

## What?

Several key statistics are available for securities through several web sites including Yahoo! Finance, Google and Nasdaq. These include, but not limited to, current P/E ratio, market capitalizations, number of shares floating, dividend yield etc. Yahoo! Finance, however, provides these statistics through an API which makes the download process easy, fast and reliable. These statistics are available for the current period and no historic data are available.

## Method

While we can download financial data to many of the spreadsheet software, we will be using Stata.

`fetchyahookeystats` downloads key statistics for a list of symbols from Yahoo! Finance API.

## Syntax and options

`fetchyahookeystats namelist`

## Example

The following example will download the key statistics for AAPL, IBM, XOM, GOOG, FB, TWTR and HD.

```
net install http://researchdata.com/stata/203/fetchyahookeystats.pkg, force
* fetchyahookeystats requires expose package by Nicholas J. Cox, Durham University
net install http://fmwww.bc.edu/RePEc/bocode/s/expose.pkg, force
fetchyahookeystats AAPL IBM XOM GOOG FB TWTR HD
```

symbol	shortName	regularMarketPrice	sharesOutstanding	marketCap	epsForward	bookValue	forwardPE	priceToBook
1	HD	163.0765	1178019968	193181007872	8.31	3.869	19.720467	54.462147
2	TWTR	15.79	734608000	14532776384	8.43	6.452	46.823256	3.867256
3	FB	177.76	2378330112	516258566556	6.54	22.924	27.188428	7.754318
4	GOOG	1823.525	347734016	714387685376	41.28	214.015	24.784697	4.782492
5	XOM	83.46	4237118015	353629280576	3.98	42.288	28.569849	1.9736896
6	IBM	152.1437	931939968	141788887168	13.93	21.118	18.922817	7.2844563
7	AAPL	172.2216	5165238088	889564233728	11.17	25.615	15.418227	6.723467

Figure 1: Key statistics: `fetchyahookeystats` data

## Example

The following example will download the key statistics for all S&P-500 components.

```
net install http://researchdata.com/stata/010/fetchcomponents.pkg, force
net install http://researchdata.com/stata/203/fetchyahookeystats.pkg, force
net install http://fmwww.bc.edu/RePEc/bocode/s/expose.pkg, force
fetchcomponents, symbol(^GSPC)
levelsof Symbol, local(symbols) clean
fetchyahookeystats `symbols'
save SP500_key_stats.dta, replace
```

## Example

The following example will create equally weighted portfolios based on the key statistics (i.e. P/E ratio) downloaded for all S&P-500 components.

```
net install http://researchdata.com/stata/203/fetchyahoquotes.pkg, force

fetchcomponents, symbol(^GSPC)
levelsof Symbol, local(symbols) clean
fetchyahookeystats `symbols'
save SP500_key_stats.dta, replace

destring trailingPE, replace force
drop if (trailingPE==.) | (trailingPE==0)
sort trailingPE

levelsof symbol if _n<51, local(low_pe) clean
levelsof symbol if _n>404, local(high_pe) clean

fetchyahoquotes `low_pe' `high_pe' ^GSPC, freq(d) chg(ln) start(01jan2018)

gen P_low_pe = 0
foreach aa in `low_pe' {
    replace P_low_pe = P_low_pe + ln`aa' if (ln`aa'!=.)
}
replace P_low_pe = P_low_pe / 50

gen P_high_pe = 0
foreach aa in `high_pe' {
    replace P_high_pe = P_high_pe + ln`aa' if (ln`aa'!=.)
}
replace P_high_pe = P_high_pe / 50
```

Let's look at the risk and return for each of the two portfolios:

```
tabstat P_low_pe P_high_pe, stats(sum sd)
```

stats	P_low_pe	P_high~e
sum	-.1523372	.120429
sd	.0106343	.0107555

Low PE portfolio has a total return of -15.23% and standard deviation of 0.0106. High PE portfolio has a total return of 12.04% and standard deviation of 0.0107. Therefore, while both portfolios have almost the same level of risk, high PE portfolio return outperformed the low PE portfolio.

