Python Case Study: Calculating 1mo CDR

**Objective**: Calculate and plot the 1mo CDR of a pool of loans while answering pythonic questions throughout.

**Dataset**: Excel file with loan level, time series data of 3 main variables: (1) UPB, (2) Performance Status, and (3) Status.

1. *UPB* – Principal gross balance of a loan for a given month.
2. *Performance Status* – The performance status of a loan for a given month can be:
   1. Non-Performing
   2. Performing
   3. Liquidated
3. *Status* – The status of a loan for a given month can be:
   1. Current
   2. 30-59
   3. 60-89
   4. 90-119
   5. 120-179
   6. 180+
   7. Bankruptcy
   8. Liquidated
   9. Chargeoff

**Helpful Information and Formulas**

* Total amount of Charged Off UPB for a given month is equal to:
  + If the prior month is “Performing” and the current month is both “Non-Performing” and “Chargeoff”:
    - Equal to UPB for the *current* month
  + If the prior month is “Performing” and the current month is “Non-Performing” but the current month does not equal “Chargeoff”:
    - Equal to UPB from the *prior* month

* 1mo CDR is equal to:

