**UST Coupon Treasury Auctions**

1. For this project, we only focus on auctions for coupon bonds (2Y, 3Y, 5Y, 7Y, 10Y, 20Y and 30Y). US Treasuries have weekly auction for various tenors of Treasury bills, but we do trade them because of small DV01 (dollar value of one basis point).
2. US Treasury holds auctions of US Treasury securities with a fixed schedule to meet the government financing needs:
   1. 3Y, 10Y and 30Y are auctioned before the middle of the month (15th) for settlement on the 15th of the month, or the next business day if 15th is a weekend or holiday. They are used to be called quarterly refunding. Quarter months for US Treasuries are Feb, May, Aug and Nov, just a convention.
   2. 20Y auction occurs about 1 week after mid-month auctions.
   3. 2Y, 5Y and 7Y happens about a week fore month-end, for settlement on the last day of the month, or the next business day of 30th or 31st if not a good business day.

**Risk characteristics of US Treasury securities**

Bonds (fixed income) trade more in yield (of course we ultimately transact in price) terms. They form a yield curve when you plot maturity against yield level. Due to duration (dP/dy), 1 basis point (bp) move in 2Y has different price sensitivity than those of 30Y. The following is the current DV01s for each tenor per $1mm notional size at current yield levels

1. 1Y $99 @ 4.43%
2. 2Y $190 @ 4.268%
3. 3Y $276 @ 4.23%
4. 5Y $450 @ 4.045%
5. 7Y $604 @ 3.979%
6. 10Y $763 @ 3.906%
7. 20Y $1217.5 @ 4.31%
8. 30Y $1497.8 @ 4.071%

Currently, we have an inverted yield curve from 1Y to 10Y. If these are zero coupon bonds, DV01s of 1Y, 2Y and 5Y will be closer to $100, $200, and $500, just giving you a rough gauge why DV01 has this order of magnitude.

**DV01 of US Treasury bond futures**

The dataset we have are US bond futures. And they have the following DV01 per $100,000 face (futures is smaller in size) for this project:

1. TU, 2Y, $19.1
2. FV, 5Y, $45.4
3. TY, 7Y, $65.7 (this is commonly called 10Y note contract, but CTD (cheapest-to-deliver) is usually a older (called off-the-run) 7Y bond.
4. UXY, 10Y, $95.4
5. US, 15Y, $135.5
6. WN, 25Y, $213.7

You use the above DV01s to come up with proper weightings for curve trades.