IB3FM-15 Forensic Accounting using Data Analytics

26/27

Department
Warwick Business School
Level
Undergraduate Level 3
Module leader
Dhanya Krishna Kumar
Credit value
15
Module duration
10 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

Description

Introductory description

This is an elective module available for WBS and non-WBS students. To find detailed availability and to apply for this module, log in to my.wbs.ac.uk using your normal IT login details and apply via the my.wbs module application system. Once you've secured a place on my.wbs you should apply via your home department's usual process, which usually takes place via eVision. Note that you do not require the module leader's permission to study a WBS module, so please do not contact them to request it.

This comprehensive module on financial misreporting detection and prediction combines theoretical foundations with practical applications, delivered through integrated lectures and hands-on seminars. Beginning with the fundamental distinction between financial misreporting and earnings management, the course progresses through data analytics techniques, predictive modelling, and culminates in ethical considerations. Students develop practical skills in manipulating financial databases and constructing detection models using programming tools, with a focus on publicly listed corporations. Through hands-on experience with financial databases and industry-standard tools, students learn to identify potential misreporting instances and forecast future occurrences, preparing them for real-world applications in financial analysis and regulatory compliance.

Module web page

Module aims

The objective of this module is to enhance students' comprehension and insight regarding the phenomenon of misreporting in the corporate sector. It seeks to answer pivotal questions: Why do certain corporations engage in such malpractices? What repercussions follow? What ethical dilemmas arise from accounting misconduct? Specifically, the module is designed to furnish students with the essential knowledge and competencies required for identifying and forecasting instances of misreporting.

Upon completion of this module, students will have developed an understanding of the distinction between earnings management and misreporting. They will explore the driving factors behind these practices and their implications for various stakeholders and the broader economic landscape. The module focuses on the study of various empirical methodologies to detect and anticipate earnings management and misreporting.

A key aspect of the module is the in-depth exploration of the strengths and limitations of these empirical tools. A primary focus is placed on enabling students to proficiently implement, apply, and estimate various detection and prediction models, while also fostering the ability to critically analyse the outcomes of these models. This process will involve the use of extensive financial databases and the application of statistical tools to estimate these models, thereby ensuring that students not only understand the theoretical underpinnings but also acquire practical skills in execution and analysis.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

-Why firms commit misreporting and current methods of detection
-Financial misreporting
-Regulations on financial misreporting
-The cost of misreporting
-The benefits of misreporting
-Gatekeepers (e.g. Auditors, Analysts, Institutional investors)
-Ethical issues
-Replicating the existing literature and evaluating the benefits and cost associated with choosing any model
-Corporate misreporting and tools to detect misreporting.
-The concept of earnings management
-The difference between earnings management and financial misreporting
-The limitations of existing models in misclassifying the fraud firms as non-fraud
-Changes in literature on financial misreporting.

Learning outcomes

By the end of the module, students should be able to:

- Evaluate and critically analyse existing literature on earnings management and misreporting, and fraud.
- Estimate misreporting and fraud prediction models, and misreporting forecasting models.
- Recognize the advantages and disadvantages of each model and in which case each model is more useful.
- Explain key detection/prediction models and reflect critically on the limitations of those models and the assumptions that underpin them.
- Interpret empirical evidence and offer coherent insights into firm's financial reporting quality and likelihood of (future) misreporting.
- Communicate complex ideas effectively, in writing and through data visualization techniques.

Indicative reading list

Reading lists can be found in Talis

Research element

Reading and critically evaluating relevant literature
Use basic Stata commands to navigate, manage, and manipulate data.
Clean and transform raw data into usable formats for analysis using Stata.
Use descriptive statistics to summarize and explore data in Stata.
Use Stata to conduct advanced statistical analysis and interpret results.
Develop clear and concise research reports and papers that incorporate Stata output and analysis.

Interdisciplinary

The module is combination of Accounting and Ethical (from a lawyer's perspective) modules.

Subject specific skills

Critically evaluate misreporting and fraud detection and prediction models.
Critically interpret and evaluate the outcome of the different models.
Write informed reports evaluating firm's likelihood of having manipulated earnings or misreported (i.e., detection/prediction).

Transferable skills

Work collaboratively with others to estimate earnings management detection and misreporting prediction models.
Manage time effectively to meet research project deadlines. Contribute effectively to class discussions.
Interpreting and critically evaluating financial accounting archival research. Apply best practices in accounting research.

Study

Study time

Type	Required
Lectures	10 sessions of 1 hour (7%)
Supervised practical classes	9 sessions of 2 hours (12%)
Private study	49 hours (33%)
Assessment	73 hours (49%)
Total	150 hours

Private study description

Directed reading; preparation ahead of teaching sessions, private study.

Costs

Category	Description	Funded by	Cost to student
IT and software	Due to the nature of the module students will require access to laptops during workshops (tablets and iPads may not have the required functionality for the software used).	Student	

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A

	Weighting	Study time	Eligible for self-certification
Individual Assignment	90%	65 hours	Yes (extension)
Participation	10%	8 hours	No

Assessment group R

	Weighting	Study time	Eligible for self-certification
Individual Assignment	100%		Yes (extension)

Feedback on assessment

Feedback will be provided via my.wbs.

Availability

Pre-requisites

To take this module, you must have passed:

- Any of
  - IB146-15 Accounting for Business
  - IB124-15 Introduction to Financial Accounting
  - IB133-15 Foundations of Accounting
  - IB2D3-15 Accounting in Practice

There is currently no information about the courses for which this module is core or optional.