



GOLDEN HORSE FUND MANAGEMENT ALGORITHMIC TRADING COMPETITION

Overview

Golden Horse Fund Management is pleased to collaborate with NUS Investment Society to present Algorithmic Trading Competition 2018/19. This competition is open to all undergraduate, graduate students, and alumni from the National University of Singapore, Nanyang Technological University, and Singapore Management University. The competition aims to expose students to the development of trading algorithms, and to learn more about the investment perspective of a hedge fund.

Description

Students will participate in teams of up to three for the competition. Each team will start with an initial cash allocation of US \$10 million at day 1. The objective is to develop a trading algorithm to achieve the highest risk-adjusted returns, as measured by the Sharpe Ratio, with consideration to the maximum drawdowns and % of positive months. The trading universe for the strategies will be restricted to the conditions as set below in the [Competition Rules and Requirements](#) and the [List of Tradeable Securities](#).

The competition will have two phases. The first phase will require the student to conduct research and back-test on a chosen trading strategy. The second phase will test the students' submitted strategy based on an out-of-sample data. The first phase will take place from 19th January 0000 – 28th February 2359, during which students can make multiple submissions, with the last submission taken as the official entry.

At the end of the first phase, the score for the teams' submission will be released upon confirmation. For the second phase, the data for the period of 1st March – 1st May will be collected and used as out-of-sample data to score the students' submissions. The submissions by the teams will be judged on the score of the first phase and the second phase.

All registered participants are invited to attend the Prize Ceremony to be held in May/June 2019 (TBC). The final date of the prize ceremony will be confirmed on a later date. The top 3 teams will be invited to present their strategies and performance results to share their learning. The members of the top 3 teams will also be offered internship and career opportunities at Golden Horse Fund Management Pte Ltd and/or its partners.

Prizes

1st prize (worth \$3000)

Cash prize \$2500, SONY Hi-Res Balanced Armature In-ear headphone w/ Mic, and 5 boxes of New Moon Essence of Chicken (8s x 68ml)

2nd prize (worth \$2000)

Cash prize \$1700, SONY Hi-Res Hear in 2 Wireless In-ear headphone w/ Mic, and 2 boxes of New Moon Essence of Chicken (8s x 68ml)

3rd prize (worth \$1000)

Cash prize \$800, SONY Hi-Res H.ear in Wireless Noise Cancelling In-ear Headphone



Competition Rules and Requirements

1. Tradeable Securities – Teams are only allowed to trade securities that fulfil the conditions here and in the [List of Tradeable Securities](#).
2. Asset traded must be sufficiently liquid such that trading position $\leq 10\%$ of daily liquidity of asset
3. Max DD $\leq 50\%$
4. Assume transaction cost of 0.02% of trade size for each entry and exit
5. Back-test period from **01/01/2003 – 31/12/2018** if using a strategy trading on timeframe of daily or higher, and from **01/01/2008 - 31/12/2018** if using a strategy trading on a timeframe lower than daily (intraday trades)
6. Back-test written in Python / R / Matlab / Excel, other languages subjected to request and confirmation
7. Calculations based on daily returns

Schedule

19/1/19: Official Start of Competition

28/2/19: Submission of Back-test

1/3/19: Commencement of Forward Period

1/5/19: End of Forward Period

May/June 19 (TBC): Prize Presentation Ceremony

Teams can begin submitting their entries from 20th Jan 2019. Submissions will close on 28th February 2019, and the LAST submission of each team will be taken as the official entry to the competition. Teams are recommended to submit their entries early (~one week in advance.)

Registration

Participants can enter in teams of one to three. Complete the registration form, which can be found here. You should receive a confirmation email for your registration by the 20th January 2019. If you have not received communication from GHFM after 20th January 2019, please email algo.comp.1819@mail.goldenhorsefm.com with the subject line “Registration Confirmation Inquiry” and include your team representative’s full name, email address, and full name of all other team members.

Scoring

GHFM will use a ‘score’ system to judge the teams’ performance. Teams will be first evaluated by their back-test performance measured by the Sharpe Ratio, Maximum Drawdown, Months to Recovery, and % of Positive Month. After the forward period, teams will also be evaluated by their performance on the out-of-sample returns and volatility. A combination of the first score and the second score will be used to determine the winner.



List of Tradeable Securities

- Forex
- Us Equities
- US futures
- ICE/ London Metal Exchange futures
- Other instruments subjected to request and confirmation

Submission guideline

Teams are to submit their entries containing the items detailed below in a zip file to algo.submissions@mail.goldenhorsefm.com, with the subject line “NUS GHFM Algo Comp 2019 :

1. Data / Data source
2. Code (written to be suitable for forward test)
3. Report including one or two short paragraphs to explain the logic behind the strategy, the monthly returns of the back-test, and the performance table below:

Annualized Return		% Positive Months	
Annualized Volatility		Maximum Drawdown	
Sharpe Ratio		Months to Recovery	

Additional Information

For updated information, participants can refer to the official competition website at <http://www.goldenhorsefm.com/algo-trading-comp.html>. Participants can also email algo.comp.1819@mail.goldenhorsefm.com for any queries.