**Signals (Backtesting)**

* Check data
  + Absolute values
  + Distribution of variables being used
  + Modify data (log, normalize etc) depending on its distribution.
  + Industry adjustment
* Signal generation
  + Make sure data is being used properly when defining percentiles (zeros and blanks)
  + Make sure each parameter used is contributing to improving results.
  + Check horizon of investment (1 month, 12 months, 18 months etc)
  + **Check dropping sectors (eg 28, 44 etc)**
* Screens
  + Avoid using return parameters in screens (eg cumret121 > p80cumret121)
  + Check sensitivity of results to screens
* Check QT1
  + Check Returns for different time periods (>2005 etc, >336 etc.)
  + Check number of trades in a month
  + Check if returns are coming from a few months or a particular period
* Attribution –
  + What is driving the returns –
    - A particular sector
    - High/low vol names
    - High/low sdret names
    - High/low liquidity names
    - Large/small size names
* Check correlation with other signals and the **product**
  + Reduce correlation with other signals
  + Check volume and universe thresholds. Is it playing in the same universe, as that can lead to higher correlations
  + Check overlap with other signals by comparing signal\_imp\_m.txt and modify signal to remove all overlapping signals from other signals.
  + **Allocate to Signal Buckets**
* Check impact on Allsignals
  + Check with signal as it is
  + Impact of long side and short side of the signal separately on the long and short side of allsignals\*
  + Check with version which removes overlapping signals
  + Substitute a correlated strategy instead of adding directly
* Robustness - Run R shell
* Stability –
  + signal changes
  + Run signal with old data (3 month back) and then run signal comparison
* Drawdown –
  + Monthly and Daily
  + Individual signal (similar to allsignals\*)
  + Effect of drawdown on allsignals\*
* Loads
  + Check loads with ffhml, ffumd, ffsmb, volf and BAB
* When Revisiting the product, check the following –
  + Relative performance of all signals (from QT1) for entire history, live returns, last 6 months etc. – rerun the product by removing the weakest signals
  + rerun the product by removing the signals with the worst stability