# FinTeX

Package version 1.1-0

Enrico Schumann
es@enricoschumann.net

PMWR provides several methods for `toLatex`.

## Monthly returns

For a timeseries (e.g. `zoo` or `xts`), the function `returns` provides monthly returns.

```
> returns(DAX, period = "month")
```

```
      Jan Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  Oct Nov  Dec YTD
2014 -1.0 4.1 -1.4  0.5  3.5 -1.1 -4.3  0.7  0.0 -1.6 7.0 -1.8 4.3
2015  9.1 6.6  5.0 -4.3 -0.4 -4.1  3.3 -9.3 -5.8 12.3 4.9 -5.6 9.6
```

To have such a table placed into a LaTeX file, you can put the following snippet into a Sweave file.

```
\begin{tabular}{rrrrrrrrrrrrrr}
<<results=tex,echo=false>>=
toLatex(returns(DAX, period = "month"), ytd = "\\textsc{ytd}")
@
\end{tabular}
```

The results will look like this:

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YTD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2014 | -1.0 | 4.1 | -1.4 | 0.5 | 3.5 | -1.1 | -4.3 | 0.7 | 0.0 | -1.6 | 7.0 | -1.8 | 4.3 |
| 2015 | 9.1 | 6.6 | 5.0 | -4.3 | -0.4 | -4.1 | 3.3 | -9.3 | -5.8 | 12.3 | 4.9 | -5.6 | 9.6 |

## NAVseries

Summaries of NAVseries contain a number of statistics that can be placed into LaTeX templates.

```
> returns(DAX, period = "annualised")
```

```
6.9%  [02 Jan 2014 -- 30 Dec 2015]
```

To do so, call `toLatex` with a summary of one or more NAVseries, and a `template`.

```
> toLatex(summary(as.NAVseries(DAX,  title = "DAX"),
                  as.NAVseries(REXP, title = "REXP")),
          template = "%title: %return\\% \\\\")
```

```
DAX: 6.9\% \\
REXP: 3.8\% \\
```

Note that the template was recycled, i.e. it was used for both series. We may also pass separate templates for each series.

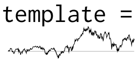
In recent versions of R, you can use raw character constants of the form `r"(...)"`, which reduces the need for escaping. See `?Quotes`.

```
> tmpl <- c("Equities (%title) made %return\\%, with a drawdown of %mdd\\%;",
            "bonds (%title) returned %return\\%.")
> toLatex(summary(as.NAVseries(DAX,  title = "DAX"),
                  as.NAVseries(REXP, title = "REXP")),
          template = tmpl)
```

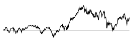
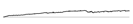
```
Equities (DAX) made 6.9\%, with a drawdown of 23.8\%;
bonds (REXP) returned 3.8\%.
```

The keyword `%sparkline` adds a sparkline:

```
> toLatex(summary(as.NAVseries(DAX,  title = "DAX")),
          template = "The DAX %sparkline made %return\\% during the period.")
```

The DAX  made 6.9% during the period. It uses the LaTeX package `sparklines` (`https://ctan.org/pkg/sparklines`).

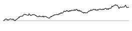
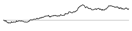
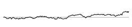
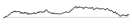
Since templates are recycled, we can easily create rows for LaTeX tables, such as this one:

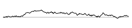
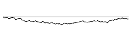
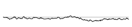
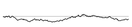
| | | Return p.a. | Volatility |
|---|---|---|---|
| DAX |  | 6.9 | 18.0 |
| REXP |  | 3.8 | 1.9 |

. . . which is produced by the following call:

```
> toLatex(summary(as.NAVseries(DAX,  title = "DAX"),
                  as.NAVseries(REXP, title = "REXP")),
          template = "%title & %sparkline & %return & %volatility  \\\\")
```

When several NAV series are passed to `toLatex`, all sparkline plots use the same y-scale. It is then straightforward to produce tables such as the following one, in which we have sorted 50 random series by total return. (See the vignette source for the exact code, but the key command is `toLatex(do.call(summary, <list of NAVseries>))`).

| Return | Vol | |
|---|---|---|
| 32.3 | 1.0 |  |
| 31.3 | 1.0 | |
| 28.0 | 1.0 | |
| 27.1 | 1.0 |  |
| 26.8 | 1.0 | |
| 17.4 | 1.0 | |
| 13.2 | 0.9 |  |
| 12.8 | 1.0 | |
| 12.5 | 1.0 | |
| 10.7 | 1.0 | |
| 10.3 | 0.9 | |
| 9.3 | 1.0 | |
| 6.9 | 1.0 | |
| 6.6 | 1.1 |  |
| 5.6 | 1.0 | |
| 5.2 | 1.0 | |
| 4.0 | 1.0 | |

| Return | Vol | |
|---|---|---|
| 3.8 | 1.0 | |
| 3.1 | 1.0 | |
| 2.8 | 1.0 | |
| 1.8 | 1.0 |  |
| 0.6 | 1.0 | |
| 0.1 | 1.1 | |
| -0.2 | 1.0 | |
| -0.3 | 1.0 | |
| -0.9 | 0.9 | |
| -2.9 | 0.9 | |
| -3.4 | 1.0 | |
| -4.7 | 1.0 |  |
| -4.8 | 0.9 | |
| -4.8 | 1.0 | |
| -5.3 | 1.0 | |
| -6.0 | 1.0 |  |
| -6.6 | 1.0 |  |

| Return | Vol | |
|---|---|---|
| -6.7 | 1.0 | |
| -7.5 | 1.0 | |
| -8.1 | 1.0 | |
| -8.4 | 1.0 | |
| -10.0 | 1.0 | |
| -11.6 | 0.9 | |
| -12.9 | 1.0 | |
| -14.2 | 1.0 | |
| -14.3 | 1.1 | |
| -14.9 | 1.0 | |
| -15.5 | 1.0 | |
| -15.5 | 0.9 | |
| -22.3 | 1.1 | |
| -23.1 | 0.9 | |
| -24.8 | 1.0 | |
| -37.4 | 1.1 | |