SS3 Quant Analysis Summary

Monday, May 20, 2019

5:52 PM

# Technical Analysis

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| --- | --- |
| One population mean | Z-stats(known pop variance) / t-stats |
| Two population mean (independent) | T-stats |
| Two population mean (dependent) | Paired comparisons test (t-stats) |
| One population variance | Chi-square |
| Two population variance | F-stats |

* + Time-series data consists of observations measured over a period of time, spaced at uniform intervals. The monthly returns on a particular stock over the last 5 years are an example of time-series data.
  + Cross-sectional data refers to data collected by observing many subjects (such as individuals, firms, or countries/regions) at the same point in time. Analysis of cross-sectional data usually consists of comparing the differences among the subjects. The returns of individual stocks over the last year are an example of cross-sectional data.

Data sets can have both time-series and cross-sectional data in them. Examples of such data sets are:

* + **Longitudinal** data, which is data collected over time about multiple characteristics of the same observational unit. The various economic indicators—unemployment levels, inflation, GDP growth rates (multiple characteristics) of a particular country (observational unit) over a decade (period of time) are examples of longitudinal data.
  + **Panel** data, which refers to data collected over time about a single characteristic of multiple observational units. The unemployment rate (single characteristic) o=f a number of countries (multiple observational units) over time are examples of panel data.

Sentiment indicators:

* + Put/call ratio {↑bad
  + Volatility index (VIX) {↑bad
  + Short interest ratio {↑bad
  + Margin debt {↑good
  + Opinion polls

Flow of funds:

* + Arms index
  + Short-term trading index (TRIN)

Price-based indicators:

* + Moving average lines
  + Bollinger bands: standard deviations above and below moving average
  + Momentum oscillators - relative strength index
    - rate of change oscillator: RSI, MACD(, moving average convergence/divergence), stochastic

**Reversal** patterns: head-and-shoulders, double top, triple top, inverse head-and-shoulders, double bottom, triple bottom

**Continuation** patterns: triangles, rectangles, flags, pennants

Price ($) 
Golden cross 
Dead cross 
60-day moving 
average: Notice how it 
is smoother than the 
20-day moving 
averaoe 
20-day moving 
average: Notice that it 
is more volatile than 
the 60-day moving 
averaoe 
a volume 

Time-weighted and Money-weighted

TWRR& MWRR 女 
性 质 
TWRR 
． 月 马 匀 ． ， 稻 当 于 给 每 个 
收 率 相 同 的 权 重 
计 算 每 一 期 的 “ 8 
· n 期 HPF 的 几 何 平 均 
． 不 会 受 到 现 金 流 流 入 流 出 
的 影 响 
更 准 确 
MWR 0 〕 ． 
． 以 现 金 乍 为 权 重 ， 觐 金 流 越 多 的 
一 期 ， 收 益 率 给 的 权 重 越 大 
． 找 到 一 期 现 金 流 
氰 1 RR = 讠 十 的 IIRR 
会 受 现 金 流 改 变 的 影 晌 ， 所 以 客 
飞 MWRR-n 
· 如 客 F 投 资 的 蘸 来 越 多 ， 相 当 于 
给 后 期 的 收 益 率 一 个 更 高 的 权 重 