

Brazilian Review of Finance: A template

Author One[†]

Author Two[‡]

Author Three^{*}

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Keywords: Risk measures; Standard deviation.

JEL Code: E3, C41, C43.

1. Introduction

Below you can find a scheme of citation commands and corresponding outputs. You can also cite multiple references with a single `\cite` command; for instance, `\cite{markowitz52, rockafellar02, rockafellar06}` produces the output (Markowitz, 1952; Rockafellar and Uryasev, 2002; Rockafellar et al., 2006). Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget

Submitted on February 8, 2023. Revised on May 25, 2023. Accepted on June 9, 2023. Published online in June 2023. Editor in charge: Mr Editor.

[†] Author One affiliation, Brazil: author.one@email

[‡] Author Two affiliation, Brazil: author.two@email

^{*} Author Three affiliation, Brazil: author.three@email

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<code>\citeasnoun{markowitz52}</code>	Markowitz (1952)
<code>\cite[p.9]{markowitz52}</code>	(Markowitz, 1952, p.9)
<code>\citename{markowitz52}</code>	Markowitz
<code>\citeyear*{markowitz52}</code>	1952
<code>\citeyear{markowitz52}</code>	(1952)

In the [References](#) section, you can make the title of a reference *clickable* by including the `doi` field in the `references.bib` file, as shown in the example below. In practice, the `doi` field accepts any type of web address; this can be useful when you have a reference which has no DOI but does have a permalink. Additionally, if you want to explicitly display the URL for a given reference, then just add the `url` field in the `bib` file. These possibilities are illustrated in the [References](#) section.

```

1 @article{rockafellar02,
2 title={Conditional value-at-risk for general loss
3 distributions},
4 author={Rockafellar, R Tyrrell and Uryasev, Stanislav},
5 journal={Journal of banking & finance},
6 volume={26},
7 number={7},
8 pages={1443--1471},
9 year={2002},
10 doi = {https://doi.org/10.1016/S0378-4266(02)00271-6},

```

1.1 Useful tools for reference managing

There are several useful tools to help organize your references. Here are some of them:

- (i) <https://www.mendeley.com>
- (ii) <https://www.jabref.org>
- (iii) <https://text2bib.economics.utoronto.ca>
- (iv) <https://truben.no/latex/bibtex/>

2. Methodology

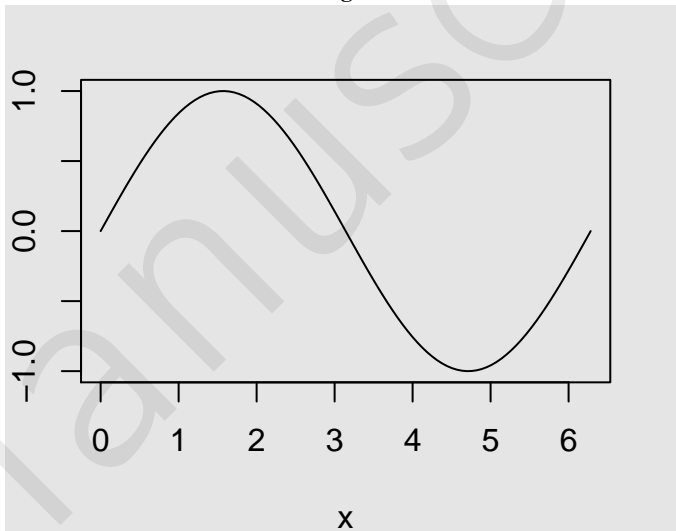
In this section you should discuss the methodology.¹

2.1 Figures

Figure 1 was generated in R through the following code:

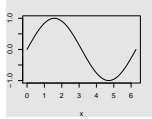
```
1 x = seq(from=0, to=2*pi, length=100)
2 cm = 1/2.54 # this is just for defining units of
  measurement
3 pdf(file='plot.pdf', width=9*cm, height=7*cm, bg=rgb
  (0,0,0,.1))
4 par(mai = c(2*cm,1*cm,.5*cm,1*cm))
5 plot(x, sin(x), type='l')
6 dev.off()
```

Figure 1
A figure



Ideally, figure dimensions should be controlled *outside* of \LaTeX , as the preceding R code illustrates. If you cannot generate or obtain the figure with appropriate sizing, then adding the optional argument `[width=9cm]` to the `\includegraphics` command will do the job. Below we illustrate usage of the `\includegraphics [width=2cm] {media/plot.pdf}` command.

¹Footnote links should come after punctuation.



2.2 The model

We write inline equations as $x = x$ or displayed equations as

$$dX_t = \mu dt + \sigma dB_t \quad (1)$$

and reference equations using `\eqref{eq1}` to display as equation (1). Maybe we should have added this in [section 1](#). You can also reference theorems, for example `\autoref{thm:1}` will produce [Theorem 1](#).

Definition 1. We say that x is equal to x whenever $x = x$.

Lemma 1. $x \geq y$ if and only if $y \leq x$.

Proof. This is left as an exercise. ■

Proposition 1. $x = x$ if and only if $x = x$.

Theorem 1. If $x = x$ and $y = y$, then $x > y$ implies $x > y$.

Proof. A proof with default title. ■

A proof with custom title. This is trivial. ■

Corollary 1. $x > y$ if and only if $y < x$.

Remark 1. This is a remark.

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3. Results


You can add tables easily: see [Table 1](#). There are three custom column types that accept width specification: `L`, `C` and `R`, which work similarly to the standard `p` column type; for instance, use `C{4cm}` for a (horizontally) centered column 4cm wide. Notice, however, that \LaTeX has some inconsistencies regarding lengths, as [Example 1](#) illustrates. Thus, some manual fine-tuning may be necessary to obtain tables with the desired width.

Table 1
A simple table

variable	value	p -value
X	1	0.0
Y	-1	0.8
You can write long texts inside table cells, with custom linebreaks	A	B

Table descriptions go here. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Example 1. This example illustrates length inconsistencies in \LaTeX .



a	b	c
x	y	z

The source code yielding the rule and table above is as follows:

```
1 \noindent\rule{.6\textwidth}{1cm}
2 \noindent\begin{tabular}{L{.2\textwidth}C{.2\textwidth}R
   { .2\textwidth}}
3 \toprule
4 x & y & z\tabularnewline\bottomrule
5 \end{tabular}
```

3.1 Some additional features

Table 2 illustrates how to align numbers by the decimal place marker. It also shows how to implement the `\multirow` command.

Table 2
Another simple table

variable		value	<i>p</i> -value
X		1.001	0.0
Y		-10.00	0.8
Z	Z ₁	1.1	0
	Z ₂	2.2	0

Here are two useful tools to help formatting \LaTeX tables:

- (i) <https://www.tablesgenerator.com>
- (ii) <https://truben.no/table/>

Acknowledgments

Author One would like to thank Institution One for financial support.

References

Markowitz, H. (1952). Portfolio selection, *Journal of Finance* **7**(1): 77–91.

Rockafellar, R. T. and Uryasev, S. (2002). [Conditional value-at-risk for general loss distributions](#), *Journal of banking & finance* **26**(7): 1443–1471.

Rockafellar, R. T., Uryasev, S. and Zabarankin, M. (2006). Generalized deviations in risk analysis, *Finance and Stochastics* **10**: 51–74.

URL: <https://doi.org/10.1007/s00780-005-0165-8>

A. Additional tables and figures

This appendix has some additional tables and figures, for example Table A1 illustrates how to generate a sideways table, and also shows how to implement the `\multicolumn` command. Figure A1 illustrates usage of subfigures. Panels A1a and A1b were generated in R through the following code:

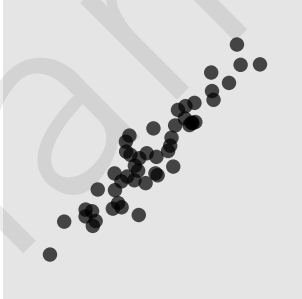
```

1 set.seed(123)
2 cm = 1/2.54
3 x = rnorm(50)
4 pdf(file='plot2a.pdf', width=4*cm, height=4*cm, bg=rgb
  (0,0,0,.1))
5 par(mai = c(.5*cm, .5*cm, .5*cm, .5*cm))
6 plot(x, x+rnorm(50,sd=.4), pch=16, col=rgb(0,0,0,.7),
  bty='n', axes=FALSE, ann=FALSE)
7 dev.off()
8
9 pdf(file='plot2b.pdf', width=4*cm, height=4*cm, bg=rgb
  (0,0,0,.1))
10 par(mai = c(.5*cm, .5*cm, .5*cm, .5*cm))
11 plot(x, rnorm(50,sd=1), pch=16, col=rgb(0,0,0,.7), bty='
  n', axes=FALSE, ann=FALSE)
12 dev.off()

```

Figure A1
Adding subfigures

(a) Bivariate Normal with $\rho = 1$



(b) Bivariate Normal with $\rho = 0$

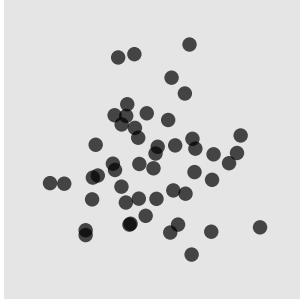


Table A1
A sideways table

variable	estimation outputs		
	value	t-stat.	p-value
X	1	3.59	0.0
Y	-1	-0.1	0.8
You can write long texts inside table cells, with custom linebreaks			
	A	B	C