Performance Attribution for Equity Portfolios

R/Finance 2013

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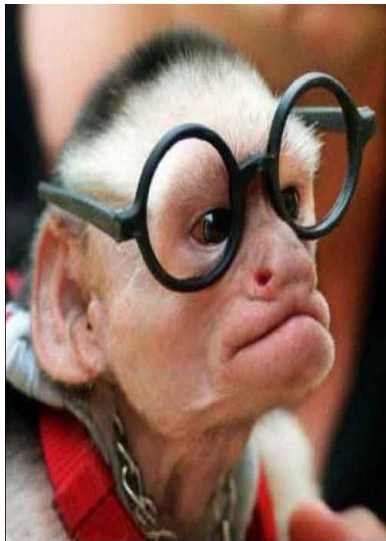# Fund Performance

Fund Performance

COURTESY: LEGG MASON

Bill Miller

Fund Performance

Bill Miller

# **pa** Package (**P**erformance **A**ttribution)

- Brinson model
  - Allocation, Selection, Interaction effects
  - Allow users to specify own categories

- Regression-based attribution
  - Attribute returns to various factors
  - Either discrete or continuous factors
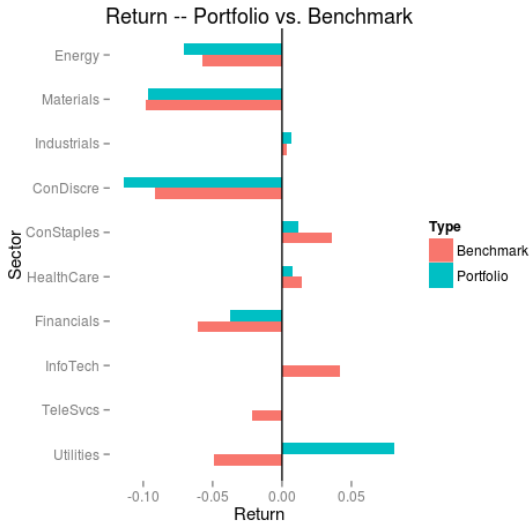
- Multi-period linking algorithms for returns

An Example

- Long-only

- Equal-weighted portfolio of 200 stocks

- Benchmark of 1000 stocks

Brinson Attribution - Sector Exposures
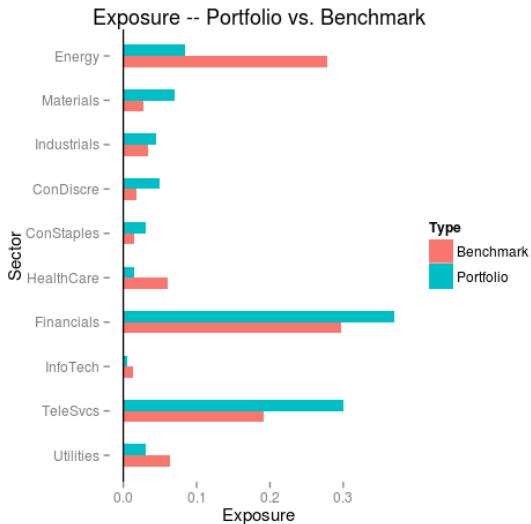
Brinson Attribution - Sector Returns

Brinson Attribution - Summary

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Period:                        2010-01-01
Methodology:                   Brinson
Securities in the portfolio:   200
Securities in the benchmark:   1000

Returns
$'Attribution by category in bps'
          Allocation Selection Interaction
Energy      110.934    -37.52      26.059
Materials   -41.534      0.48       0.734
Industrials   0.361      1.30       0.473
ConDiscre   -28.688     -4.23      -7.044
ConStaples    5.467     -3.59      -3.673
HealthCare   -6.692     -4.07       3.063
Financials  -43.998     70.13      16.988
InfoTech     -3.255     -5.32       3.255
TeleSvcs    -23.106     41.55      23.348
Utilities    16.544     83.03     -44.108
Total       -13.966    141.77      19.095

$Aggregate
                      2010-01-01
Allocation Effect      -0.00140
Selection Effect        0.01418
Interaction Effect      0.00191
Active Return           0.01469
```
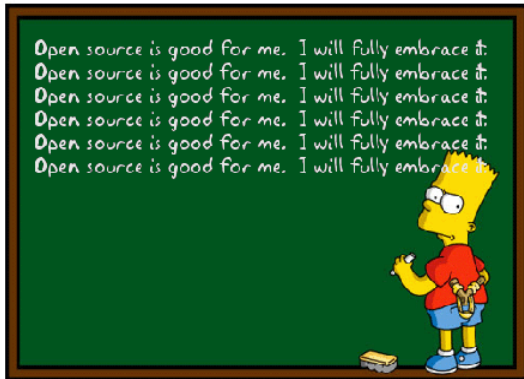
Thank You!

pa pacakge:
http://cran.r-project.org/web/packages/pa/index.html
Vignette:
http://cran.r-project.org/web/packages/pa/vignettes/pa.pdf

Repository: https://github.com/yl2/pa

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