

Leibniz Universität Hannover
Wirtschaftswissenschaftliche Fakultät
Institut für Banken und Finanzierung

Hedge Funds: Trading Strategies and Performance Evaluation

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Thema:

Thesis Title

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1 Introduction

This simplified RMarkdown template is designed for students at the Leibniz University Hannover (LUH) to prepare their (seminar) thesis. The cover sheet and the statutory declaration (ehrenwörtliche Erklärung) are in compliance with the requirements of the Student Dean's office. Margins, font size and citation style are in line with the formal guidelines of the Institute of Banking and Finance and may be adapted to the requirements at other LUH institutes.

2 Language

2.1 Switch from English to German

This template supports theses in German and English. To switch between them, use the `lang` parameter in the yaml header. To write in American English (German), use “en-us” (“de”). This affects the name of the table of contents, list of figures, list of tables and the statutory declaration. However, this does not change the title of the references, this has to be adapted manually.

2.2 RStudio spell-checking

From RStudio 1.3 upwards, the RStudio IDE offers live spell checking. To change it from English to German, go to Tools -> Global Options -> Spelling and change the main dictionary to German. Live spelling doesn't work for German (new) just yet, but in most cases, the German dictionary will suffice. Make sure to check “use live spell checking” after changing the dictionary. The change will affect the output after you save the document. In order to install a full German dictionary for spelling suggestions, follow these steps:

1. Download the German dictionary files `de_DE_frami.aff` and

de_DE_frami.dic from the libreoffice repository (free!).

2. Click [here](#) to add them to RStudio by copying them into the correct folder. This depends on your operating system, but the explanation on the website is pretty thorough.

3 Equations

3.1 Inline equations

RMarkdown and LaTeX are the perfect combination for theses with math equations. In this case, RMarkdown relies on the syntax of LaTeX when typesetting equations, so it is hard to distinguish between the two languages. To add an equation to the text, simply use $e = mc^2$. There are many more expressions, just download the corresponding cheat sheet:

[LaTeX cheat sheet](#)

3.2 Block equations

Sometimes, equations are too central to be written in a line of text. In this case, use block equations. RMarkdown does this by doing the following:

$$\bar{x} = \frac{1}{N} \sum_{i=1} N x_i$$

This has one major disadvantage, namely that there are no numbers for the equations. Numbered equations are useful if you want to refer to the equation later on. Since the syntax above is 99% LaTeX anyway, we can use the native LaTeX equation environment:

$$\bar{x} = \frac{1}{N} \sum_{i=1} N x_i \tag{1}$$

If you want to deactivate enumeration, use `equation*` within the braces. Use the label to refer to this important equation, as follows: Equation (1)

is the arithmetic mean. There are other equation environments, e.g. `array` for more complicated expressions.

4 Figures

4.1 Figures from R plots

```
data <- read.csv(sharkdata)

plot(data$x, data$y, xlab = "", ylab = "", axes = FALSE)
```

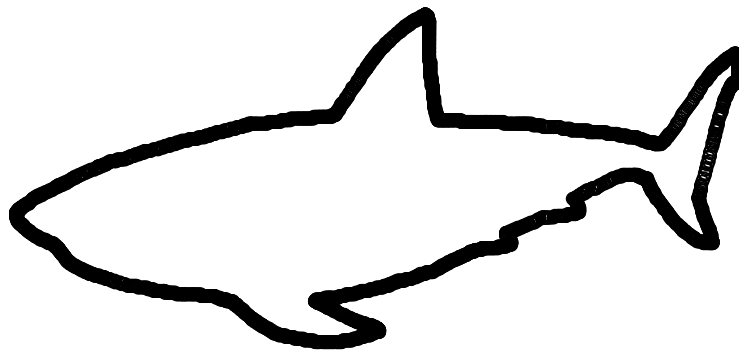


Figure 1: A dangerous animal. Source: Allison Horst.

4.2 Figures from local files

This is the easiest way to include a figure from a local file:

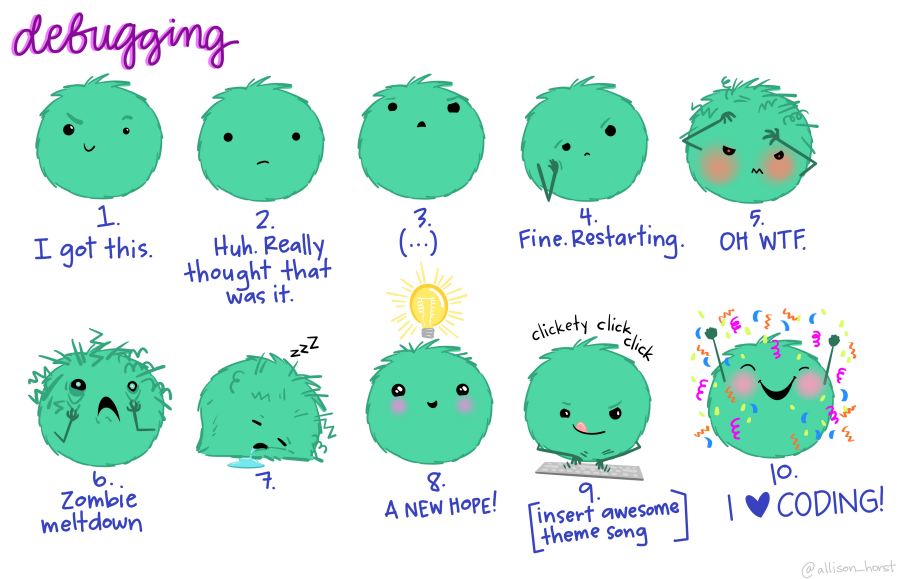


Figure 2: Faces of debugging. Source: Allison Horst

5 Tables

5.1 Kable

This is an example table with kable, including a caption:

```
kable(flights[1:5,1:5],
      booktabs = TRUE,
      caption = "Example Table.")
```

5.2 LaTeX tables

6 Markdown tables

Table 1: Your Caption

First Header	Second Header	Third Header
First row	Data	Very long data entry
Second row	Cell	<i>Cell</i>
Third row	Cell that spans across two columns	

7 Citations

7.1 Citations in Markdown

7.2 Citations in LaTeX

7.3 Citation styles

8 Debugging

8.1 Debugging R Code

8.2 Debugging LaTeX issues

9 How to get started

Literature

Wickham, H., & Grolemund, G. (2016). *R for data science: Import, tidy, transform, visualize, and model data* (First Ed). Sebastopol, CA: O'Reilly.

Statutory Declaration

Hiermit versichere ich, dass ich die vorliegende Arbeit selbständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe, dass alle Stellen der Arbeit, die wörtlich oder sinngemäß aus anderen Quellen übernommen wurden, als solche kenntlich gemacht habe und dass die Arbeit in gleicher oder ähnlicher Form noch keiner Prüfungsbehörde vorgelegt wurde.

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