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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).
```

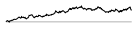





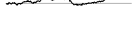








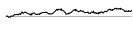






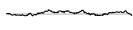





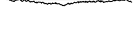

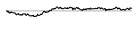


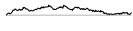


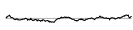



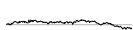








Since templates are recycled, we can easily create rows for L<sup>A</sup>T<sub>E</sub>X tables, such as this one:

		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		Return	Vol		Return	Vol	
26.2	1.1		2.5	1.0		-11.0	1.0	
25.0	1.0		0.5	1.0		-11.1	0.9	
18.8	1.0		-0.2	1.0		-11.3	1.0	
18.4	1.0		-0.2	1.0		-13.4	1.0	
17.5	1.0		-1.6	0.9		-13.4	1.1	
15.2	1.0		-1.6	1.0		-13.6	1.0	
14.1	1.0		-2.3	1.0		-14.1	1.0	
13.0	1.0		-2.9	0.9		-15.7	1.1	
8.9	1.0		-4.0	1.0		-16.3	1.0	
7.0	0.9		-6.1	1.0		-23.8	1.1	
6.8	1.0		-6.2	0.9		-25.6	1.1	
6.0	1.1		-6.5	1.0		-26.0	1.0	
4.8	1.0		-7.0	0.9		-27.7	0.9	
4.2	1.0		-7.2	0.9		-28.2	1.0	
4.2	1.0		-9.2	1.1		-29.2	0.9	
3.9	1.0		-9.4	1.0		-30.5	1.0	
3.2	1.0		-10.0	1.0	