Financial Planning for Academics

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** Disclaimer **

I am not a financial planner or advisor.

None of this is investment advice.

Areas of financial planning

- Retirement
- Insurance
- Hiring an advisor

- Saving for College
- Debt Management

Retirement Planning

What type of plan do you have?

- Defined Benefit - TSERs
  - Provides a pension based on the number of years of service.
  - Common for teachers/government employees.
  - Pros: Guaranteed, can have survivor benefit.
  - Cons: Total amount may be limited - ends when you die.
- Defined Contribution - ORP *[We will focus on this]*
  - You determine the investment choices of the plan.
  - Retirement is based upon how much money you have accumulated by your retirement age.
  - Pros: Potentially higher values, can leave money to your heirs.
  - Cons: You face risk of not having enough to retire on.

How much do you need?

- Common rule of thumb - 75% of your salary at retirement.
- Example: $100,000 annual salary => $75,000 per year.
- Let’s ignore SS (https://www.ssa.gov/OACT/quickcalc/)
- Retirement fund can generate 4-7% annually (again rough rule of thumb).
  - 4% assumes you’ll spend mostly income and leave most of the principal intact.
  - 7% assumes you’ll spend income and some principal.

75,000/0.07 = $1,071,000. 75,000/0.04 = $1,875,000.

- Portfolio at retirement should be $1 - 2M to create $75,000 income.

Challenges faced by academics

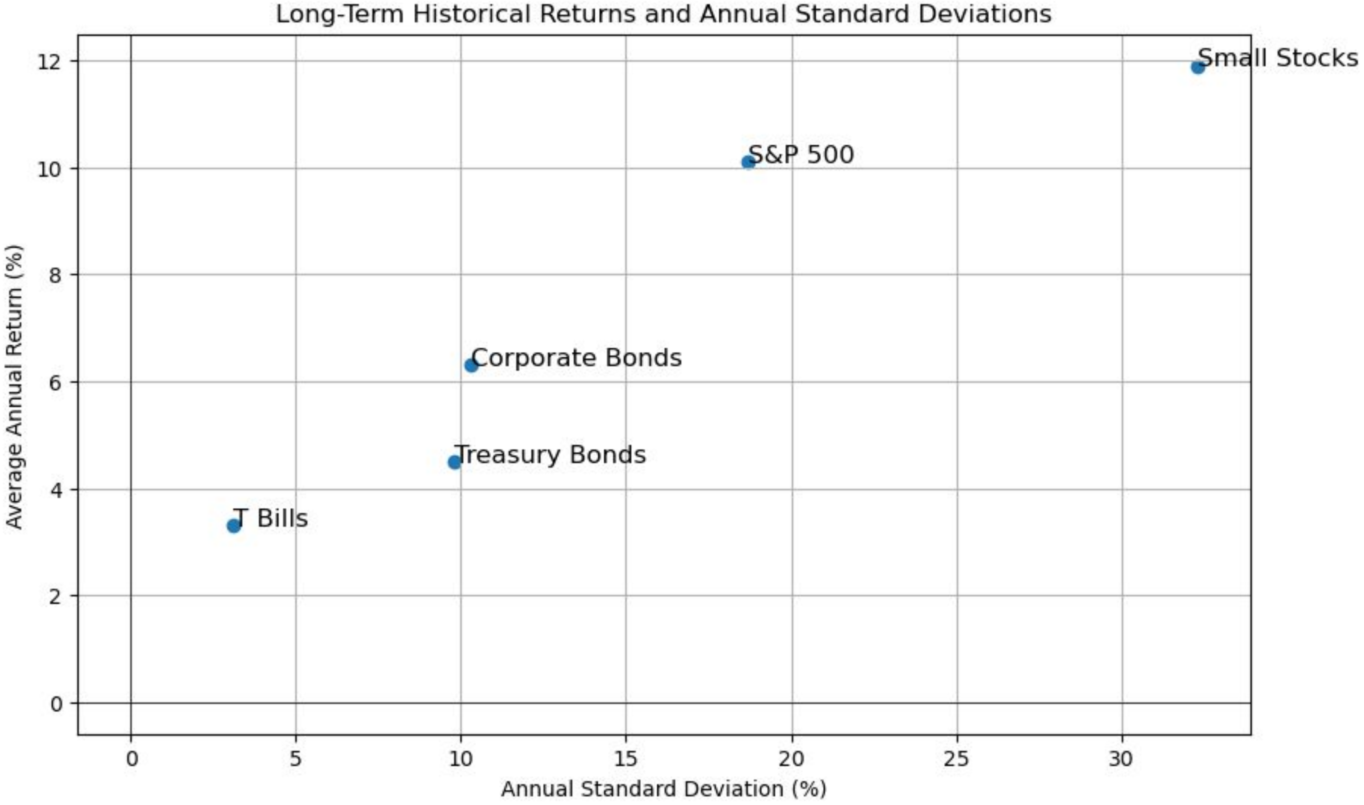
1. We often start thinking about financial planning later (after doing a PhD, post-doc).

2. We have variable income, based on grants, overloads etc.

3. We don't have a huge amount of income growth.

4. We're very busy thinking about our research and teaching. Finance and investing isn't that interesting (for most of us).

How do you get there?



But please, show me some finance math…

Age	40
Retirement Age	67
Salary	$100,000
Contribution rate	12%
Dollar contribution	$12,000
Amount in plan today	$0

	All Stocks	Stocks and Bonds	All Bonds	
Annual Return	12%	8%	4%	
Years to Retirement	27	27	27	
Value at Retirement	**$2,032,488**	**$1,048,209**	**$565,011**	

More finance nerdery

TLDR: don't put all your eggs in one basket.

"*diversification is the only free lunch in investing*" - Nobel laureate Harry Markowitz

When you combine two assets, the expected return is equal to the weighted average of the returns of the assets.

So a 50/50 split between a 10% return and 5% return will create a (10+5)/2=7.5%

BUT the risk will be less than an equal weighted risk

So a 50/50 split between a 20% standard deviation and a 10% standard deviation will have a standard deviation of LESS than 15%, if the correlation between the two assets is less than 1.

For example, if correlation=0.6, Standard deviation = 13.6%

So what do I put in my retirement plan?

https://my.tiaa.org/private/parttools/secureperfview/performance

- According to the TIAA site there are 57 different options available.
- Let's simplify the problem
- Focus on mutual funds - Reduces the list to 20.
- Fees suck … the value from your retirement.
  - So pick the lowest fee funds
  - In finance, you **don't** get what you pay for. Fees are the enemy.
- Reduces list to 6.

As of 12/31/2024 unless noted

Glossary

Name [Symbol] Product Type / Share Class	Asset Class	Daily YTD	1 Y	3 Y	5 Y	10 Y	Since Incep Incep Date	Net Exp (%) Gross Exp (%)	Morningstar Overall Rating [3] / Category As of 12/31/2024	
All results										
Vanguard Growth Index Institutional[VIGIX] **Mutual Funds** Inst	Equities	0.59%	32.68%	9.20%	18.37%	15.76%	9.36% 05/14/1998	0.04% 0.04%	★★★★ Out of 1,020 Funds Large Growth	Invest
Vanguard Institutional Index Fund Institutional Plus[VIIIX] **Mutual Funds** Inst	Equities	2.29%	24.99%	8.92%	14.51%	13.09%	9.03% 07/07/1997	0.02% 0.02%	★★★★★ Out of 1,280 Funds Large Blend	Invest INVESTED
Vanguard Extended Market Index Fund Institutional Plus Class[VEMPX] **Mutual Funds** Inst	Equities	3.97%	16.93%	2.55%	9.91%	9.48%	10.60% 01/14/2011	0.04% 0.04%	★★★ Out of 377 Funds Mid-Cap Blend	Invest
Vanguard Short Term Bond Index Fund Institutional Plus Class[VBIPX] **Mutual Funds** Inst	Fixed Income	0.46%	3.76%	0.94%	1.28%	1.63%	1.54% 09/29/2011	0.04% 0.04%	★★ Out of 522 Funds Short-Term Bond	Invest
Vanguard Total International Stock Index Institutional Plus[VTPSX] **Mutual Funds** Inst	Equities	2.85%	5.19%	0.70%	4.32%	5.11%	5.01% 11/30/2010	0.08% 0.08%	★★★ Out of 648 Funds Foreign Large Blend	Invest
Vanguard Total Bond Market Index Fund Institutional Plus[VBMPX] **Mutual Funds** Inst	Fixed Income	0.70%	1.26%	-2.40%	-0.30%	1.35%	2.25% 02/05/2010	0.03% 0.03%	★★★ Out of 431 Funds Intermediate Core Bond	Invest

Final Steps

Pick a stock mutual fund and a bond (fixed income) fund. Blend the proportions depending on your risk tolerance.

100% Stocks 0% Bonds Higher Risk Higher Return	0% Stocks 100% Bonds Low Risk Low Return

If you opt for too low return/risk then you'll need to contribute more. You can do this through 401K/403B plans

But this is too much finance. There must be another way.

You can select a “Target Date” Fund aka: “RetirePlus Pro Models”

These are “funds of funds”. They combine mutual funds to create a portfolio based on your age.

Younger employees get a more risky version, older get a less risky version.

Key is that the portfolio automatically shifts from risky -> lower risk over time as you approach retirement.

Target Date Funds - the good, the bad, the ugly.

- Good: Set it and forget it.
- Bad: They tend to be more conservative and they have higher fees.
    - A work around - pick a target date fund for a younger age or put part in a stock fund.
- Ugly: UNC System changed all its target date funds and for some employees changed ALL current balances and ALL future allocations to the new RetirePlus Pro Models. Even for employees who only had a portion of their funds in a target date model.

You must log in to TIAA and make sure your current choices are what you want and that future allocations are correct. UHR recently sent an email about this.

My brother in law told me that tech was good because …

- Don’t listen to your brother in law.
- Resist the temptation to “Time the market”.
  - Moving money in and out of investments because you think that they will do better in the coming days/months/years.
- Finance Professors who have PhDs in stock valuation get this wrong.

See: Wikipedia: Dunning–Kruger effect

Insurance - not as complicated

- Term Life. ✅
  - Cheap, get enough coverage to last until your kids graduate or you reach 62
- Disability. ✅
  - Expensive, but you need it - you are more likely to be sick or injured.
- Whole Life / Universal Life. ❌
  - Combines Term Life with a savings plan.
  - You get a financial benefit if you don’t die.
  - Very expensive compared to buying Term Life and just saving more.
  - Pushed hard by insurance sales people because the make a good commission.
  - Rarely ever buy these products (there are rare estate planning situations where these might be useful)

But maybe I just hire a financial planner…

- Financial Planner fees
    - Flat fee for consultation ✅
    - Hourly Rate ✅
    - Assets Under Management (0.5%-1%) ❌
- Commissions ❌
    - Earn money by selling you stuff.
- Hybrid of Fees and Commissions. ❌
- Red Flags
    - Commissions
    - Financial Planner who claims that they can pick funds/stocks that will do well and beat the market.
- If you have a complex tax situation, inherited money etc - your financial planner should have tax skills (CPA).

Summary - financial planning mistakes

- Not saving enough
- Being too conservative in investment choices (especially if younger)
- Paying too much in fees
- Thinking that you can predict the markets and trading accordingly
- Buying expensive, complicated insurance

Resources

UNC System Memo on target date funds

Social Security Quick Calculator

TIAA Investment Options

Return Spreadsheet (includes a more complex retirement calculator)

Books/websites:

Obviously a near infinite source of information, but https://jlcollinsnh.com/ has some reasonable stuff and a book that is quite sensible.