

Dynamically Shifting LB Period WF

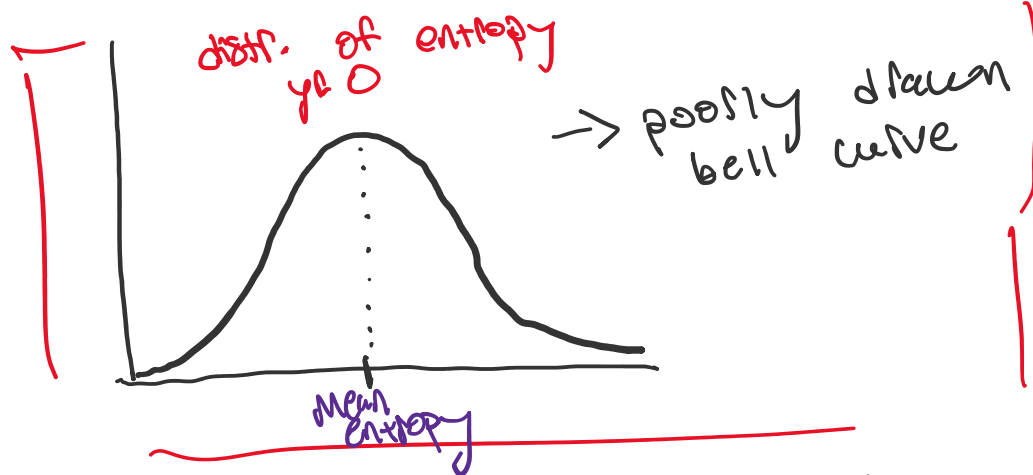
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9:05 AM

idea)

- initialize first period as 1 year, (don't use first full yr. of ROR's in WF)
- compute weekly entropy \rightarrow annualize it
- make pdf of entropy in year 0. and calc stdev of entropy

Result:



- Run param optimization (MCMC) on last bus. day of year 0.
- Compute entropy of ROR's every week for chosen params
- If mean entropy is an extreme value,

- if mean entropy is an extreme value, (based on some CI, w/ some α -level), we determine enough new noise has been introduced to our dataset.

↳ NEW PARAM OPTIMIZATION.

- after new optimization our new pdf for entropy becomes: 5 day entropy from 1/1/year 1 to day before param optimization.

↳ continue w/ dynamic period adjustment

ex.)

dates ...	ROR (NSDQ)	FNDX3
10/1/1985	#	N/A
...
12/2/1985	#	#
...
1/2/1986	#	#
...
1/7/86 (1:30pm Friday)	#	#
...

← first day of FNDX3 after trigger

(first day of yr. 0)

→ get first 5 day entropy

Friday)
 .
 .
 .
 12/31/1986 #
 .
 .
 .
 (Arbitrary date) #
 1/27/1987

→ build first entropy pdf. w/ mean and std.

→ we have been calculating entropy from 1/2 to curr date.
 We found that there is a significant change in mean entropy (compared to y1.0)
 w/ 95% confidence

↓
 1/27/1987 (update params for FNDX3)

- now use pdf (entropy)
 for 1/2/1987 - 1/27/1987
 to compare to new period.

↓
 continue until present date.

Take aways:

- The most frequent parameter optimization period will be once a week, but this will most likely rarely happen, because 1 week of RORs don't provide enough new noise.
- This approach allows us to use market noise as a means of updating our parameters during back tests.
- **Bottom Line:** Dynamic method, Uses computational power more efficiently.