Source: *The Business Times*, p27
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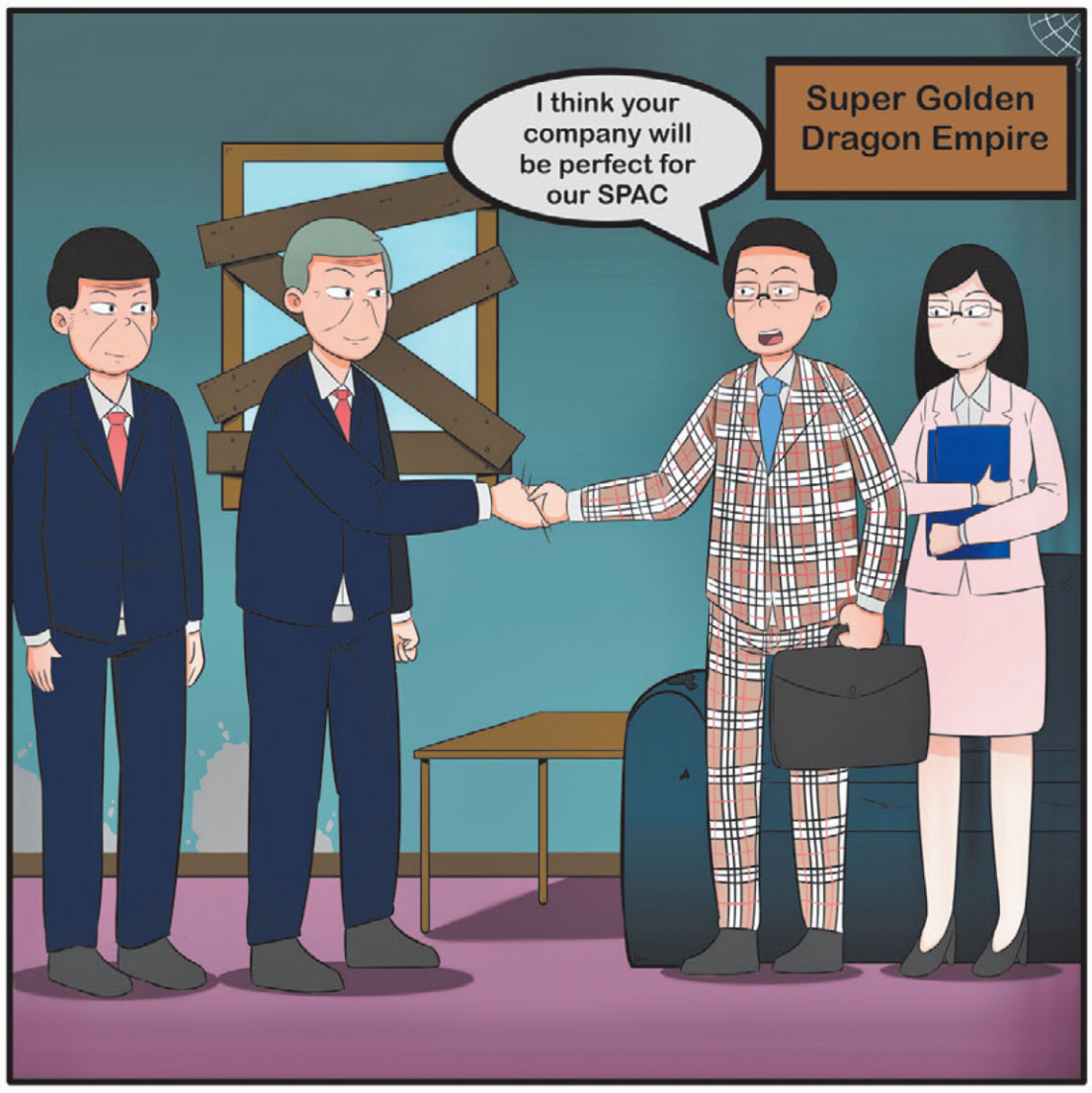

Source: Mak Yuen Teen

Judging a company by its name

Are grandiose names a reflection of ambition or an indication of hubris, a sign of future success or impending doom? An assessment using machine learning.

BY NICOLAS LYE ZHI QIN AND MAK YUEN TEEN

WHEN S-chip Celestial Nutrifoods went into liquidation 10 years ago, it was far from heavenly for minority shareholders. Another S-chip, Midas, turned out to be less than golden. Homegrown Best World has not had the best of times. Meanwhile, a more modestly named Apple became the most valuable company in the world. Tencent in China turned out to be worth a lot more than its name.

Does the name of a company matter? We were intrigued by the rather grandiose words frequently appearing in names of companies, often combined with other grandiose words. Are grandiose names a reflection of ambition or an indication of hubris or window-dressing? Is a grandiose name a sign of future success or impending doom?

Anecdotally, we had noticed that companies that got into trouble often seem to have rather grandiose names.

THE NAME GAME

Previous research has found that companies with shorter and easier to pronounce names; patriotic names during wartime; "dot.com-ish" names during the dot.com boom; disfluent names that evoke cues of unfamiliarity and create a perception of high novelty; and names with greater fluency; have more positive outcomes such as greater share turnover, higher valuations, greater investor interest or recognition, and higher returns.

A 2018 study assessed the Chinese characters in the names of companies with Chinese names based on terseness, fluency, moral connotation, and overall recognition. It found that companies with names that are concise, memorable, easy to pronounce, and reflect traditional Chinese values, tend to have higher investor recognition and higher valuations.

Other studies have found that companies with ticker codes that are easier to pronounce or more meaningful had higher abnormal returns or stronger short run post-initial public offering (IPO) performance.

Previous studies have not however looked at grandiosity of a company's name.

MEASURING GRANDIOSITY

In our study, the grandiosity of the company name was derived using two approaches – a sentiment analysis approach, whereby machine learning algorithms were trained to rate company names based on positive or negative associations on the Internet; and a survey, which gathered individuals' perceptions of company names.

Before the sentiment analysis was conducted, the company names in the sample were formatted into standardised words from the English dictionary. This is because some of the company names are direct Chinese or dialect phonetic transcriptions which would not be picked up by the machine learning algorithm as the training data set is based in English.

Given that the meanings of Chinese phrases often differ significantly from the individual constituent words, a context-centric translation software that preserves the meaning of the original text instead of conducting a simple word-by-word translation was used. The resulting translated list of names was then reviewed by a Chinese teacher to ensure that the meanings have been accurately translated.

The company names in the sample were then put through a data preparation and cleaning process. Next, a Web-scraping "crawler" was programmed to set predefined rules on what to extract. The domain directory for the webpages to be scraped was then narrowed down to Singapore-based hosting domains to better capture the sentiment of the Singapore market.

The output of the sentiment analysis comprises of two parts – the polarity of the sentiment and the magnitude of the sentiment. The polarity can be positive, neutral, or negative, while the magnitude ranges from zero per cent to 100 per cent level of confidence. Words with a positive sentiment and a high level of confidence are more favourably perceived as compared to words with a negative sentiment and high level of confidence.

The words are then re-scaled into a 0-10 scale, with 10 being the most positively perceived. The grandiosity scores of each company name was then calculated as the average of the re-scaled sentiment analysis scores of the constituent words.

As an alternative, a survey involving 239 participants was also used to serve as a sanity check for the results of the sentiment analysis. For the survey, we sought participants with no investment experience in the Singapore stock market so that their assessment of the company names are not affected by their knowledge of specific companies.

Each survey participant was asked to rate 30 company names selected through a random process from the entire set of 617 Singapore company names included in the study, together with five dummy names with high grandiosity scores and five dummy names with low grandiosity scores. Participants were asked to rate each name based on their overall perception of the name on a scale of 0-10. The average of each of the company names was then calculated.

The correlation between the grandiosity scores from the sentiment analysis and the survey was 0.94. This indicates that the ratings of grandiosity based on sentiment analysis using machine learning is very similar to the ratings of grandiosity from a large opinion survey.

So what are some words that appear in names that scored the highest in grandiosity? Some examples include "golden", "dragon", "incredible", "world class", "grand", "best", "apex", "global", "top", "full" and "rich". Company names with words such as "noble", "advanced", "alpha" and "max" also scored quite high. Often, several grandiose words were used together in names that scored highest in grandiosity.

We then examined whether the grandiosity of a company's name is related to regulatory and third-party legal actions, and market performance. Regulatory actions were measured by the number of queries issued by SGX, and whether the company has been watch-listed or faced suspensions. Market performance was measured by the portfolio's return volatility, total turnover, and cumulative abnormal returns.

The analyses controlled for issuer-specific factors such as industry, age, market capitalisation, growth, leverage, and Mainboard versus Catalist listing.

We found that companies with more grandiose names were likely to receive more queries and face legal actions from third parties, with some evidence that they are more likely to be watch-listed.

Those with more grandiose names also had lower abnormal returns over the long term, with some evidence of greater short-term return volatility.

We are not suggesting that investors base their investment strategies around avoiding companies with grandiose names. What we have found does not necessarily apply in all cases and may not be the case in the future. However, like companies with founders or management disclosing questionable qualifications or honorifics in their biographies, or that appoint directors based on celebrity status or public profile rather than track records or ability to contribute, a grandiose name could be a sign of window-dressing.

WIDER APPLICATIONS

Artificial intelligence and machine learning techniques, similar to those used in our study, can also be applied in other areas, such as assessment of environmental, social and governance (ESG) risks, where the data is often qualitative and unstructured. For example, in the governance area, they can be used to convert unstructured data (for example, personality/character traits of directors from their online comments, public sentiments about them, etc) into structured data that can be processed using a model.

A machine learning algorithm can also be used to crawl the Web to scrape for specific data points. Some challenges include the process of cleaning the data and training the machine to accurately "label" or categorise data points into the correct classifications – for example, in the case of our study, giving a rating such as positive, neutral or negative.

Unsupervised learning and supervised learning are two possible machine learning approaches to do this. Expert domain knowledge would be helpful for supervised learning approaches.

Machine learning can complement or even replace existing ESG or governance ratings which are based on fixed criteria, and where assessment uses mainly a company's own disclosures or a rather limited information set. We see tremendous potential in using technology such as machine learning to more robustly assess different aspects of risks of companies and look forward to being part of this journey.

This article is based on an honours thesis by Nicolas Lye Zhi Qin, a first class honours graduate from the BBA (Accounting) programme at NUS Business School, supervised by Mak Yuen Teen, who is an associate professor at the School specialising in corporate governance. The views here are the writers' personal views.