Master's Thesis Instructions

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Purpose of this document

This document is a summary of the thesis process as well as a collection of key issues related to topic selection and information sources. It is not intended to be a substitute for personal guidance and advice available from your thesis supervisor. It can be thought of as a guide of more technical nature, covering the issues that are best read individually by each student before beginning thesis work.

Pedagogical philosophy

The purpose of the thesis seminar is to help students prepare their thesis. The seminar sessions are a natural place to seek comments and constructive criticism from the supervisor and fellow students. Also the fact that each student must make two presentations helps organize the work by setting concrete goals and timetables. The presentations prompt students to think along lines that otherwise may not occur to them.

Thesis groups

Students should start their thesis work during their second fall term on the Master's program, for the latest. Students are automatically enrolled into thesis groups headed by one of the thesis supervisors in accordance to this timing target. For example, someone who started their Master's studies in September of year 2025 would start in a thesis group in September of year 2026. Some students have begun their Master's studies not in September, but in other parts of the year. For example, say someone has started in the March of 2025. Their second year fall season in the program would begin in September 2026, so they should start their thesis work then. It is also possible to start earlier. For example, say the student who had started in March 2025 is able to complete her coursework faster so that she could start thesis work already in the spring of 2026. This is highly encouraged. If this applies to you, please contact the department planning officer on how to get into a thesis group in the middle of the academic year. Most advisors would be delighted to instruct a student who wants to move swiftly, especially if the student already has an idea for the thesis topic.

Seminar logistics and basic requirements

The first meeting of the seminar group is held in the beginning of the fall term. It is devoted to discussing thesis work as well as seminar rules and logistics (there may be slight differences across supervisors). Moreover, presentation dates will be set. Each student makes two presentations (phase I and II, described below) and two discussions of other students' presentations. Non-presenting students are also expected to participate in the discussion. The phase I and II papers should be made available for one week before the presentation. The seminar reports and the thesis can be written either in Finnish or English. If there is at least one non-native Finnish speaker in the group, the seminar language will be English.

Thesis Seminar as a course

The seminar itself is a 6-credit course that is separately graded as 0 to 5. A grade level 5 is achieved by showing successful project management, professional correspondence, and contributing toward other students' work. The requirements in more specific terms are following.

For Grade level 1 (minimum passing level): Presenting phase I and II; acting twice as an opponent; turning in a completed thesis (at some point)

For Grade level 5: Level 1 requirements + the following: Phase II completed during the second semester of thesis work; completed thesis turned in within 12 months of starting; no significant absences from thesis sessions (barring force majeure); constructive criticism for others' work, beyond those where one is opponent; overall professional approach to communication and ability to take feedback.

Grade levels < 5. Starting with 5, Subtract one point for each semester the thesis is late; subtract one point for significant amount of unexcused absences; subtract one point for canceling presentation / opponent duty /session participation without prior agreement; subtract one point for not being an active and contributing member.

Phase I and II papers

Phase I can be thought of a research plan. They are usually 10 or more pages, and cover the following issues:

- The research question and testable hypotheses
- What data exactly is to be used and what does it include. Descriptive statistics are not required at Phase I, but if you already have data at your disposal, you can report them already at this stage
- What methods are going to be used, and what empirical tests you plan to run (i.e., what variables are expected to be related and in what way)
- How does the thesis relate to existing literature (i.e., what does it build upon, does it bring something new)
- Dummy tables, i.e. empty tables which show what tests you plan to do and how you plan to present your results. These are like tables in the major finance journals with all the explanations, but without the numbers.

The plan rarely materializes exactly the way as presented. Nevertheless, it is important to make a serious attempt to develop the presentation along concrete lines. This achieves two goals. First, it forces the student to carefully assess the way the study should be implemented. Second, it allows the thesis supervisor and other seminar group members to give constructive comments. If there is little tangible to comment on - for example, the research plan largely consists of a review of existing literature - it is unreasonable to expect others to develop an implementable thesis plan virtually from scratch. Therefore, it is in the best interest of each student to prepare a thorough and carefully thought out research plan that is likely to inspire constructive criticism and implementable ideas. This will save the student a lot of effort later since there will be a concrete path to follow.

In Phase II the completion rate of the thesis is expected to be 70-80%. At this stage all key statistical tests have been done and interpreted, and theoretical issues resolved. The thesis should also be complete in the sense that no sections or parts are missing. The paper should comply with the formatting requirements (see below). After a Phase II presentation the student should have a clear idea of what robustness checks or potential extensions would most benefit the thesis. One should also reserve time for improving the language and final appearance of the thesis before turning it in.

Selection of research topic

Thinking about and formulating an important question to address in your thesis is an important part of acquiring a master's degree in finance at Aalto University. Students are generally expected to generate their research topic themselves. The role of the supervisor is to help formulate the topic in a way that leads to an implementable plan.

Many thesis topics have stemmed from an application of recently published or forthcoming academic articles to the Finnish or European environment. The very best theses tend to contain original ideas that have potential to be publishable in academic journals. The topic can also be a practical problem - assignments from the industry are encouraged provided that they meet the academic standards for an acceptable thesis.

With any topic it is essential to assess how the study can be implemented. For example, many research topics are not meaningful to study with Finnish data given the scarcity of observations. In general, the feasibility of data collection always needs to be carefully assessed before committing into a specific topic.

Thesis types and examples

The categories below are presented in a rough order of frequency, beginning with the most common type. Representative examples of past theses are listed.

• Empirical (with "canned data")

Kaidesoja, Joel, 2018. "Lawyer CEOs and corporate risk-taking"

Kontinen, Jesper, 2018, "Implications of Lotteryness and Implicit Bailout Protection on Bank Valuation: Evidence from Europe"

Weckman, Markus, 2018, "Cross-sectional return seasonalities and intra-industry overreaction to earnings seasonalities"

• Empirical (survey data)

Luotonen, Niilo, 2010, "Personal values and stock market participation - evidence from Finnish university students"

Seppälä, Antti, 2009. Behavioral biases of investment advisors - The effect of overconfidence and hindsight bias

• Empirical (naturally occurring data)

Ahtila, Olli-Pekka, 2014. "Business angel investment decision-making criteria"

• Experimental

Nieminen, Annika, 2016, "Dishonesty and trust in finance"

Ojantakanen, Annika, 2011, "Lead gifts as incentives in fundraising: Evidence from a natural field experiment in Finland"

Case study

Allonen, Mikko, 2013, "Operating lease or purchase - analysis, Case: An acquisition of Airbus A330-300 for Finnair"

Aittola, Antti, 1995, "On economic exposure: hedging continuous foreign currency cash flows under uncertainty".

• Numerical / Simulation

Pirinen, Antti, 2001, "Pricing and hedging American options - a comparison of methods".

Häkkinen, Matti, 2014, "The net stable funding ratio: An empirical analysis from European perspective"

• Theoretical

Korpela, Juha, 1994, "Cox-Ingersoll-Ross general equilibrium term structure theories".

Components of a typical thesis

Introduction (academic and practical motivation; research problem and purpose; contribution, i.e., how the thesis adds to prior knowledge; limitations of the study; structure of the study)

Prior literature (theoretical background and prior empirical studies to the extent it helps to motivate the research question and to place in context the contribution of the thesis).

Hypotheses (whether it is a good idea to have this as a whole section of its own depends on the case).

Methods and data (depending on the amount of material, either one or two separate sections)

Results (discussing interpretations, links to existing literature, and implications)

Summary and conclusions (possibly including a brief discussion of potential future research)

Relevant information sources

Important scientific contributions are published in academic journals. The most prestigious general finance journals are listed below. Journal of Finance and Journal of Financial Economics have excellent web pages, which include a full list of forthcoming and downloadable papers. Most of the journals can be accessed through the Journal search at the school library.

- Journal of Finance
- Journal of Financial Economics
- Review of Financial Studies
- Journal of Financial and Quantitative Analysis
- Review of Finance
- Journal of Business (discontinued)

There are also many excellent more specialized journals, such as the following:

- Critical Finance Review
- Journal of Banking and Finance
- Journal of Corporate Finance
- Journal of Empirical Finance
- Journal of Financial Intermediation
- Journal of Financial Markets
- Journal of Money, Credit and Banking
- Financial Management
- Review of Asset Pricing Studies
- Review of Corporate Finance Studies

There are also some high quality practitioner oriented journals:

• Financial Analysts Journal

- Journal of Applied Corporate Finance
- Journal of Portfolio Management
- Risk

There are also relevant journals in other disciplines. Many general economics journals publish financeoriented papers, and also accounting journals publish papers that are relevant particularly for corporate finance researchers. Major economics journals include American Economic Review, Econometrica, Journal of Political Economy, Review of Economic Studies, and Quarterly Journal of Economics. The major accounting journals include Accounting Review, Journal of Accounting and Economics, and Journal of Accounting Research.

Given the lag in the scientific publication process, articles are often a couple of years old when they come out as published. The freshest research can thus be found in working papers. The most comprehensive source of finance, economics and accounting working papers is the SSRN (Social Science Research Network). Of course, there is no quality assurance in SSRN papers as they have not gone through a peer review like the published research. Timeliness thus comes with the cost of having to be even more careful in applying critical thinking but, nevertheless, SSRN is a highly useful tool.

Other sources of working papers include NBER (National Bureau of Economic Research, a very high quality working paper series; free full text downloads require access from Aalto domain) and working paper sites of individual universities and home pages of individual researchers.

A particularly helpful search engine is the ISI Web of Science. It allows a researcher to search in three ways: in addition to making normal searches with different search criteria, the database shows which articles refer to a given article and which articles are cited by that article. The second property is particularly useful when searching for new relevant research from a given area. Suppose that one is able to identify a classic article that all articles in that area cite (or should cite). Searching this article from the database and clicking the link "Times Cited" gives an exhaustive list of the references to the original article. This list is likely to cover more or less all relevant published articles in that research area, at least from the journals that are covered in the database. The third property can be utilized by clicking the link "Cited References". This gives one informed opinion of relevant past research. It is generally useful to make searches like this for several new articles. Commonalities in citation patterns give useful hints of which articles are most relevant.

Google Scholar can be used in a similar way as ISI Web of Science. It also allows for forward referencing by clicking "cited by" (similar to "Times Cited" above) at the bottom of an article. Google indexes studies posted to Internet, so user needs to exercise some caution – not every study to a classic article is a piece of high quality research. Google Scholar offers timeliness and extreme comprehensiveness, again with the cost of having to apply critical thinking similar to the case working papers posted to SRRN.

Guidance

The thesis supervisor acts as a sparring partner when developing and molding the research plan. A major part of the feedback is given in connection to the phase I and II presentations. Students are encouraged to ask their supervisor's advice also at other times. Sometimes the supervisor can help make more efficient or value adding choices, but sometimes it comes to a matter of judgment. Often there is no right or wrong when it comes to methodological details or use of data, and then the answer may be to do it in more than one way.

It is also reasonable to ask your supervisor to take a look at specific sections of your thesis, such as the introduction, hypotheses, and results, or some parts of those. However, no one wants to read the same text several times (as it will also be read when grading), so students should consider carefully before asking their supervisor to read longer parts of the text outside of the seminar. Moreover, when asking for a re-reading of

the text, the student should carefully document which parts of the text have changed from the previous version of the research, and how they differ. In addition, it is important to detail the comments of the supervisor, if any, that the student has not been able to address.

Formatting

All tables and figures should be self-explanatory. This means that the reader should be able to figure out exactly what is done in each table or figure without reading the main text. The leading finance journals are a good source of examples for the tables and figures.

At the time of writing, Aalto University was undergoing a process generating a common thesis template. Meanwhile, you can use the guidance below. The most important factor with formatting is not the exact formatting specifications, but clarity and consistency of formatting within a document.

All master's theses should use the following layout settings, unless otherwise instructed by Aalto University common thesis template:

- Line spacing 1.5
- Font Times New Roman 12 pt. (this is Times New Roman, 12pt.)
- Page numbering Top of page, center
- Aligned Both left and right
- Margins of 2.5 cm top, bottom, left, and right.
- Style instructions concerning references, footnotes, and other related issues can be found from the Journal of Financial Economics Style Guide, or by looking at examples in recently published articles in the Journal of Financial Economics.

Finishing the thesis and graduation

The thesis should be turned in and left for evaluation when the student considers it ready. Each thesis will be read and graded by two department faculty members, one of which is the thesis supervisor.

The due date for turning in the thesis is linked to the intended graduation date. The best places to get technical information on what to do when you want to turn in your thesis, as well as the due dates, are the following webpages:

- Graduation logistics page (check here for thesis submission dates if you intend to graduate on a certain date):
 - <u>https://into.aalto.fi/display/enfinance/Graduation</u>
- Before you submit your thesis, make sure to read the following pages (summary: we take plagiarism very seriously)
 - Aalto University Code of Conduct: <u>https://into.aalto.fi/display/ensaannot/Code+of+Conduct+in+the+University+Environment</u>
 - Aalto University Code of Academic Integrity and Handling Violations Thereof: <u>https://into.aalto.fi/display/ensaannot/Aalto+University+Code+of+Academic+Integrity+and+Handling+Violations+Thereof</u>
- Thesis submission page:
 - <u>https://mycourses.aalto.fi/course/view.php?id=26246#section-0</u>
- The department planning officer will also help as needed, but please check the above resources first