1 Data Used (US)

For all data the earliest reference data used was 198703 and the latest reference date used was 201503.

1.1 Yield rates

The US federal reserve provides yield rates on bond data. The one and ten year bond yields were used. These are provided as $i^{(2)}$ from which an effective annual rate i is calculated and a force of interest δ is calculated. The quarterly force of interest is $\delta/4$.

1.2 Stock index

The SP500 was used from Yahoo finance (index $\wedge$GRSP). Suppose we know the stock price at 198610, 198611, 198612, 198701, 198702, 198703, 198704 (start of month) and we want the return over the quarter 1 of 1987. Intuitively, If you bought a stock at 198701 (start of month) and sold it at 198704 (start of month) then you would have made a profit (negative or positive) of $S_{1987-04} - S_{1987-01}$ and your return over quarter 1 would be $\alpha = S_{1987-04}/S_{1987-01} - 1$ implying a continuously compounded return over the quarter of $\delta = \ln(1 + \alpha)$.

1.3 Inflation

U.S. inflation information was obtained from the misery index at miseryindex.us.

1.4 Salary

Salary information was obtained from the U.S. department of commerce (Bureau of Economic Analysis) at bea.gov - per capita GDP was used.