Guidelines for Bachelor and Master Theses

Institute for Finance & Banking

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Contents

1 Preface

The purpose of these guidelines is to give instructions on writing and formatting bachelor and master theses at the Institute for Finance & Banking (IFB). Writing scientific papers requires you to follow certain rules/conventions regarding form, style and content. The compliance with the following regulations is therefore a necessary condition for the success of a bachelor or master thesis.

The thesis has to be submitted both in printed and in electronic form (PDF and Word/ LaTeX-document).[1] The text of a bachelor thesis should have the extent of 70,000 characters (incl. spaces), this corresponds to 30 ± 3 pages. A master thesis should have $150,000 - 160,000$ characters (incl. tables, graphics and formulas), which usually corresponds to 60 ± 5 pages.

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[1] For further information about the submission procedure, please refer to the ISC-website: http://www.isc.uni-muenchen.de/studiengaenge/index.html.

2 Structure of a Bachelor or Master Thesis

A bachelor or master thesis consists in general of the following parts:

- Cover Page
- Table of Contents
- List of Tables
- List of Figures
- List of Acronyms
- List of Symbols
- Main Part
- Appendix
- Bibliography
- Author's Declaration

We have uploaded two example documents on our website to give you an impression of how your thesis might look like when formatted according to these guidelines. Please refer to these example documents for any aspects that are not explicitly covered in these guidelines.

2.1 Cover Page

On the website of the ISC you can find a model-cover page.[2] Please make sure that you include all the required information.

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[2]http://www.isc.uni-muenchen.de/files/bwl/bwl_bachelor/pdfs/ba_deckblatt.pdf

2.2 Table of Contents

In your thesis you should use a numeric structuring system (e.g. "1.2.3" NOT "1. a) i)"). The table of contents should include headings for the list of tables/figures/acronyms/symbols, all structuring levels of the main part, the appendices and the bibliography, but neither the table of contents itself, nor the author's declaration.

2.3 List of Tables/Figures

If you have more than one table you have to prepare a list of tables. It should contain the numbering and the heading of each table you have provided. The same applies to figures for which a separate list has to be presented.

2.4 List of Acronyms/Symbols

If you use any abbreviations that cannot be found in a dictionary, your thesis should include a list of acronyms. It should contain all abbreviations in alphabetical order and their respective long-form. When you first use an abbreviation you should write the long-form followed by the acronym in parenthesis, e.g. "The capital asset pricing model (CAPM) ...". Afterward you only use the abbreviation, e.g. "According to the CAPM-formula ...".

A list of symbols has to be presented if you have used any symbols (e.g. β, ε). It might be reasonable to use the same symbol as in the common literature (e.g. σ^2 for variance).

2.5 Main Part

In general the text consists of three parts: introduction, chapters of the main part and the conclusion.

When writing a master thesis, the **introduction** (in total between three and five pages) can be divided into subsections "problem definition" and "method of investigation". The *problem definition* justifies the choice of topic, explains the motivation of the paper, describes the purpose and the questions and limits the problem to one or more aspects. The *method of investigation* should not only explain how you proceeded in the following chapters but also why you proceed this way. Bachelor theses should have an introduction consisting of one or two pages. A subdivision is not appropriate here, but the introduction should nevertheless describe the problem definition and the method of investigation. Be careful not to mix up the introduction with a foreword. A foreword is not common in bachelor and master theses. The following paper might help you to write a good introduction:

> Grant, Adam M., and Timothy G. Pollock, 2011, From the editors: Publishing in the AMJ - Part 3: Setting the hook, *The Academy of Management Journal* 54, 873-879.

The **main part** typically consists of two to five chapters, which have to be subdivided. Bachelor theses should not have more than three levels (e.g. "2.3.1.") and master theses should not have more than four structuring levels (e.g. "3.1.2.2"). In general there should either be no text or only a few introducing sentences between the superior section and the following subsection.

The **conclusion** gives a summary of the main results and should refer back to the purpose and questions mentioned in the introduction. You can describe open issues or suspected consequences of your results in an outlook. Developed approaches should be discussed in the main part of the paper, not in the conclusion!

2.6 Appendix

The **appendix** is an optional part of the thesis, which might include

- tables with additional data
- additional figures
- mathematical proofs and derivations
- etc.

The different parts of the appendix should be lettered (e.g. "Appendix A") and might be subdivided (e.g. "A.1"). The appendices are listed in the table of contents (see example documents). You have to refer to each appendix at least once in the main part, otherwise this appendix serves no purpose.

2.7 Bibliography

The bibliography lists all sources that you have cited/quoted in you thesis in alphabetical order. Sources that you have only read, but not quoted/cited should not be included.

Please refer to the style guide of the Journal of Finance for the referencing format of different types of sources.[3]

2.8 Author's Declaration

Your thesis also has to include an author's declaration. Please refer to the ISC-website on what this should look like.[4]

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[3]https://afajof.org/wp-content/uploads/files/policies-and-guidelines/JF_Style_-_February_2017.pdf

[4]http://www.isc.uni-muenchen.de/files/bwl/bwl_bachelor/pdfs/ehrenwoertl_erkl_.pdf

3 Formal Requirements

3.1 Page Layout

The document should have the following margins:

- top: 2.5 cm
- left: 3.5 cm
- right: 2.5 cm
- bottom: 2 cm

The type size is 12 pt and the line spacing in the text is 1.5. "Times New Roman" or the standard-LaTeX-typeface shall be used. The whole text has to be written in justification (Blocksatz).

All pages of the thesis except the cover page are numbered. Table of contents, list of tables/figures/acronyms/symbols have capital Roman page numbers starting with number "I". From chapter 1 onward the page numbering is in Arabic numbers starting again with "1".

Footnotes are numbered sequentially throughout the thesis and have to be written in type size 10 pt with line spacing 1.0. They are below the text, separated by a horizontal line. Endnotes are not permitted.

3.2 Figures and Tables

Figures should have a *caption* and tables should have a *heading* describing the content and a consecutive number. Below the caption/heading there should be a brief description which defines the variables and briefly summarizes the content (you may use type size 10 pt with line spacing 1.0). For an example please refer to the example documents.

Furthermore you have to cite the source if you did not create the figure/table on your own [e.g. "(Crouhy/Galai/Markt (2000), p. 387)" or if you have made modifications "(Based on Crouhy/Galai/Markt (2000), p. 387)"].

3.3 Formulas

Every symbol used in a formula or figure, should be explained once in the text. Avoid ambiguities of symbols and abbreviations. You are free to choose any symbols but it might be practical to use the same symbols as in common literature.

If you have any formulas in your thesis, you should use a formula editor or write your whole paper in a text program, e.g. LaTeX.

It is always useful to integrate an equation in the text, where its meaning and content is described (as in the following example).

Example:

"It is possible to derive analytical solutions for value of equity, S, and its volatility σ^2:

$$S = f\left(V, \sigma, LR, c, r\right) \tag{1}$$
$$\sigma^2 = g\left(V, \sigma, LR, c, r\right) \tag{2}$$

where LR denotes the leverage ratio in the capital structure, c is the average coupon paid on the long-term debt, and r is the risk-free interest rate (Crouhy, Galai, and Mark (2000), p. 370)."

If a sentence ends with a formula, put a full stop behind the formula. Important formulas should be numbered consecutively with Arabic numbers, so that it is possible to refer to them elsewhere in the text. The source of formulas and derivations has to be cited.

3.4 Footnotes

Footnotes contain additional notes and information. They should not be used to provide content in small type size to save space.

Additional notes in footnotes help to,

- refer to further and additional literature,
- provide supplementing and potentially interesting information,
- point to opposing opinions or results of other authors,
- refer to previous or later sections, appendices, pages or footnotes,
- give short explanations and definitions.

Footnotes have to be grammatically correct, complete sentences, except you want to refer to additional literature. In this case you can use e.g. "See also ...".

4 Citations and Quotations

4.1 Preface

In principle, every idea/concept taken from someone else, has to be quoted or cited. If you do not quote/cite, you are guilty of plagiarism.

This citation standard follows the rules of the Journal of Finance. The Journal of Finance integrates the reference in the text, while author and year are cited directly in the text. The detailed reference has to be printed at the end of your paper in the bibliography.

4.2 Citation

If you want to express a statement of other authors with your own words, you have to cite. Author(s) and year are printed in or at the end of the sentence.

Example: Author(s) in the sentence
The figure plots the consumption-to-wealth ratio of Lettau and Ludvigson (2001) along with the ratio of the quarterly consumption of stockholders to total quarterly CEX consumption.

Example: Author(s) at the end of the sentence
This property is a clear distinction from approaches that model correlations with a scalar diffusion (Driessen, Maenhout and Vilkov (2007)).

4.3 Quotations

Quotations are not used frequently. They are only used to adopt specific statements and definitions from other authors. Do not use quotations just to avoid the effort of expressing a concept in your own words. The author(s) can be named at the beginning or at the end of the sentence. In addition you have to add a precise page reference. (E.g.: „p. 99" in case of one and „pp. 21f." in case of two pages).

Example: Author(s) at the beginning of the sentence

Gelfand (2002, p. 835) describes individualism and collectivism as follows: "The self is served in individualistic cultures by being distinct from and better than others, in order to accomplish the culturally mandated task of being independent and standing out."

Example: Author(s) at the end of the sentence

Individuals view themselves "not as separate from the social context but as more connected and less differentiated from others" (Kitayama (1991, pp. 227f.)).