

Session 3A: Post Class Test

1. The table below has eleven years of annual returns on the S&P 500 and the 10-year US treasury bond from 2010 to 2020.

	<i>S&P 500</i>	<i>10-year T.Bond</i>
2010	14.82%	8.46%
2011	2.10%	16.04%
2012	15.89%	2.97%
2013	32.15%	-9.10%
2014	13.52%	10.75%
2015	1.38%	1.28%
2016	11.77%	0.69%
2017	21.61%	2.80%
2018	-4.23%	-0.02%
2019	31.21%	9.64%
2020	18.01%	11.33%

- a. Without using the Excel functions for average and standard deviation, compute the average and standard deviation in S&P 500 returns
 - b. Without using the Excel functions for average and standard deviation, compute the average and standard deviation in T.Bonf returns.
 - c. Estimate the median returns on the S&P 500 and the 10-year T.Bond in this period.
 - d. Check your answers using the Excel functions for average (AVERAGE), standard deviation (STDEV) and median (MEDIAN).
2. The link below contains data on operating profit margins for all software companies in 2020. <https://www.stern.nyu.edu/~adamodar/pdfiles/Statistics101/postclass/SoftwareMargins2020.xlsx>
- Using Excel or your favorite statistics package, estimate
- a. The average and median margin in the software business
 - b. The range, standard deviation, and standard error
 - c. The skewness and kurtosis
 - d. What do these metrics tell you about the data?
3. The link below contains data on dividend yields for all US power utilities in 2020. <https://www.stern.nyu.edu/~adamodar/pdfiles/Statistics101/postclass/UtilityDivYld2020.xlsx>
- Using Excel or your favorite statistics package, estimate
- a. The average and median margin in the business
 - b. The range, standard deviation, and standard error
 - c. The skewness and kurtosis
 - d. What do these metrics tell you about the data?
4. The link below contains data on the US consumer price index, each year from 1960 to 2020. <https://www.stern.nyu.edu/~adamodar/pdfiles/Statistics101/postclass/CPI2020.xlsx>
- Using Excel or your favorite statistics package, estimate
- a. The average and median margin in the business

- b. The range, interquartile range, standard deviation, and standard error
 - c. The skewness and kurtosis
5. The link below contains data on the price to book ratios of US banks in 2020.
<https://www.stern.nyu.edu/~adamodar/pdfiles/Statistics101/postclass/USBanks2020.xlsx>
- Using Excel or your favorite statistics package, estimate
- a. The average and median margin in the business
 - b. The range, standard deviation, and standard error
 - c. The skewness and kurtosis