Saving for Retirement

Kevin Crotty

BUSI 448: Investments

Where are we?

Last time:

- Course intro
- Bond pricing
- Basic Jupyter notebook

Today:

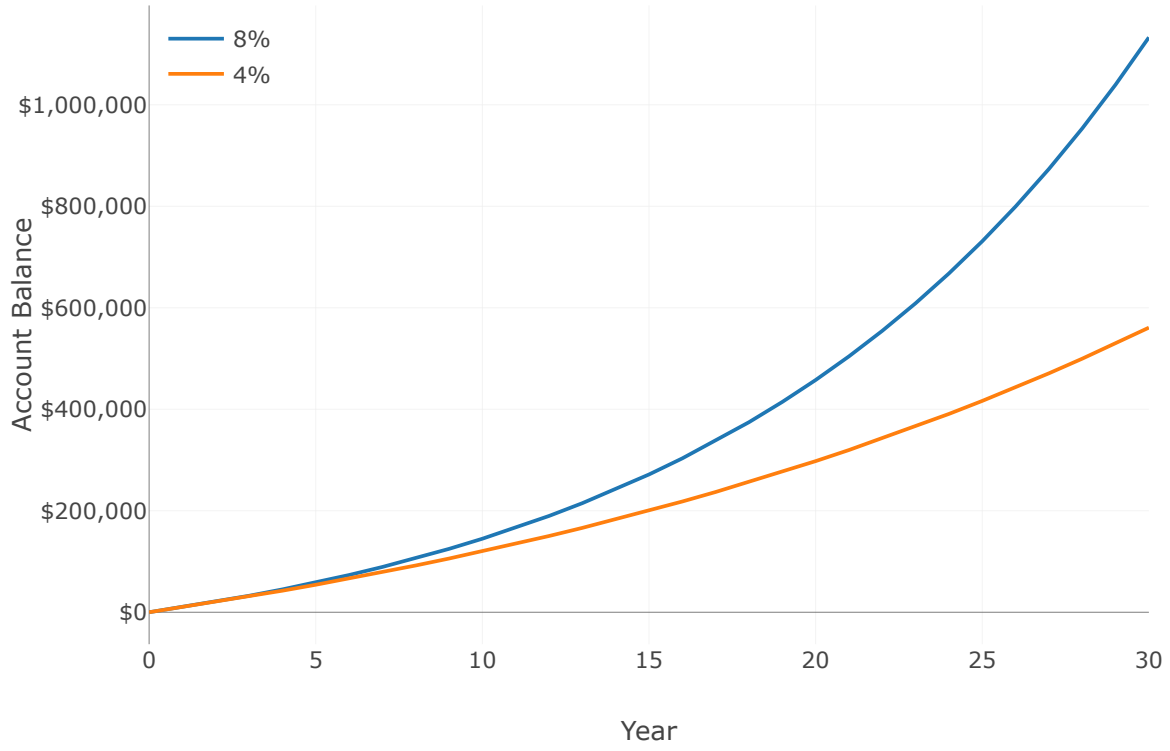
- Saving for retirement

Saving for retirement

Future value of annuity savings

- Let's assume we want to save $10,000 every year.
- Our initial balance is zero.
- How much would we have in 30 years?
  - For 8% rate?
  - for 4% rate?

Future value of annuity savings



Two ways to tackle this problem

- Write out series of cash flows and compound
- Use `npf.fv` function
  - `npf.fv(rate, n_periods, -pmt, -pv)`
- Let's try both in today's notebook

The savings/retirement problem

- Suppose we'd like to withdraw $100,000 in each year of a 20-year retirement
- We'll save for 30 years
- Assume a rate of 5%.

If we save a constant amount each year for 30 years, how much money will we need to invest each year?

A useful function: `npf.pmt`

For next time: Real and nominal cash flows, and uncertainty