

A close-up photograph of a person's hand holding a red pen, writing on a lined notebook. The person is wearing a light blue button-down shirt. The background is slightly blurred, focusing attention on the writing action. A blue rectangular box is overlaid on the left side of the image, containing the title text.

# Business Case Study 2017



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## Case Study

### Searching for Alpha

Whether it is now or 50 years ago, having an information edge in investing is and has always been paramount. The commoditization of internet and technology have meant that all investors have access to the same data at the same time. Finding unique and meaningful insights from the world of information overload has become a desire, but also a challenge. This is where Big Data comes into play. It promises access to ever-increasing pool of data with potential to gain differentiated insights that can enhance and accelerate the investment process.

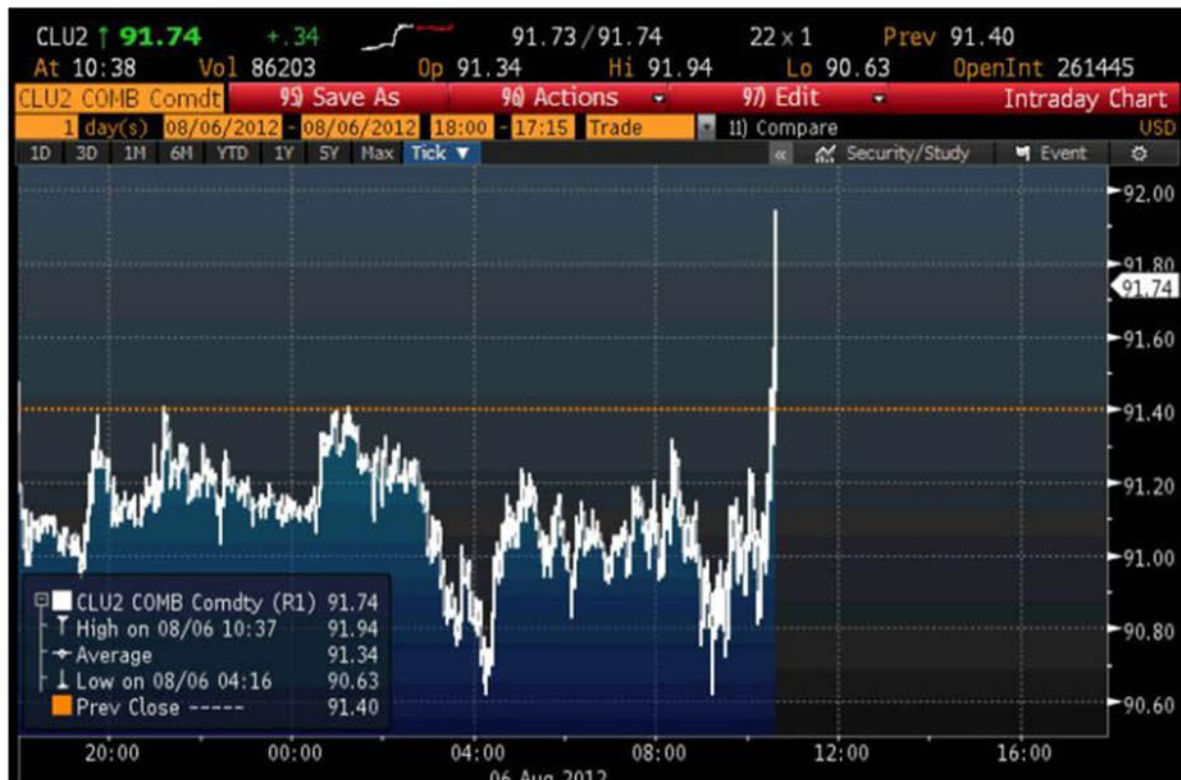
### Big Social Media Data Use Cases:

- Yigitcan Karabulut, from Goethe University Frankfurt, measured the amount of positive and negative emotion words used in Facebook posts. Data was used to investigate the relationship between Facebook's Gross National Happiness (GNH) to daily returns in the US equity market.
- Influence of Twitter:
  1. Seconds after the fake tweet was published, the Dow Jones Industrial average plunged more than 100 points, from 14697.15 to 14548.58, and rebounded within minutes.



## Case Study (Cont.)

2. In June 2012, **fake tweets** about death of Syrian President Bashar al-Assad sent from an account claimed to be that of Syria's interior minister caused the price of West Texas Intermediate crude to climb by more than \$1.



3. Byoung-Hyoun Hwang found a confidence bias among non-founder CEOs and founder CEOs. The latter tend to use more optimistic language on Twitter and during earnings-conference. They tend to be more over-confidence and are more likely to over-estimate earnings.

Confining alternative datasets to only social media limits potential alpha opportunities. Other types of data such as **shipping data, satellite imagery** etc. can also be fertile grounds for alpha-hunting in investment strategies. But some of these data sources come with costs: **licensing costs, data history, data sparsity and how to best implement the data** are not easy obstacles to overcome.

## Case Questions

We would like your team to help overcome the problem described in Case Background, which requires you to identify unique data sources that could contribute to market movement.

Find Data, **Spot Pattern**

- Identify and suggest any other potential, conventional and unconventional, **factors** (apart from social media) that could **influence the movement of stock price data**.
- How do these factors affect the the stock price?
- You are encouraged to include visualizations / tabulations to support and justify your claims.



## Research Scope

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Candidates should justify their answer by using stock price data satisfying the following requirements:

- Only stocks listed on the Hong Kong stock exchange
- Only stocks that fall in the Financials or Information Technology Sectors

## Judging Criteria

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Please note that there is no one single correct answer. Your ideas will be judged based on the following:

- Quantitative and qualitative analysis supporting your selection of factors. There is no constraint on how technical candidates' answer should be. Candidates should have a good balance between technical competency and ability to present the answers in layman's terms.
- Quality of presentation and clarity of idea
- Innovation, Originality and Creativity
- Feasibility - Is it doable? How accessible is the new alternative data source?

## Submission Format and Due Date

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Your proposal can be presented in any format that your team finds optimal to present your ideas. The file size cannot exceed 5MB in size.

Examples:

- Written report (Should not exceed 1,500 words / 10 Pages)
- Powerpoint slides (Should not exceed 10 slides)
- Video / Youtube link
- Any other means to present your ideas

Please submit your proposal by:

- Date/Time: Monday, 9th October, 09:00am
- Email: Hongkong-StudentInnovationChallenge@fil.com
- Include your team name in the subject line of your message.
- Any submissions received after 09:00 am on the closing date will not be considered.
- All written submissions must be accompanied by a completed Submission Coversheet, signed by all team members. If the Coversheet is not included, the submission is not eligible.

All written submissions will be assessed carefully by a panel of judges with diverse expertise. The top 8 teams will be chosen to compete in the Final round. All team leaders will be informed of the outcome via email by 06:00 pm on 13th October.

## Rule

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All materials including but not limited to the case details are properties of Fidelity International. You should not distribute or publish them on any online/offline platforms without prior agreement from Fidelity. Teams that are found to do so will be disqualified.

# Submission Coversheet

## Team Details

Team Name:

Team Leader:

Team Member 1:

Signature:

Team Member 2:

Signature:

Team Member 3:

Signature:

Team Member 4:

Signature:

## Declarations

I declare that the submission is my own work. I have fully attributed / referenced all sources of information used during the completion of the submission, and I am aware that failure to do so would result in disqualification.

## Official Use Only

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Assessed by:

Comment:

