ECON 3140B Financial Data Analysis
Spring 2021

Instructor: Hugo IP
Email: hugo.ip@cuhk.edu.hk
Office: ELB 1005

Teaching Assistants: Hongxiao CHEN   Jing BU
Email: 1155145041@link.cuhk.edu.hk   jingbu@link.cuhk.edu.hk

Lecture Time: Mon 12:30 noon – 1:15 pm, Thu 8:30 am – 10:15 am

Teaching Mode

All class meetings are to be conducted online, students shall attend real time online classes according to the teaching timetable by using ZOOM.

Note: Face-to-face teaching may be resumed when the pandemic stabilizes, and any subsequent changes are to be announced by the University.

Course Objectives and Learning Outcomes

This course aims to introduce contemporary approaches to technical analysis. Technical analysis involves the use of historical stock prices, volume, and other related data to forecast future price movements. Its objective is to identify trend changes at an early stage based on information available.

On completion of this course, students should be able to analyze financial data by using mainstream technical analysis techniques, evaluate the performance of different technical trading rules in different markets, and write a research paper on technical analysis.

References

Reading materials of this course will be mainly based on the lecture handouts, which will be uploaded regularly at the Blackboard: https://blackboard.cuhk.edu.hk

Murphy (1999), Technical Analysis of the Financial Markets, New York Institute of Finance

Pring (2014), Technical Analysis Explained, McGraw-Hill

Soros (1994, 2003), The Alchemy of Finance, John Wiley & Sons

There are many studies in the literature on technical analysis. You may go to the Library homepage, use the search engine "EconLit", and type "trading rules" or "technical analysis" to search for those journal articles.

Useful websites:

http://www.hkex.com.hk   http://www.google.com.hk/finance
http://www.etnet.com.hk   http://hk.finance.yahoo.com
http://www.aastocks.com   http://www.bloomberg.com

Assessment

Term Paper = 35%   **Deadline: April 26**

➔ Each group should have <u>no more than 4 members</u>. The project is a <u>2000-word</u> paper studying the <u>profitability of trading rules</u>. Data can be obtained from Thomson Reuters Eikon (DataStream) in the University Library. Span of the time series data used in the project should be at least 10 years.

➔ All student groups must upload the electronic copy of their term papers to the plagiarism detection engine, VeriGuide. Term papers that without the VeriGuide receipt will <u>not</u> be graded.

Online Final Exam = 65%   **Centralized Exam Period: April 28 to May 15**

➔ **Make-up exam will <u>never</u> be provided. Absence <u>must</u> lead to <u>zero</u> point.**

Backup Plans For Assessment

(1) If the University announces to keep online teaching completely, but resume face-to-face assessment during the centralized exam period, the revised assessment scheme will be:

Term Paper = 35%   **Deadline: April 26**

Final Exam = 65%   **On-campus, Centralized Exam Period: April 28 to May 15**

(2) If the University announces to resume face-to-face teaching and face-to-face assessment when the pandemic stabilizes, the revised assessment scheme will be:

Term Paper = 25%   **Deadline: April 26**

Mid-term Exam = 30%   **In-Class, Date and Venue: To be announced**

Final Exam = 45%   **On-campus, Centralized Exam Period: April 28 to May 15**

Note: Notifications about the mid-term exam date will be made to the students at least 14 calendar days in advance.

(3) If the University announces to resume face-to-face teaching, and if the face-to-face mid-term exam can be conducted, but face-to-face final exam is not possible due to the pandemic, the revised assessment scheme will be:

Term Paper = 25%   **Deadline: April 26**

Mid-term Exam = 45%   **In-Class, Date and Venue: To be announced**

Online Final Exam = 30%   **Centralized Exam Period: April 28 to May 15**

Note: Notifications about the mid-term exam date will be made to the students at least 14 calendar days in advance.

Teaching Schedule

Part 1. Brief Introduction to the Stock Market of Hong Kong and other Equity Markets

- The History of Hong Kong Stock market
- The Calculation of Hang Seng Index
- The Hang Seng Futures
- Commodity Market
- Forex Market

Part 2. Chart Construction

- Type of Charts Available
- Construction of the Daily Bar Chart
- Weekly and Monthly Bar Charts
- Candlesticks

Part 3. Chart Pattern Analysis

- Support, Resistance
- Trendlines, Channels, Trend Channels
- One-day Reversal, Two-day Reversal
- Blowoffs and Selling Climaxes
- V Formation and the Extended V Formation
- Double Bottoms and Double Tops
- Triple Tops and Bottoms
- Saucer Top or Rounding Top
- Saucer Bottom or Round Bottom
- Head-and-Shoulders Top
- Head-and-Shoulders Bottom
- Complex Head-and-Shoulders Pattern
- Head-and-Shoulders Consolidation
- Inverted Triangle, Symmetrical Triangle, Ascending Triangle, Descending Triangle
- Rising Wedge, Falling Wedge
- Rectangle
- Flag, Pennant
- Scallops, Fan Principle
- Gaps, The Island Reversal

Part 4. Moving Average

- Simple Moving Average
- Weighted Moving Average
- Exponential Moving Average
- Moving-Average Channels
- Bollinger Bands

Part 5. Oscillators Analysis

- Oscillators, Momentum
- Relative Strength Index
- Stochastics
- MACD
- DMI
- OBV

Part 6. Warrants

- Covered and Noncovered Warrants
- American and European Warrants
- Premiums
- Gearings
- Profit-Loss diagram

Part 7. The Elliott Wave Theory

- Corrective Waves
- The Rule of Alternation
- Channeling
- Fibonacci Numbers as the Basis of the Wave Principle
- Fibonacci Ratios and Retracements
- Using Fibonacci and Other Number Series to Establish Price and Time Targets

Academic Honesty

The University adopts a zero-tolerance policy on cheating and plagiarism. Any related offence will lead to disciplinary action including termination of studies at the University. Details can be found at: http://www.cuhk.edu.hk/policy/academichonesty