How to Choose a Dissertation Topic

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Finding More Info on Dissertation

- Dissertation Guidelines
  (See http://www.ems.bbk.ac.uk/for_students/msc_finance)
- Student Handbook (same location)
- Beverley
- Previous MSc Students, Personal Tutors

Key Points

- Worth 2 modules (i.e. 33% of overall mark)
- Only way to judge your ‘individual’ work.
- Proposal due approx 19/20\textsuperscript{th} Feb (course handbook says 5\textsuperscript{th} Feb, maybe wrong)
- Dissertation due end of August
- Single supervisor.
  - Expect 3-5 meetings of 30 minutes with your Supervisor.
  - Supervisors’ time is limited in July / August, they may only visit Campus occasionally.
- Proposal is your roadmap.
How to Choose a Dissertation Topic

Timetable - Suggested

Jan  ➔  Feb  ➔  Mar  ➔  Apr  ➔  May  ➔  Jun  ➔  Jul  ➔  Aug

Dissertation

- Talk with supervisors
- Write Proposal
- Begin Research
- Research / Writeup
- Writeup

Investigate Topics And Data
- Confirm Data
- Play with Data
- Research / Writeup

Exams

- Revise
- Revise
- Revise / Exams

MSc Finance / Finance & Commodities
How to Choose a Dissertation Topic

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Jan  >  Feb  >  Mar  >  Apr  >  May  >  Jun  >  Jul  >  Aug

Dissertation

- Write Proposal
- Look for Data
- Research, Writeup
- PANIC

Exams

- Revise
- Revise
- Revise / Exams

Job

- Working
- ???

MSc Finance / Finance & Commodities

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Choosing a Topic

- **YOU** • What interests you?
- **JOB** • What do employers want?
- **SUPERVISOR** • What do supervisors already know?
- **PAPERS** • Get ideas from research papers.
- **DATA** • Without data you have nothing.
- **SIMPLE** • Keep it simple – but not trivial.
What interests you?

- What would you like to know a lot more about by August?
- Existing skills and interests
  - Software?
  - Econometrics?
  - Prior work experience?
What do employers want?

• List your dissertation on your CV.
• Title should be clear and interesting.
• Sell your skills and interests through your dissertation.
• Great topic to discuss at interview.
What do supervisors already know?

- An interested supervisor is a helpful supervisor.
- Read the staff web pages.
- Also look for people who didn’t teach you.
- Ask PhD students for advise on supervisors.
- Talk to several (lots) of possible supervisors. It’s not rude.
- Students get re-allocated if supervisors are too popular (this is bad for you, try to avoid)
- Dissertation is a good route into a PhD...
What do supervisors already know? – For Example

http://www.ems.bbk.ac.uk/faculty/geman/

**Published Papers**

"Commodities and Numéraire", 2010, Encyclopedia of Quantitative Finance, Wiley Publisher.
"Realized Variance Options and Convex Orders", 2010, *Quantitative Finance*
"On Pricing Risky Loans and Collateralized Fund Obligations", 2009, *Journal of Credit Risk*
"Forward Curves, Scarcity and Price Volatility in Oil and Natural Gas Markets", 2009, *Energy Economics*
"Modelling Electricity Prices with Forward Looking Capacity Constraints", 2009, *Applied Mathematical Finance*
"Modeling Commodity Prices under the CEV model", Winter 2009, *Journal of Alternative Investments*
"Valuation of default-sensitive claims under imperfect information", 2008, *Finance and Stochastics*
"Water as the Next Commodity", 2007; *Journal of Alternative Investments*
"Mean Reversion versus Random Walk in Oil and Natural Gas Prices", 2007, Advances in Mathematical Finance, Birkhäuser Boston
Get ideas from research papers

• Learn how to access research papers (hint, Birkbeck e-library)
  • JSTOR (older papers, classics)
  • ScienceDirect (the best for modern stuff)
  • Google Scholar
  • What have potential supervisors published recently?

• Download 10 to 20, print.
  • Skim, not read. Look for patterns. Highlight. Keep.
  • Be prepared to discard 50%+.
Get ideas from research papers – my own experience

2,448 articles found for: ALL(crude oil convenience yield)

Uncertainty and the convenience yield in crude oil price backwardsations
Timothy J. Considine, Donald F. Larson
Preview PDF (1347 K) | Related Articles

Commodity convenience yield and risk premium determination: The case of the U.S. natural gas market
Energy Economics, Volume 28, Issue 4, July 2006, Pages 523-534
Song Zan Chiu Wei, Zhen Zhu
Preview PDF (140 K) | Related Articles

Forward curves, scarcity and price volatility in oil and natural gas markets
Hélyette Geman, Steve Ohana
Preview PDF (1373 K) | Related Articles

The dynamics of crude oil price differentials
Bassam Fattouh
Preview PDF (681 K) | Related Articles
Get ideas from research papers

- General format of research papers
  - Abstract
  - Literature Review
  - Data Summary
  - Statistical / Econometric Techniques
  - Result of Analysis
  - Conclusion
- It’s a good template for your dissertation
- Old ones are often easier to read, but modern ones are more standardised (but deeper econometrics)
Without **data** you have nothing

- Do you have a special access (intern, employer etc)
- CHECK you can use that data use outside the organisation

<table>
<thead>
<tr>
<th>Easy to Get</th>
<th>Moderately Easy</th>
<th>Hard to Get</th>
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</thead>
<tbody>
<tr>
<td>• US Share Prices (Yahoo Finance)</td>
<td>• OECD Share Prices</td>
<td>• Developing World Share Prices</td>
</tr>
<tr>
<td>• Daily Data (Yahoo Finance)</td>
<td>• US Commodity</td>
<td>• Hourly / Tick Data</td>
</tr>
<tr>
<td>• US Commodity Spot Prices (Datastream)</td>
<td>• Commodity Futures Prices (Datastream)</td>
<td>• Bonds</td>
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<tr>
<td>• Interest Rates (Federal Reserve, Bank of England)</td>
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<td>• Credit Ratings / Products</td>
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<td></td>
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<td>• Non-US Commodities</td>
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</tbody>
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Without **data** you have nothing

- Request any logins, permissions you need EARLY
- Public data is the safe choice
- Check frequency (daily good, yearly bad)
- Compare Apples with Apples
  - Currency / frequency conversions makes the story complicated
- Check length / quantity of data
  - Comparing data: You are limited by the weakest link
Recomended Data Sources

• Yahoo Finance (By far the easiest)
• Datastream (Harder to use, only 1 PC in Birkbeck Library, afternoons only)
• FRED (http://research.stlouisfed.org/fred2/)
• data.un.org (registration required?)
• www.statistics.gov.uk
• UK Economic and Social Data Service (www.esds.ac.uk) (registration required?)
Keep it **simple** – but not trivial.

- Is factor X consistent in locations A and B?
- Has factor X changed over time?
- How does factor X compare across assets?
- Is factor X a good predictor of Y?
- How are factors X and Y related?
- Are there arbitrage opportunities in market X?
- Is technique X suitable in adverse market conditions?
Summary

Start NOW!
• Or you’ll regret it in July.

Papers
• Use as your template.

Data
• Data => topic
• Not topic => data

Supervisors
• Make friends now!

Good luck...

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