Grad School

Your Worst Financial Decision Yet!
Goal: To Be Happy
I don’t know. But I can at least tell you how to be not unhappy!
Money = Happiness?
No - But !Money = !Happiness

- Known as a Hygiene Factor in 2 Factor Theory
- Absence leads to unhappiness
- Having enough gets you to 0
- Once you have enough, different factors required to be happy - Motivators
- Others include job security, working conditions
How much would you need to retire?
How Much Is Enough?

The magic income: $70,000 a year. As people earn more money, their day-to-day happiness rises. Until you hit $70,000. After that, it is just more stuff, with no gain in happiness.

- Results of a Gallup Survey of 450,000 Americans
How do I get to $70k and then focus on the happiness part?
The Economy
A Black Box Model

- If you had a machine that could give you anything you wanted there would be no need for money.
- The economy is like an imperfect black box. You have to put stuff in and then it spits out what you want.
Inputs → Money → Outputs

Inputs Is Combination Of:

- Time - Warehouse Labour
- Talent - Sports star, Actor
- Ideas - Disney Character License
- Land - Rent On A House
- Capital - Espresso Machine

Outputs:

- Oreos
- Starbucks
- Car
- TV
- Movie Tickets
Value ($) = f(Demand, Supply)

- What is the most expensive thing you have access to right now?
- What is the most important thing you have access to right now?

- Take away: You want to be trading rare + valuable artifacts with the economy
Investing
You Have Some Money

Money

- Consume
- Invest (Purchase of Capital)
Investing

- Purchase of a good that is intended to generate value
- Many Different Types
  - Stocks (Partial Ownership of Companies)
  - Bonds (Loan to a 3rd party)
  - REITS (Group Ownership of Real Estate)
  - Hotdog Stands
- Passive vs. Active
- Different Rates of Return and Risk Profiles
On average, 4% is safe. 7% return is possible. (Controlled for Inflation)
How much is enough to retire?
$70,000 / .04 = $1.75M
Sounds like a lot...

- Compound Interest to the rescue!
- Thought exercise
  - Your money doubles
  - As it’s doubling the partial gain also earns interest
  - And that interest earns interest
  - Ad infinitum…
  - Are you infinitely rich?
Convergence Analysis and Synthesis

- Works out to be only $e =$
- Damn you math
- Not bad though
- Let’s combine our ideas
- Hygiene Factors + Generation of Value + Investing + Compound Interest = ...
Gary The Grad Student

- Graduated with PhD at 28
- Pay of loans, gets married etc.
- Starts saving at 30
- Saves 20k / year
- Gets average return of 7% a year
- FI at 58
Eugene The Engineer

- Graduated At 22
- Lives Like A Student and Saves $35k
- Gets married at 30 and cuts back to saving 20k => Matches Gary
- Gets the average return of 7%
- FI at 45
Other half of 2-factor theory

- Motivators
  - Gets you from 0 to Happy
  - Independent of Hygiene Factors
  - Autonomy, Recognition, Meaningful work, Growth
  - Control of Team, Technique and Tools
  - Close Relationships
  - All available in grad school!
  - So the extra ~15 years is worth it...I think.
Thanks!
Q & A’s - Anything Personal Finance

- RRSP
- TFSA
- Investing
- Entry Level Salaries for CS
- Anything Finance Related!