



University of Stuttgart
Germany

Department III: Finance

Guidelines for final theses

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List of abbreviations

BWI	Institute of Business Administration
DBIS	Database Information System
AI	Artificial intelligence

List of symbols

β	Beta
r	Yield
r_f	risk-free interest
r_m	Market return

List of tables

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1. Preliminary remarks

This guideline supplements and specifies the citation guidelines of the Institute of Business Administration (BWI) at the University of Stuttgart. It is intended to provide assistance in the preparation of a thesis and to provide information on formal requirements. The specifications in these guidelines are binding and should be taken into account when writing a thesis at the Department of Finance. Any deviations from these guidelines must be discussed in advance with the thesis supervisor. The theses supervised at the Department of Finance are generally empirical theses, i.e. theses that contain their own empirical analysis. Therefore, the structure described in these guidelines is designed for empirical theses. In particular, these guidelines also contain information on how the data and programs used in the thesis must be handed in when submitting the thesis. The possibilities to access our databases and to download data for the thesis can be discussed with the supervisor. When researching literature, it is advisable to make full use of the possibilities offered by the academic libraries in the region of Stuttgart (Stuttgart University Library, BWI Institute Library, Württemberg State Library, etc.). Furthermore, the database information system (DBIS) provides an overview of the licensed databases of the University of Stuttgart. The VHB publication media ranking (in particular the area rating for banking and finance) can be used to assess the academic quality of publications.

2. Scope, structure and formal requirements

2.1 Scope of a thesis

A Bachelor's thesis should have between 30 and 40 pages (continuous text without outline, appendix, etc.). The length of a Master's thesis should be between 50 and 70 pages (continuous text without outline, appendix, etc.). This length also includes tables, graphs and figures to which the text refers. All content that is important for understanding the elaborations must be presented in the text body. Footnotes for sources or supplementary explanations are included.

2.2 Structure of a thesis

The structure of the thesis and the numbering of the components as well as the type of page numbers in the respective components are described below. The following structure and sequence of the components of a thesis are desirable:

Roman numbering:

- Cover sheet (see Appendix 1)
- Table of contents
- List of abbreviations (+)
- List of symbols (+)
- List of figures and tables (+)

Arabic numbering:

- Text part

Roman numbering:

- Appendix (+)
- Bibliography

without numbering:

- Declaration of authorship

The components of the structure marked with a “+” are not required if the respective content does not appear in the paper. For example, a list of figures is not necessary if the thesis does not contain any figures.

The individual pages of the paper must be numbered consecutively. The text part of the paper should be numbered in Arabic numerals. All pages before and after the text section are organized consecutively with Roman numerals. The cover page is part of the numbering, but no page number is used.

The declaration of authorship is not given a page number and is therefore not included in the table of contents.

2.3 Formatting

The table below shows the specifications for formatting the thesis

Font	Arial 12pt or Helvetica 12pt
Margins	Top: 2 cm Bottom: 2,5 cm Right: 2,5 cm Left: 2 cm
Line spacing	1,5
Alignment	Justification, a separator must be used
Footnotes	Arial 10pt or Helvetica 10pt, single line spacing, consecutive numbering
Headings	<ul style="list-style-type: none">- of main sections: Arial 14pt and bold- of subsections: Arial 12pt and bold
Sheet format	DIN A4, labeled on one side

Table 1: Formatting requirements for theses

2.4 Mathematical formulas

Formulas are centered in the text and must be numbered consecutively on the right-hand side of the page. Italics must be used to display formulas and symbols in the text.

Example:

$$r = r_f + \beta(r_m - r_f) \quad (1)$$

The symbols used (e.g. β) are listed and defined in the symbol directory. When a symbol is used for the first time, it must be introduced briefly but clearly.

2.5 Citation

All statements in the thesis must be comprehensible and verifiable. For this reason, all ideas that do not come from the author (all borrowings and references) must be marked as such and provided with a source reference. Both verbatim and indirect quotations must be cited with a source. The following explanations on citation methods and sources are largely taken from the citation guidelines of the Institute of Business Administration.

Literal quotations must be placed in quotation marks, whereby no changes to the text are permitted. If quotation marks have already been used in the citation, these are replaced by single quotation marks '...'. It must be indicated whether highlighting is already used in the original or was subsequently added by the author. Additional additions or explanations in the quotation by the author are to be placed in round brackets (...; the author) or without the addition "the author" in square brackets. The omission of a word is to be indicated by two dots, several words by three dots.

Examples:

- "Success is driven by effort and resilience."¹
- "Success is driven by 'effort and resilience'."²
- "Success is d r i v e n by 'effort and resilience'."³ (Block from the author)
- "Success is driven by effort and resilience."⁴ (Bold in the original)
- "The author (Holtz; author's note) even gives an impressive example of this"⁵
- "The author even gives an .. example "⁶
- "The author gives ... an impressive example."⁷

Indirect citations must be made in such a way that the scope of the respective adoption is clearly recognizable. If possible, the primary source should always be cited. Secondary literature must be marked accordingly and should only be used if the original source is not accessible.

a) Example with short title

Meisenbach (Management), p.14, quoted from: Dollesberger (Kybernetik), p.18

b) Example with year

Meisenbach (1993), p.14, quoted from: Dollesberger (1994), p.81

The translation of foreign-language texts can lead to literal quotations or analogous borrowings. If an exact reproduction of foreign-language texts is desired, a literal quotation in the respective foreign language is recommended. As a general rule, longer literal or analogous quotations should be avoided.

2.6 References in footnotes

Abbreviated references are to be used in the footnotes. This information has to be added at least:

- Family name
- Short title **or** year (in brackets),
- Page number

The footnotes must allow a clear assignment to the source references described in the bibliography. If there is a possibility of confusion with other authors of the same surname, the first name (abbreviated) must be given. If there are two authors, both surnames must be mentioned in the order given in the bibliography. If there are more than two authors, only the first name should be mentioned and supplemented with et al. If references and borrowings refer to several consecutive pages of a source, the exact page number must be given. If borrowings and references refer to several consecutive pages of a source, the source must be referenced by stating the first page and an f. (for “following”) if the source is on two pages, and by an exact specification of the page range if the borrowing is on several pages that can be restricted exactly. If it is not possible to narrow down a borrowed idea precisely, the first page touched should be named and followed by the note ff. (for “continued”). If the procedure with the year numbers is chosen and several publications by the same author appeared in the same year, they are marked with the addition: a, b, c, This addition is made immediately after the year in brackets. If reference is made to laws, these are to be listed with the relevant paragraph, if necessary, also with paragraph (in Roman numerals) and sentence (in Arabic numerals), as well as the usual abbreviation of the law (this is to be included in the list of abbreviations). Legal commentaries should be cited according to the title of the work (usually the founder of the commentary), the respective editor as well as the paragraph and the paragraph number or bullet point of the commentary. Reference should be made to collections of decisions using the usual abbreviations and stating the respective volume and page. If the same publication is cited two or more times in immediate succession, it may be referred to as “ibid” instead of the surname and the abbreviated title or year. In this case, the page number may be omitted if the same page is mentioned in the preceding footnote. References to another passage in the author's work or to statements by other of other authors in academic literature whose opinion is not reproduced verbatim in the text should be indicated with “cf.”.

a) Example with short title

verbatim quote

- Kirsch et al (Logistics), p.12

analogous quote

- cf. Mintzberg (Folklore), p.50f. and Scott (Measuring), p.267

b) Example with year

verbatim quote:

- Kirsch et al (1993), p.12

analogous quote:

- cf. Mintzberg (1994), p.50f. and Scott (1993), p.267

c) Examples specifically from the legal field

- § 124 I S. 2 BGB
- Palandt-Heinrichs, § 326 note 2a
- Münch Komm-Emmerich, § 275 marginal no. 72

(Note: Münch Komm should be included in the list of abbreviations for Münchener commentary; in the bibliography, the general bibliographical details should be given in the bibliography.).

- BGHZ 17, 239

3. Components of the thesis

3.1 Cover sheet

A cover sheet must be prepared for final theses. The following information should be included:

- Title of the thesis, degree program, university and date of submission
- Name and matriculation number of the author
- Examiner and address of the institute

The cover page should match the overall appearance of the thesis. A template for the design of the cover page can be found in the appendix of the guidelines (Appendix 1).

3.2 Structure and table of contents

The outline serves to provide clarity and shows the logical structure of the thesis. All chapters of the thesis must be listed in the table of contents with page numbers. The academic thesis should be structured in such a way that it has both superordinate and subordinate outline points. Equivalent topic blocks are on the same level. Outline points with only one sub-point are not permitted. The bullet points are numbered with a decimal structure. There is no point after the last section number (e.g. 3.2.2), except at the top level (e.g. 1., 2.). Subsections with less than half a page of text should be avoided. In the table of contents, all parts of the paper (with the exception of the cover page and table of contents itself) are listed with page numbers. However, only the chapters of the text are given outline numbers and not the lists or the appendix. An example of the formatting of the table of contents can be found in the appendix. (Appendix 2)

3.3 List of abbreviations

As a general rule, abbreviations should be kept to a minimum. Commonly used abbreviations such as “e.g.” or “etc.” can be used without having to be listed in the list of abbreviations. All other abbreviations used in the work (e.g. subject-specific abbreviations or journal abbreviations) must be defined when they are first used in the body text, e.g. “artificial intelligence (AI)”, and listed and defined alphabetically in the list of abbreviations. Abbreviations that can be found in the bibliography or appendix must also be included in the list of abbreviations.

3.4 List of symbols

If symbols are used in the work, for example in mathematical formulas, these symbols must be listed and defined (alphabetically) in a list of symbols. Abbreviations for currencies (€, \$...) do not have to be listed here.

3.5 List of figures and tables

The tables and figures contained in the paper must be numbered consecutively (Table 1, Table 2, Figure 1, etc.). In the list of figures and tables, all tables and figures must be listed with their number, title and page number.

3.6 Text part

A scientific paper is divided into three central parts: Introduction, main body and conclusion. The introduction is intended to introduce the reader to the topic. It explains the problem and the aim of the work and clarifies the relevance of the topic for science and practice. In the introduction, questions are raised that will be answered in the course of the work and the interest is defined (what is covered and what is not). In addition, the introduction provides an overview of the structure and content of the thesis.

In the main section, the content of the work is presented in a structured manner. A literature review shows the current state of research and places the work in the context of existing research. The overview of theory and existing literature should contain all the information that is important for understanding the subsequent analyses. Gaps or contradictions in previous research are pointed out and hypotheses are derived and justified. It is clearly described which hypotheses / research questions the subsequent analyses examine and from what these are derived. This is followed by a section in which the data and methods used to answer the research question are described. This section describes the source of the data and how the data was collected, processed and analyzed. It is explained why this methodology was chosen and, where applicable, why another methodology was not used. The aim of this section is to make the collection and processing of the data as well as the methodology of the analysis comprehensible to the reader. With the help of this description, it should be possible to replicate the analysis. In the subsequent section, the results of the work are presented in a clear and structured manner. Depending on the topic, tables and figures are suitable for illustrating the results. In this section, the hypotheses and research questions that were formulated previously are an-

swered. The results of the work are interpreted statistically and economically and discussed critically. The own results are classified in the existing research and possible reasons for contradictory findings are explained. Limits to the significance and comparability of the results are pointed out and possible sources of errors are described. If necessary, this section can also outline optimization approaches for future studies.

The final section summarizes the main findings and results of the work. It shows the significance of the results for science and practice and provides an outlook on the need for further research in connection with the topic.

3.7 Tables and figures

Tables and figures supplement the text and serve to visualize results or concepts. The text should refer to the tables and figures and explain them. Tables and figures are numbered consecutively and should be given a title. If necessary, they should be accompanied by a short descriptive text that allows the reader to understand the table or figure independently of the text. For example, if a table shows the results of a statistical analysis, the descriptive text should include the type of analysis and the definitions of the variables and abbreviations in the table.

All rows and columns as well as axes and graphs must be clearly labeled. If tables or figures are taken from external sources, they must be marked as such. The font size and line spacing in tables may be smaller than in continuous text. Care must be taken to ensure good legibility.

3.8 Bibliography

All sources used in the thesis must be listed alphabetically in the bibliography. The following explanations on source work are taken from the citation guidelines of the Institute of Business Administration.

Clear **criteria** apply to the references in the table of contents, which must be clearly implemented:

- Correctness (error-free information)
- Completeness (all information required for retrieval)
- Consistency (adherence to a specific scheme)
- Clarity (naming all authors in alphabetical order)
- Up-to-dateness (latest editions)

Different information is required depending on the type of source.

(1) For independent books and writings

- Surname, first name(s) of the author(s) (complete); in the case of editors, the additional note: (ed.)
- Short title or year (in brackets)
- Full title of the book
- if not first edition, number of the edition
- Place(s) of publication; if there are more than three places of publication, abbreviate with i.a. after the second place.
- Year of publication

a) Example with short title

- Kirsch, W. (Decision Processes), Introduction to the theory of Decision Processes (3 Volumes), Wiesbaden 1987

b) Example with year

- Kirsch, W. (1987a), Introduction to the theory of Decision Processes (3 Volumes), Wiesbaden 1987

(2) for articles in journals, anthologies and reference works

- Surname, first name(s) of the author(s) (complete list of authors)
- Short title or year (in brackets)
- Full title of the article
- Name of the journal, year, volume and issue number, exact page number (first and last page) or, in the case of anthologies, the name of the editor, short title or year (in brackets) and exact page number (first and last page).

The complete work must also be cited as a book. The titles of dictionaries, handbooks and journals can be abbreviated. In this case, a list of abbreviations must be prepared. The usual abbreviations should be used.

a) Example with short title:

- Mac Crimmon, K.R. (Decision-Making), Managerial Decision-Making, in: McGuire (Pub., Contemporary Management), pp. 445 – 495

b) Example with year:

- Mac Crimmon, K.R. (1994), Managerial Decision-Making, in: Mc Guire (Pub., 1994), pp. 445 – 495

(3) For dissertations and postdoctoral theses, if not published in book form

- Surname and first name
- Short title or year (in brackets)
- Title
- Addition: Dissertation ("Diss.") or habilitation thesis ("Habil.-Thes.") and university
- Place and year of publication

a) Example with short title

- Kieser, A. (Influencing factors), Influencing factors of corporate organization. The state of empirical research and results of an own survey, Habil.-Thes. at the University of Cologne, Cologne 1993

b) Example with year

- Kieser, A. (1993), Influencing factors of corporate organization. The state of empirical research and results of an own survey, Habil.-Thes. at the University of Cologne, Cologne 1993

(4) for working papers, research reports, etc.

- Surname and first name(s)
- Short title or year (in brackets)
- Title
- Addendum: "Working paper" or "Research report" with institute name (with appropriate additions if necessary, e.g. consecutive number of the report)
- Place and year of publication

a) Example with short title

- Ball, B.C. and Lorange, P. (Responsiveness), Managing your Strategic Responsiveness to the Environment, Working Paper of the Massachusetts Institute of Technology, Working Paper 980, 1991

b) Example with year

- Ball, B.C. and Lorange, P. (1991), Managing your Strategic Responsiveness to the Environment, Working Paper of the Massachusetts Institute of Technology, Working Paper 980, 1991

(5) For newspaper articles

- Surname and first name(s)
- Short title or year (in brackets)
- Title
- Name of the newspaper, number, date, page number

a) Example with short title

- Jocham, A. (Work agreement), Mercedes-Benz: For new engine plant, new work agreement, in: Handelsblatt No. 142, 27.07.1993, p. 3

b) Example with year

- Jocham, A. (1993), Mercedes-Benz: For new engine plant, new work agreement, in: Handelsblatt No. 142, 27.07.1993, S. 3

The bibliography may only include sources that are cited in the text section, the footnotes or the appendix of the paper!

Without indication of the place of publication, the year or the author

without place = wo.p.

without year = wo.d.

without authors name = wo.n.

If an author's name is missing, it is possible to place the designation wo.n. in front of the publication title and classify it alphabetically.

3.9 Notes on the use of internet sources

When using Internet sources, there are a few special features to consider. In principle, Internet sources should be cited with the same care and in a comparable form as conventional literature, i.e. it should be clear who the author of the source is, how up-to-date it is and where it can be accessed.

In addition, a printout of the relevant web pages must be kept until the final grading. Care must be taken to ensure that the entire website is saved in a structured manner; it is not sufficient to archive only the HTML code; GIF and JPG graphics must also be saved. PDF data used should also be printed or saved.

Please be particularly critical when selecting and evaluating internet sources!

The **footnote reference** should include:

- Author; if the author is not known, the organization responsible for the website should be named
- Short title or year (in brackets) of the last change to the page (if not known: year of access)
- URL; in the case of very long and cryptic URLs, reference should be made to the bibliography ("URL see bibliography")
- For PDF files downloaded from the Internet, the corresponding page number must be given after the title

a) Example with short title

- IBM Germany (Environmental Management System), URL see bibliography

b) Example with year

- Brehm (2000), URL see bibliography

The **bibliography** should include the following information about the internet sources:

- Complete source with full URL. In the case of dynamically generated websites, the parameters passed for generation (after the "?" in the URL) must also be listed. For PDF files, the URL to be specified refers to the corresponding PDF file (e.g. <http://www.abc.de/research/report.pdf>). For pages that use frames, care should be taken to ensure that the URL of the frame in which the relevant text is located is specified and not the URL of the HTML page that only contains the frame structure.

- Mention the organization responsible for the page, e.g. "On the pages of the Department of ABWL and Business Informatics of the Institute of Business Administration at the University of Stuttgart"
- The date of the last change to the page (e.g. "Status: 11.5.1999" or "Message from 2.3.2001") or, if no information is available on this point the date of your access ("Accessed on 11.4.2001")

a) Example with short title

- IBM Deutschland (Environment Management System), Environment Management System, On the pages of IBM Germany, <http://www-5.ibm.com/de/umwelt/management/index.html>, Zugriff am 08.04.2002

b) Example with year

- Brehm, M. (2000), Fortran 90 unter UXP/V – Einführung, On the pages of the Leibnitz Computing Center of the Bavarian Academy of Science, <http://www.lrz-muenchen.de/services/compute/vpp/compiler/f90.1.html>, Status: 28.11.2000

3.10 Appendix

All content that is relevant for understanding the text must not be included in the appendix but must be presented in the text. The appendix includes supplementary materials and documents that provide relevant additional information or that - for a variety of reasons - are difficult or impossible for the reader to access but are not essential for understanding. Materials that do not provide any relevant additional information or prove to be irrelevant in the context of the work are not to be listed in the appendix.

3.11 Declaration of authorship

At the end of the thesis, a declaration of independent work and aids used must be attached. This declaration must be signed by the author of the thesis. The wording of the following declaration of independence is translated from the citation guidelines of the Institute of Business Administration:

“I hereby confirm,

- that the work, or in the case of group work, the part marked accordingly, was written independently,
- that no sources other than those stated have been used and that all statements taken verbatim or in spirit from other works have been identified as such,
- that no aids other than those specified have been used,
- that the submitted work has not been the subject of another examination procedure, neither in its entirety nor in significant parts,
- that the work has not already been published, either in full or in part, and
- that the electronic copy is consistent with the other copies.

Stuttgart, the

Signature“

3.12 Autonomy declaration in relation to generative artificial intelligence (AI) systems

In addition to the declaration of authorship of the Institute of Business Administration, the Department of Finance also has a declaration on the use of artificial intelligence. In this declaration, the use of tools based on generative artificial intelligence (e.g., ChatGPT) and the individual contribution is made transparent. In addition to the declaration, the use of generative AI must be documented with appropriate documentation. An untruthful answer to the declaration violates the declaration of originality. You will receive the declaration from your supervisor.

3.13 Submission of the thesis

You must submit your thesis in bound and digital form within the processing time. The number of bound copies to be submitted can be found in your examination regulations. You can submit the bound copies by post or in person. Please send a digital version of your thesis to Ms. Michaela Müller-Witte (michaela.mueller-witte@bwi.uni-stuttgart.de), including your data and calculations if applicable. All data used for the thesis as well as all calculations and programs (e.g. script files) required to obtain the results must also be submitted. Ideally, the data and programs should be submitted together with the digital submission by e-mail. If this is not possible, the files can be submitted on a storage medium (e.g. a USB stick), which is enclosed with the printed copies. The data sets used must be clearly identifiable and traceable. The calculations carried out in the work must

be verifiable. This includes both the underlying code and the programs required for execution. Furthermore, in addition to the declaration of originality, the use of generative AI must be maintained and proven in appropriate documentation (e.g., chat logs).

Appendix

Appendix 1: Cover Sheet

TOPIC

BACHELOR THESIS/ MASTER THESIS

Submitted to: Professor Dr. Philipp Schuster
Institut of Business Administration
University of Stuttgart
Department III: Finance

from: First and Last Name
Address
Degree Objective: (Bachelor of Science/ Master of Science ...)
Subject: XXXXX
Matriculation Number: XXXXX

submitted on: DD.MM.YYYY

Appendix 2: Exemplary table of contents

Table of content

List of abbreviations.....III

List of symbols.....IV

List of figures.....V

List of tables.....VI

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2. Title.....X

2.1 Title.....X

2.2 Title.....X

2.2.1 Title.....X

2.2.2 Title.....X

3. Title.....X

3.1 Title.....X

3.1.1 Title.....X

3.1.2 Title.....X

3.2 Title.....X

3.2.1 Title.....X

3.2.2 Title.....X

4. Title.....X

4.1 Title.....X

4.2 Title.....X

5. Title.....X

5.1 Title.....X

5.1.1 Title.....X

5.1.2 Title.....X

5.2 Title.....X

6. Summary and outlook.....X

Appendix.....VII

Bibliography.....VIII