay the Course.

July Course.



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