Economic question 1: How do past experiences with market returns impact levels of preferred risk-taking?

- CRRA and CARA functions suggest that people tend to have "stable risk preferences, which are unaltered by economic experiences" (Malmendier & Nagel, 374)

Economic question 2: Do earlier or more recent experiences have more weight in impacting levels of preferred risk-taking?

- "Psychology literature argues that personal experiences, especially recent ones, exert a greater influence on personal decisions than statistical summary information in books or via education" (Nisbett and Ross, 1980)
- "Recent literature in economics suggests that the cultural and political environment in which individuals grow up affects their preference and belief formation, such as their trust in financial institutions, stock market participation, and preferences over social policies" (Guiso& Sapienza & Zingales, 2004)

- I replicate a similar specification using stock returns from the S&C 500 and data from the SCF 2016; I only used one year of data, and so, it's difficult to compare across years

$$y_{it} = \alpha + \beta A_{it}(\lambda) + \gamma' x_{it} + \varepsilon_{it}.$$

$$A_{it}(\lambda) = \sum_{k=1}^{age_{it}-1} w_{it}(k,\lambda) R_{t-k}, \text{ where } w_{it}(k,\lambda) = \frac{(age_{it}-k)^{\lambda}}{\sum_{k=1}^{age_{it}-1}(age_{it}-k)^{\lambda}},$$

- In the original study, the researchers used the second equation to assign weights to each of the years of stock returns to account for important a stock return in based on the individual's age at the time
- Then, using the weighted average, they were able to correlate that with risk attitudes
- The first equation models the relationship between risk attitudes and previous economic experiences. You can't run a linear regression, because you calculate Lambda and Beta at the same time
- If Lambda is negative, it means that returns closer to birth have a higher weight
- If Lambda is 0, it means that all returns have equal weight
- If Lambda is positive, it means that more recent returns have higher weight

- Malmendier and Nagel find that past economic experiences are correlated with future financial investments
- They use data on stock returns from the S&P 500 going back to 1871 until 2007, when the paper was released. They calculated real bond returns from the total return index of 10-year U.S. Treasury bonds
- They used SCF data from the years 1983 to 2007. They also used precursor surveys that started in 1947
- They used four risk attitude measures: self-reported willingness to take financial risk, binary variable for stock market participation, binary variable for bond market participation, and the fraction of liquid assets invested in stocks
- They correlated experienced returns over an individual's lifetime with their risk attitudes
- They ultimately found that recent returns were more impactful on a person's attitudes to take financial risk, and that economics experiences therefore did have an impact on a person's risk attitudes. Recent returns also tended to more extremely affect younger individuals

My extension: Does this data hold true in the year 2016? Notably, the great recession occurred after the report happened, so I wonder if that event makes the future data confirm or contradict the findings in the paper

- Very difficult to use a weighted equation, so I approximated by first regressing the returns when there is equal weight
- Then, to give higher weight to returns that happened earlier in life, I averaged the returns only from a person's first half of life
- Lastly, to give higher weight to recent returns, I averaged the returns only from a person's latter half of life
- I regressed all of these with the various risk attitude indicators, and the only ones that returned back positive were stock market participation and self-reported risk attitudes when regressed with more recent stock returns

- These findings slightly confirm Malmendier and Nagel's findings that more recent economic returns have a greater influence on people's tendencies to take financial risks
- That being said, my data was not super precise, and the reason for that could likely be that I wasn't able to account for specific ages and cohorts. Also my data set was confined to one year