FINANCIAL TIMES

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FT Investigation: The strange tale of ticker '566'

Miles Johnson, Lucy Hornby and Cynthia O'Murchu

How an obscure toy maker was transformed into Hanergy Thin Film, a solar group whose value touched $40bn before a dramatic fall back to earth

©Getty

Six years ago even the most bullish brokers would have struggled to get excited about the stock that traded under the ticker "566" on the Hong Kong exchange. Even as foreign investors were desperate to invest in China's booming economy, RBI Holdings held little appeal: it was a lossmaking plastic toy company whose products included a Spanish-speaking educational robot.

By 2012, "566" had transformed. Toy robots were out. Now selling solar panel equipment, the

company was striking big deals with a little-known mainland Chinese businessman, Li Hejun and his Hanergy Group.

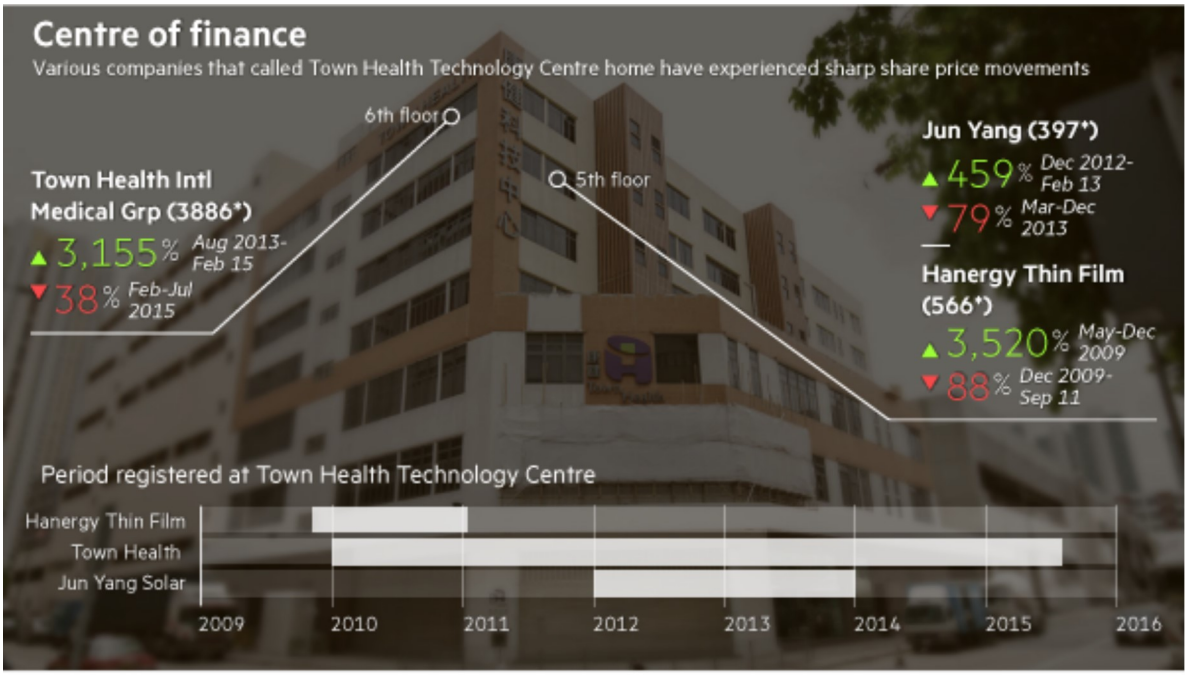
Three years later, the stock ticker for an unloved toymaker exploded into one of the most valuable companies on the Hong Kong market with a value of $40bn, turning Mr Li into China's wealthiest paper billionaire.

But today Hanergy Thin Film Power's shares are suspended and will remain so as long as Hong Kong's market regulator — which this month formally ordered the exchange to halt HTF trading — probes its business model. Mr Li, who lost more than half his fortune in just an hour of trading when HTF shares tumbled in May, has become a symbol of the brutal sell-off in Chinese shares that has sent tremors through global markets.

The rise and fall of Mr Li and Hanergy has also shed light on the shadowy corners of Hong Kong's stock market, where hundreds of small listings quietly change their names and business models overnight, their share prices surging and falling in silence.

For mainland Chinese entrepreneurs, who have long needed ways to invest — or hide — their earnings, the Hong Kong market has provided a route not just to riches, but to foreign-denominated capital that can be parked in tax havens such as the British Virgin Islands.

As investigators try to understand how a failing toy maker briefly became Hong Kong's biggest corporate success story, a good place to start is a squat building far from Hong Kong's glitzy centre. The Town Health Technology Centre, an office block in the bustling Shatin neighbourhood, was where "566" began its metamorphosis in 2010.



*For clarity, companies are identified with stock tickers and their current company name
Sources: Hong Kong stock exchange filings; company annual reports; Bloomberg

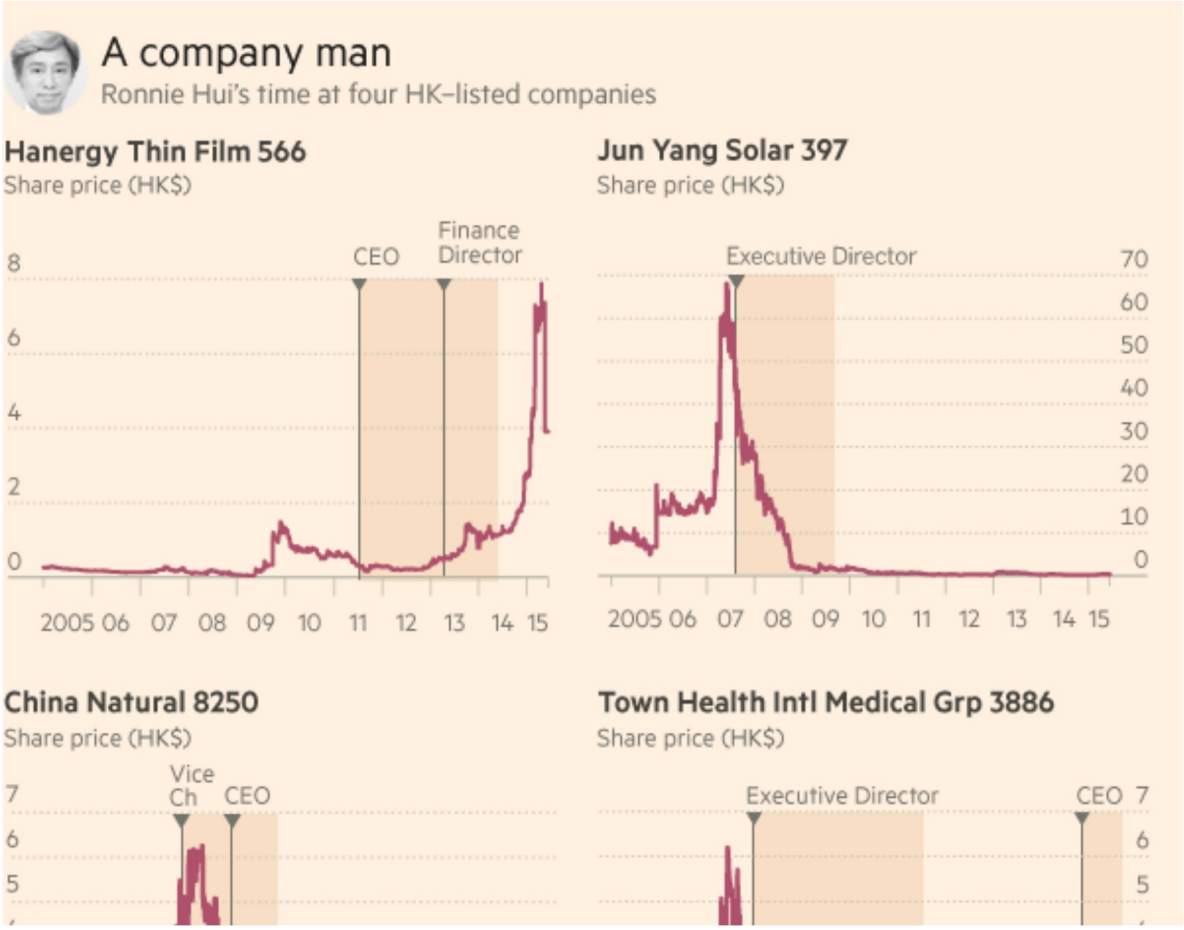
There it joined a handful of small listed companies — selling everything from healthcare products to financial services to software — some of which have bought and sold each other's shares, provided each other with loans and swapped senior executives.

The complexity of such deals, and the motives behind them, have frequently baffled foreign investors. "It is possible the Hong Kong market and the tiny companies listed there provide shelter for fraud and/or questionable transactions because of the inability to enforce rules [governing] cross holdings and related party transactions that are used to disguise or falsify dishonest or fabricated money flows," says Rod Sutton, an insolvency specialist at FTI Consulting in Hong Kong.

Of the dozens of directors who have worked at companies registered at the Town Health Technology Centre, one personality stands out. Ronnie Hui is the chief executive of Town Health International Medical Group, the owner of the office block. Until last year, he was chief executive and then finance director of Hanergy Thin Film.

The silver-haired Dr Hui, a trained paediatrician active in political parties loyal to Beijing, has over the past decade been an executive or director at 10 Hong Kong companies — some of them based at Town Health Technology Centre.

The companies he has chosen to work with have been exciting ones. In addition to Hanergy Thin Film — whose share price more than doubled during his time there — several other companies where Dr Hui served as a director saw dazzling increases and subsequent drops in market value.



the Financial
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on buying and owning stocks. They can hold me accountable for how the business is operated but they can't hold me accountable for the share price behaviour," he says.

When Mr Li burst on the scene in Hong Kong in 2010 with a $2.5bn solar equipment deal he "came from nowhere", says one Hong Kong-based consultant. "No one in Hong Kong — bankers, lawyers, accountants — had ever heard of this guy or had any idea who he was."

The connections his nascent solar company made with the Town Health Technology Centre companies were to prove useful to the unknown tycoon.

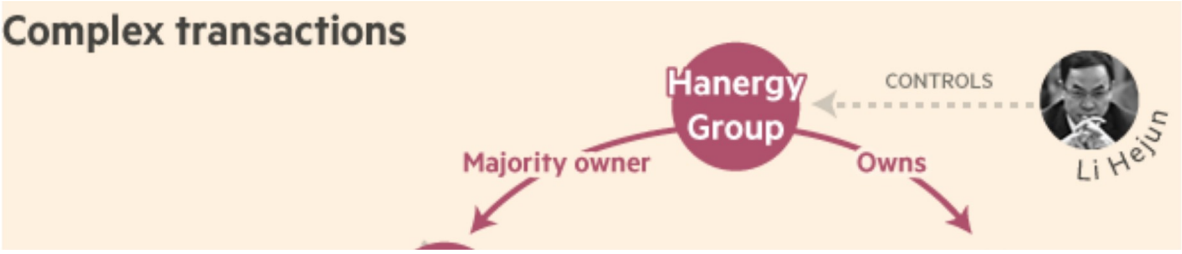
One company based out of the Town Health Technology Centre provided a loan worth millions of dollars to Hanergy Group, holding Mr Li's stock as collateral. The company has changed its name seven times in 15 years but is now known as Jun Yang Solar. Yet despite the frequent name changes, it has always traded under the ticker "397".

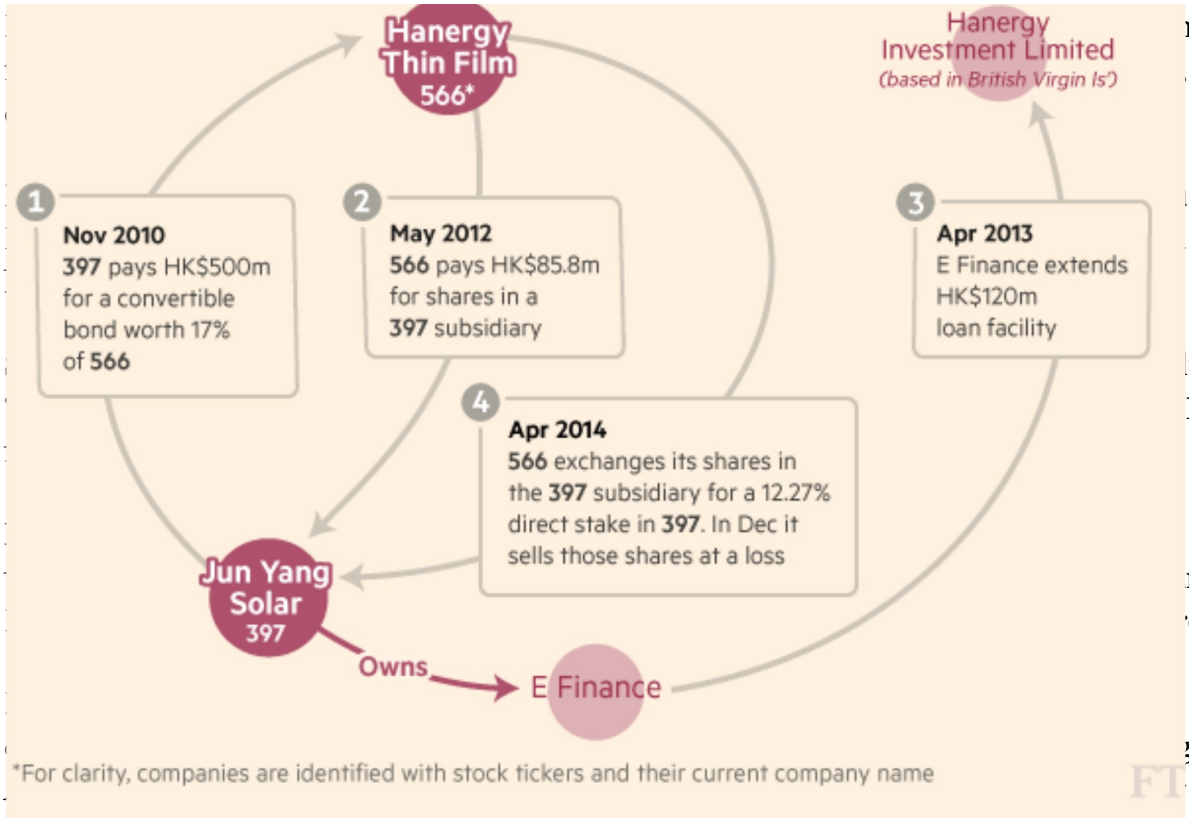
Dr Hui was the executive director of the "397" listing between 2007 and 2009 when it was called Hong Kong Health Check, a provider of medical diagnostic services. He left before the company changed its name to China GoGreen to focus on solar power.

As Mr Li built his stake in the Hong Kong ticker "566", the former toy maker, Dr Hui was named chief executive. Within months "566" took up an address at the Town Health Technology Centre, and began its transformation into Hanergy Thin Film.

Dr Hui's new company now not only shared an office with his old employers at "397", but also began to enter into commercial transactions with other companies based there. China GoGreen was one of the main customers of "566". At one stage Hanergy Thin Film purchased a stake in "397", which was by then called Jun Yang Solar, before going on to sell the shares at a loss.

Later, in 2013, Mr Li's Hanergy Group took out a high-interest HK$120m loan from Jun Yang Solar, which by this point had decided to diversify beyond solar power and become a money lender.





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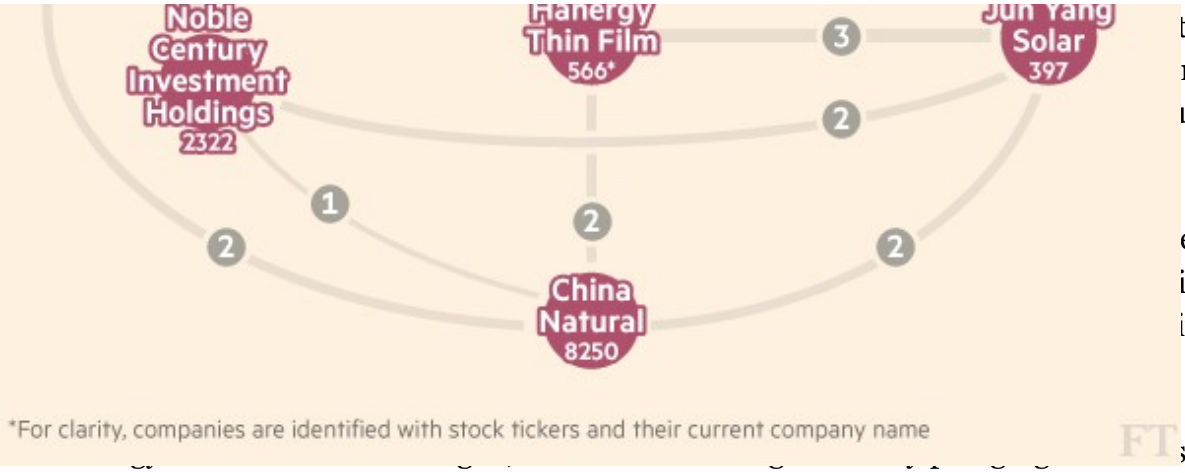
Ms Chu is one of the richest people in Hong Kong and has built a chequered reputation for herself and Kingston in the Hong Kong market. She was sanctioned in 2003 by the Hong Kong regulator after an investigation into manipulative trading in derivative warrants. In May, Kingston was fined HK$500,000 ($65,000) by the regulator for "fitness and properness" concerns linked to accounts in Macau.

The links between Hanergy Thin Film and companies connected to the Town Health Technology Centre and its owner have continued for years. Like Jun Yang, China Natural Resources changed its name and business model numerous times, switching from pharmaceuticals to public relations and — most recently — to trading and processing minerals. While China Natural was not registered to the Town Health Technology Centre, it shared multiple directors with companies based there, including Dr Hui, who worked at the listing when it had another name between 2007 and 2009.



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In March 2015, when Mr Li wanted to enter into a sale and leaseback agreement for one of his Gulfstream private jets, he sold it to Noble Century Investment Holdings, a Hong Kong listed company worth less than $100m whose other major asset is a bulk cargo ship.

Noble Century's chief executive at the time of the deal, Chan Chi Yuen, has served as a director at ticker "397" since 2005. Kenneth Chi Hung-chi, one of three independent directors at Noble Century, served as chairman of "397" between 2003 and 2007, and is also an independent director of China Natural Resources. Both have served on the board of Kingston Financial.

Mr Li's rapid rise and fall has come to symbolise the top of a market in China and Hong Kong that

had become dangerously overheated. In the weeks since its crash, some news outlets have asked whether Hanergy Thin Film is "China's Enron" but Mr Li maintains that the business remains healthy. However, some of its largest private investors have sold out in off-exchange deals at a hefty loss. Those who lent Mr Li money in exchange for shares face seeing their collateral lose value.

HTF said yesterday it would cancel a $2.2bn "arm's length" three-year agreement to buy solar panels from its parent company. Yet Dr Hui remains sanguine about his ties to a company that has suffered one of Hong Kong's biggest market collapses. He sees himself continuing a career as a serial company executive.

"A professional manager is supposed to be a manager that can manage whatever type of business, whether it is a healthcare, laboratory check-up, solar or whatever," he says. "Maybe someday you might see me as a professional manager of a bank. Or property group. Who knows?"

Additional reporting by Owen Guo, Robin Kwong and Naomi Rovnick

Graphics by Caroline Nevitt

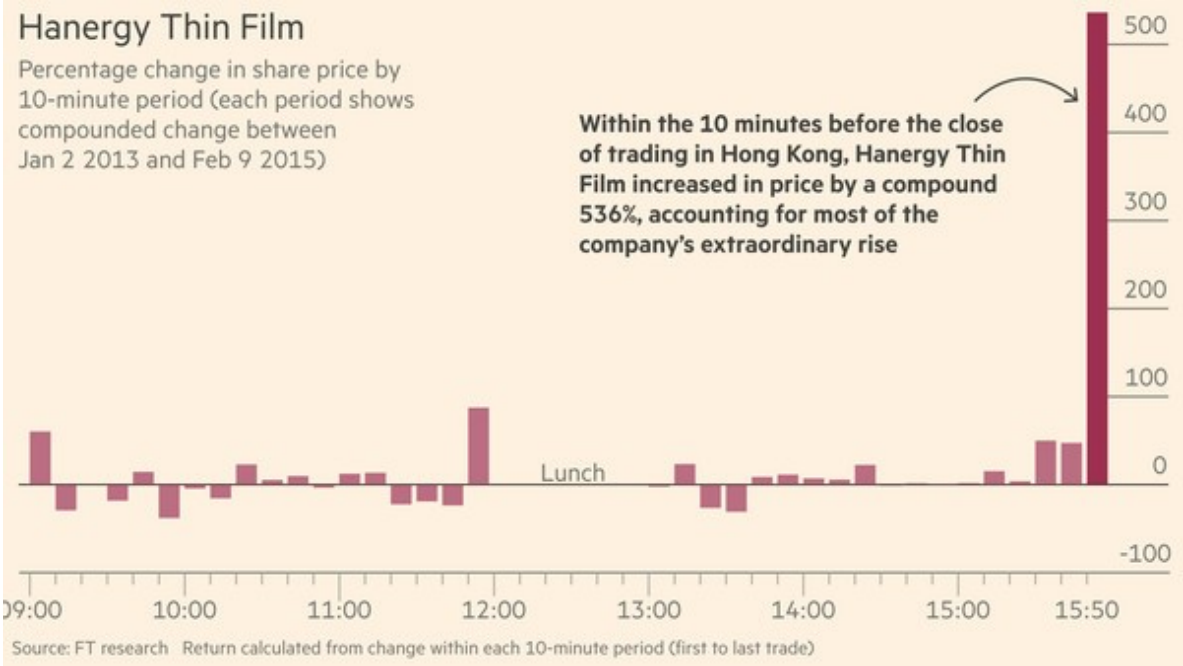
FINANCIAL TIMES

March 24, 2015 10:00 pm

Hanergy: The 10-minute trade

Miles Johnson and Gavin Jackson

FT analysis highlights unusual trading patterns over the past two years



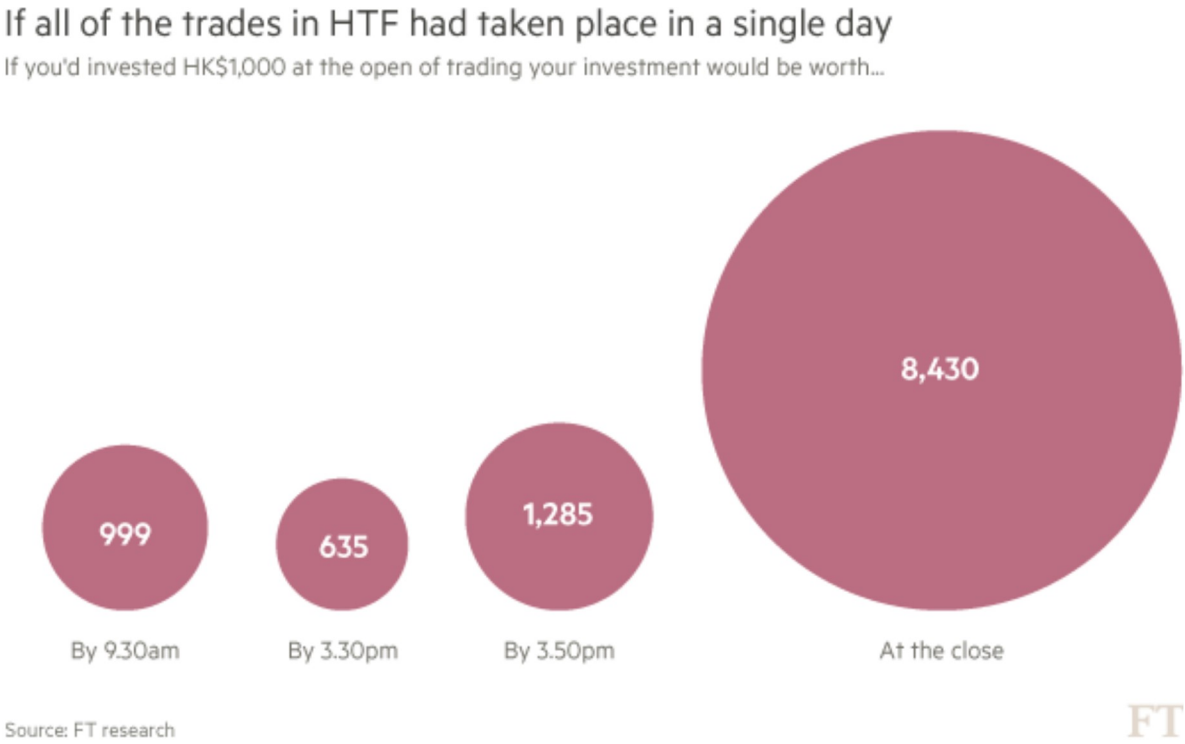
For the past two years, 3.50pm in Hong Kong has been a golden moment in the soaring fortunes of Hanergy Thin Film Power Group, the $35.5bn solar company that has transformed its owner into China's richest man.

A Financial Times analysis of two years of trading data of Hanergy Thin Film stock — more than 800,000 individual trades on the Hong Kong Stock Exchange — shows that shares consistently surged late in the day, about 10 minutes before the exchange's close, from the start of 2013 until

February this year.

The late-day outperformance of HTF, which has emerged as the world's biggest solar company by value, is a stark reminder that in stocks trading, timing is everything.

It means that an investor who held HTF shares from the start of trading at 9am to 3.30pm would have lost money — despite the company's share price rising by 1,168 per cent between January 2013 and February 9 2015.



A trader who bought HK$1,000 ($129) worth of HTF at 9am on every day of trading since January 2 2013 and sold those shares at 3.30pm each day, would have seen their money shrink to HK$635 by February 2015. But if they held on for just under half an hour more each time, the HK$1,000 would have turned into HK$8,430. This calculation does not include overnight gains.

Analysing the surge

HTF is the listed arm of Hanergy Group, a private Chinese company that has taken a big bet on thin film solar. In less than two years, HTF has surged making it worth more than Twitter or Tesla, the electric carmaker, and its founder Li Hejun, who owns 73 per cent of its shares, China's richest billionaire.

The FT examined 140m individual trades from top listed companies in Hong Kong to explore the soaring share price of what until last year was a little known small-cap solar company.

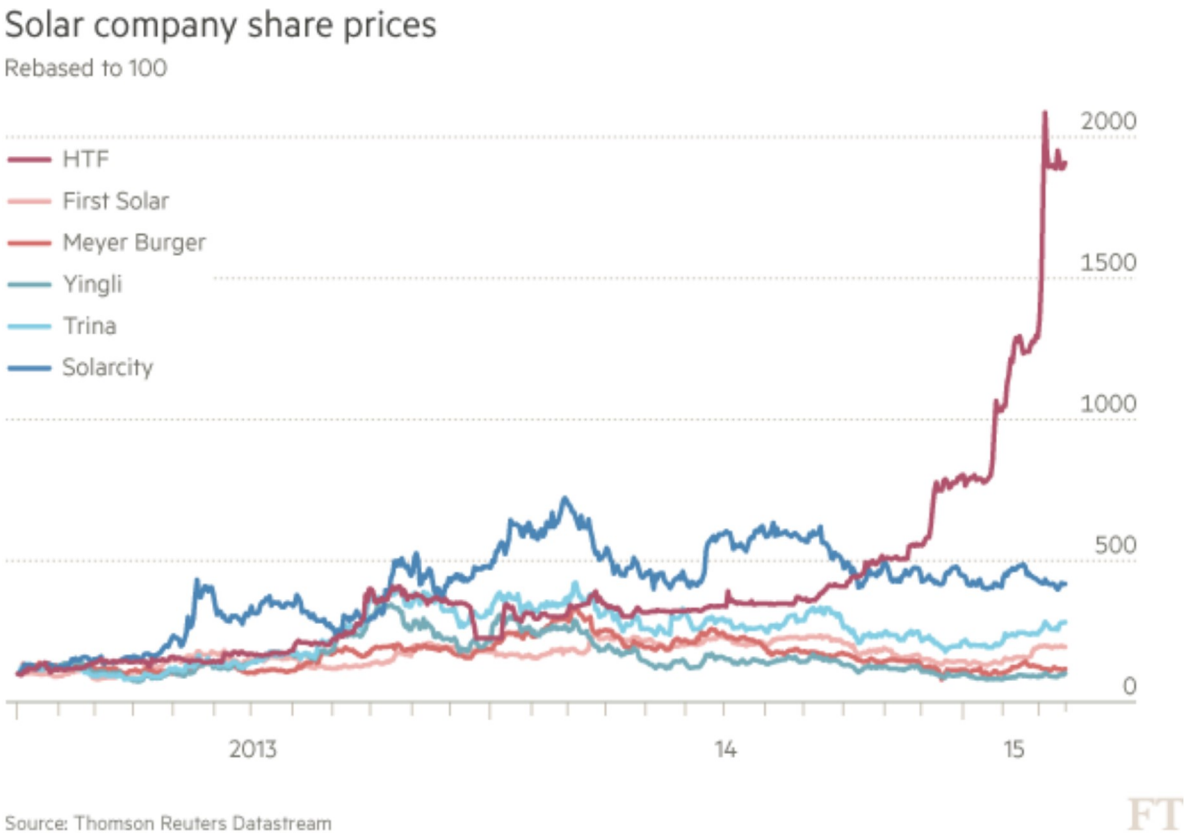
Nothing within the data explains why the HTF surge happens. But analysts, who examined the FT findings, as well as the raw data, laid out three possible scenarios: market manipulation by an

unknown trader, an algorithmic trading program is at play, or it occurs randomly.

Rajesh Aggarwal, professor of finance at Northeastern University in Boston and an expert on stock market manipulation cases, also reviewed the FT findings and raised the spectre of manipulation: "This is consistent with the stock price having been systematically manipulated over the past couple of years. This pattern of large price increases during the last 10 minutes of trade is extremely unlikely to have occurred randomly."

Hanergy has publicly addressed the steep rise in its share price over the past few months. The rise has confused analysts following the company and the solar sector itself. HTF previously attributed some of its gains to interest from mainland Chinese buyers — who are able to invest through a new Hong Kong-Shanghai Stock Connect programme. HTF is one of the most high-profile companies to benefit from Stock Connect.

The soaring valuation means HTF is now worth more than all Chinese solar companies combined, and more than five times the value of its next largest US competitor, First Solar.



In a statement to the Hong Kong bourse this month, Hanergy Group said it was not responsible for the swift rise in the share price.

"Our group, as the shareholder of Hanergy Thin Film, has not committed any so-called 'propping up' or taken any action to push up its share price," the company said.

Too big to ignore

For this article, Hanergy said: "We are not aware of any reasons for these prices and volume movements. We have not received any queries from any party, including the Hong Kong financial regulators, raising this question to the company. We are not able to comment on your alleged finding because we are not supplied with the materials in your possession."

The Hong Kong Securities and Futures Commission, which regulates the stock market, declined to comment on the findings of the FT investigation.

HTF's rapid rise to become one of the largest companies on the Hong Kong stock exchange has, in the words of one analyst, made it "too big to ignore".

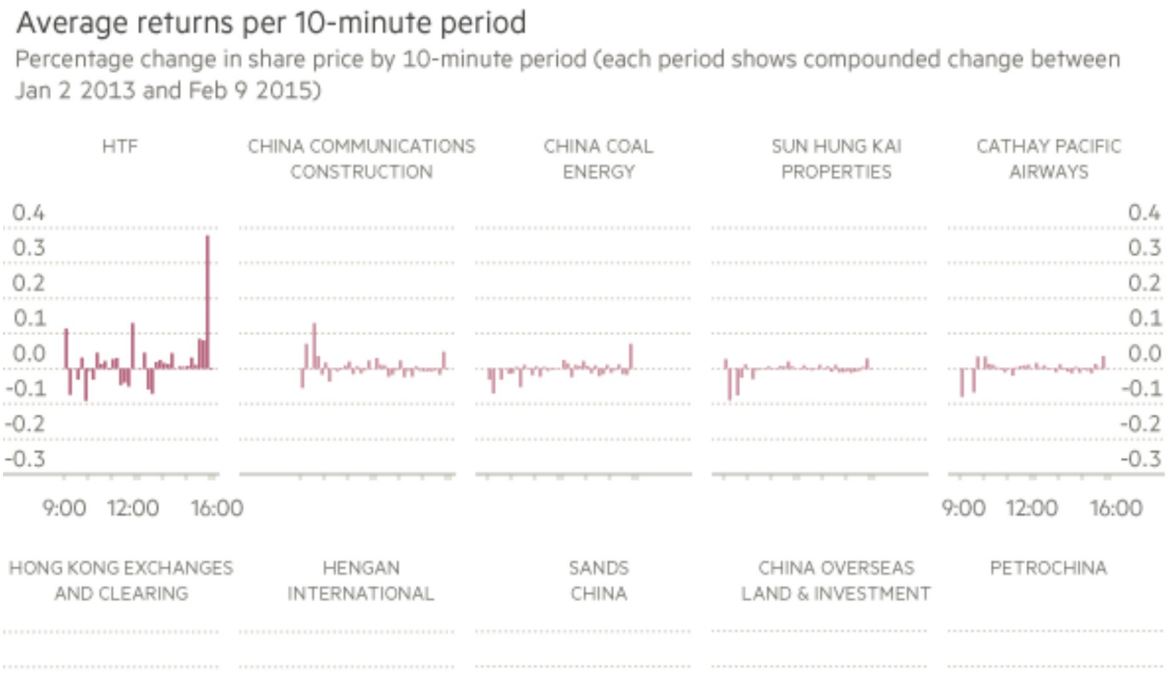
The FT earlier this year published articles about Hanergy and its business model, noting the listed company's large reliance on sales to its mainland parent group and the low output at mainland solar panel factories. Hanergy Group has also accessed high interest shadow banking loans in China.

The company has emphasised that it recorded a net profit of more than HK$2bn for 2013 and has built a reputation as a leader in the solar energy industry.

Mr Li has said that thinner, lighter technology will make Hanergy Group, with factories across China and overseas acquisitions, an industry leader.

The FT analysis of raw data from the Hong Kong stock exchange — second-by-second trades every day for two years — reveals a remarkable, consistent pattern of returns benefiting HTF shareholders. The company's shares rose in the last 10 minutes of trading in 23 of the 25 months analysed.

The same analysis was conducted on a randomly selected basket of 20 other Hong Kong listed companies; a few stocks had a more active late-day performance than others. But HTF was a significant outlier, as the charts below show. No other company came close to its end of day gains.

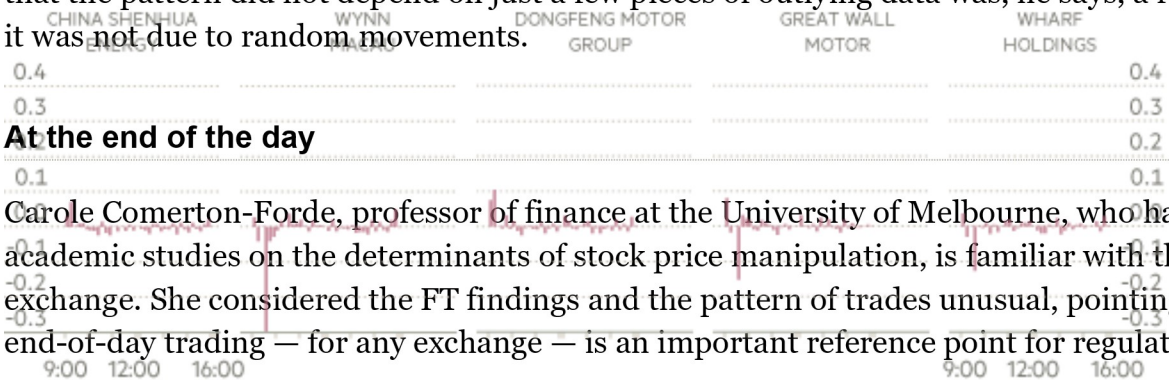


This calculation does not include the change between the close and the next day's open.

Heavy trading at the end of the day is not unusual, but academic experts on stock market trading who examined the FT's analysis say the pattern of large gains during the last 10 minutes of trading — with such regularity — is unusual. As Hanergy founder Mr Li holds 73 per cent of the HTF's shares, this means that the amount available to trade freely on the market, the so-called free float, is highly constricted.

Eric Budish, associate professor of economics at the University of Chicago Booth School and an expert on financial markets, says it was highly unlikely that the late day price gains had occurred by random chance. He examined the raw data from the FT.

"Having looked at the data I can say that it's certainly an unusual pattern, extremely unlikely to occur by chance," he says. Mr Budish pointed to the persistence of the pattern over time. The fact that the pattern did not depend on just a few pieces of outlying data was, he says, a reason to believe it was not due to random movements.



At the end of the day

Carole Comerton-Forde, professor of finance at the University of Melbourne, who has written academic studies on the determinants of stock price manipulation, is familiar with the Hong Kong exchange. She considered the FT findings and the pattern of trades unusual, pointing out that end-of-day trading — for any exchange — is an important reference point for regulators.

"The official close is generally the most important official reference price for the market. Closing prices are typically used, for example, to set mutual fund net asset values, to settle derivatives contracts, for pricing equity offerings or for lending covenants from banks that have taken stock as collateral for loans.

"Therefore people have strong motivation to seek to influence or manipulate these prices because it will influence an outcome outside the market," she says. "If there is a company where there is a limited free float this will mean it is thinly traded, and there is plenty of empirical evidence that suggests these stocks are more susceptible to manipulation."

Mr Aggarwal also highlights the vulnerability of companies with a small free float to be manipulated by placing large but unfilled buy orders at the end of each trading day to artificially inflate the price of a particular stock.

Methodology: How the FT looked at the trading data

To investigate Hanergy Thin Film Power Group, the FT examined trade-by-trade data from the stock exchange over a two-year period beginning January 2 2013 to the end of February 9 2015.

The FT split this data into 10-minute periods and tracked the price at the beginning and end of each

10-minute segment in which the stock was traded. The entire data set for the stock exchange had 140m data points.

The HTF data are compiled from day-to-day trades, accounting for more than 800,000 data points.

Returns were calculated in two different ways: first, by finding the change in price between the first trade and last trade during each 10 minutes of the trading day; second, by finding the change in price between the first trade in one period and the first trade during the next 10 minutes of trading, as well as the change between the opening price and the previous day's trading.

From this data, the average and compound return for every 10 minutes of trading over the lifetime of the stock was calculated. The pattern was examined month-by-month and day-by-day as well.

The FT used the statistical programming language R as well as SQL in its analysis.

Hanergy: The 10-minute trade
Mar 25, 2015 - 5:22 pm

You might not have heard of Hanergy Thin Film before, but this Hong Kong listed solar energy company is worth more than $35bn. Its share price has enjoyed a startling rate of growth in the last two years. But an FT investigation into trading in the company's stock has uncovered some curious patterns. Robin Kwong talks to Miles Johnson, FT hedge fund correspondent, about the findings.