ECO 6353:
Consumption and Investment Dynamics

Ongoing Coding Problems

Part 2

1 Explanation of the bugs and their corrections:

- Error 1:
  - Unrecognized function or variable - 'tauchen'.
  - Correction:
    It could be solved using the 'rouwen' function with some calibration.
- Error 2:
  - Gamma was not specified; it was missing in the setup.
  - Correction:
    Set Gamma equal to 3.5.
- Error 3:
  - Error in the setup of the c2 equation.
  - Correction:
    Remove "small positive" from the c2 equation.

2 Explanation of how the (c, ($a\prime$) would qualitatively change if the borrowing constraint was set to 0:

If the borrowing constraint was set to 0, It would imply that households would be restricted from borrowing any assets. This would result in a situation where households would rely only on their current income and savings. This limitation on borrowing would lead to a reduction in (c) and a more conservative approach to asset accumulation ($a\prime$), particularly in response to fluctuations in income.

3 Explanation of how the (c, ($a\prime$) would qualitatively change if the if the relative risk aversion parameter was doubled:

The relative risk aversion parameter is in the utility function, and it captures the household's preference for consumption smoothing over time. A higher value of γ implies greater aversion to risk. That is, households would want to save more and consume less. The consumption function (c) would depict a more prudent behavior. The optimal asset choice ($a\prime$) would increase, depicting the household's desire to exhibit the "saving for a rainy day" approach.