

PyFi Methodology

This document is intended to provide an explanation of the methodology used in the PyFi package. This will hopefully make review easier than trying to read code.

1 Basic Financial Formulae

Present/Future Value of Cash Flows

These calculations are performed in the **pv(.)** and **fv(.)** functions.

$$pv = \sum_{t=1}^n CF_t * (1 + (apr * dt))^{-t*dt} \quad (1)$$

and

$$fv = pv * (1 + (apr * dt))^n \quad (2)$$

where CF_t is the list of cash flows, apr is the annual nominal interest rate, dt is the size of the time-step between cash flows, and n is the number of periods. Note that $T/n = dt$, so