Name of Company	Country of Origin/ Exchange Traded	Sector	Stock Price	Target Price
SANY HEAVY INDUSTRY CO LTD	**China/ SHSE**	**Industrials - Farm & Construction Machinery - Farm & Construction**	**CNY8.83 @ 23 Aug 2018**	**CNY11.52**

COMPANY PROFILE

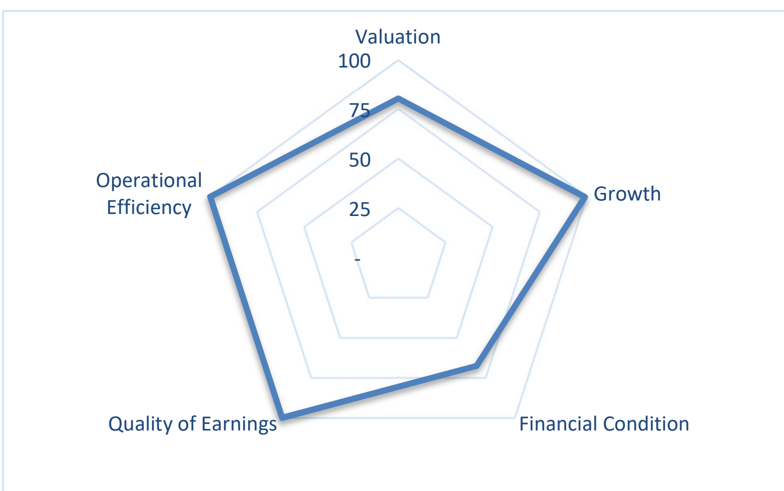
Sany Heavy Industry Co Ltd is in the business of manufacturing of construction machinery. Its products include concrete and crane machinery to excavator, road construction, and earth-working equipment.

Sany is China's largest construction machinery manufacturer and the fifth-largest worldwide in terms of revenue. Its products range from concrete and crane machinery to excavator, road construction, and earth-working equipment. We anticipate a 7%-8% top-line CAGR on back of sustained infrastructure spending ramp-up in China, as well as potential new opportunities from "Belt and Road" countries.

Stock Code	600031
Annual Dividend Yield	1.7%
Market Capitalization	CNY66.23 billion

SUMMARY

Valuation	Based on the Composite Valuation Indicator, the stock has a Target Price of CNY11.52 within a 12-month period. Our Target Price represents upside of 30.5% based on stock price of CNY8.83 as at 23 Aug 2018.
Growth	EPS Growth for the company is very positive.
Financial Condition	The company's financial condition is quite strong.
Quality of Earnings	The quality of the company's earnings is very high.
Operational Efficiency	The company's operational efficiency is very high.

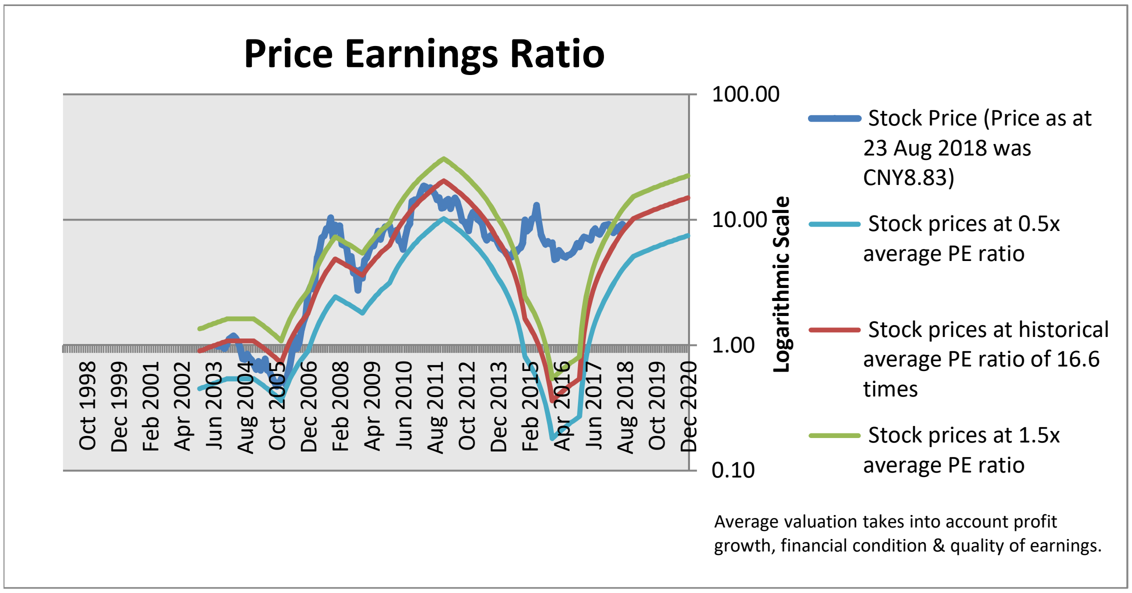


Valuation

ProThinker believes in using a combination of valuation methods to arrive at a suitable valuation for the stock. This is because while each valuation method has its benefits, it also has its shortcomings. Price to Earnings and Price to Cash Flow Ratios are meaningless when the company has negative earnings or cash flows. Price to Sales Ratio is more stable because sales are never negative. However, this does not tell us whether the company is able to sell profitably. Price to Book Ratio gives us an indication as to how much we are paying for the company's assets but assets are not directly related to a company's profitability.

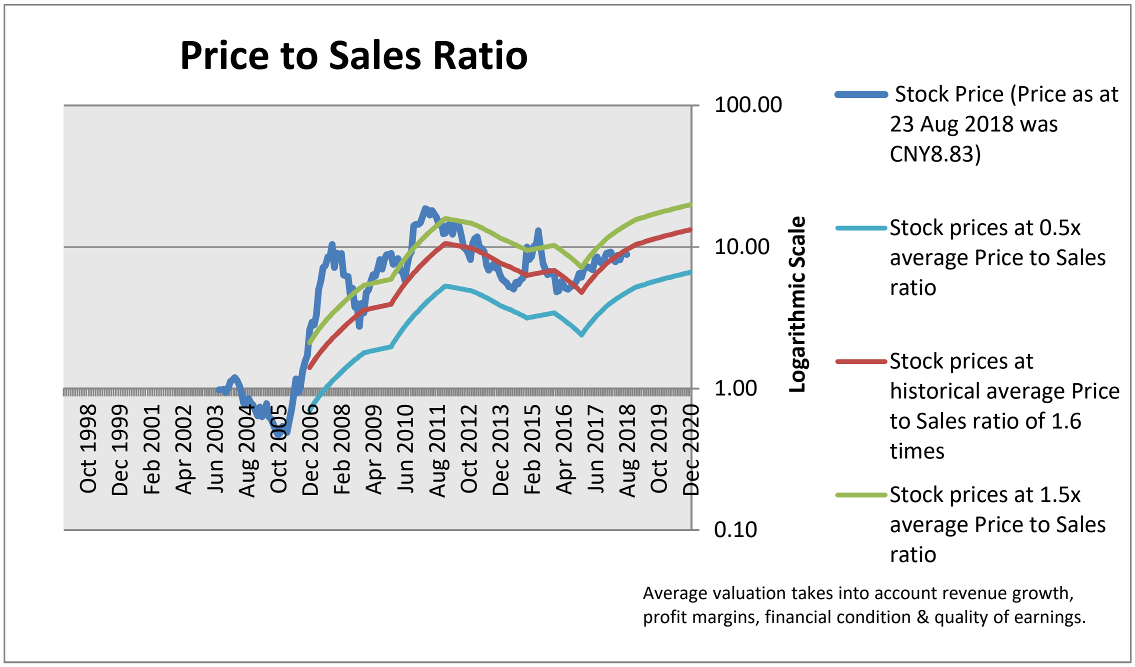
While it is important to value stocks based on multiple indicators, they sometimes lead to differing views on valuation. One indicator may tell you a stock is overvalued while the other tells you it is undervalued. That is why we use our proprietary Composite Valuation Indicator, which gives you one conclusion based on the best combination of the different indicators, to tell you whether a stock is under or overvalued. The graphical format allows you to determine whether or not the composite valuation accurately values the stock and gives you confidence to act on the decision.

In addition, we go all the way back 20 years (or as much as information is available) to give you a meaning "average" valuation of the company that takes extreme periods of the dot.com bubble and global financial crisis. Without this long a period, you won't know the extreme highs and lows and therefore will not be able to determine the norm.



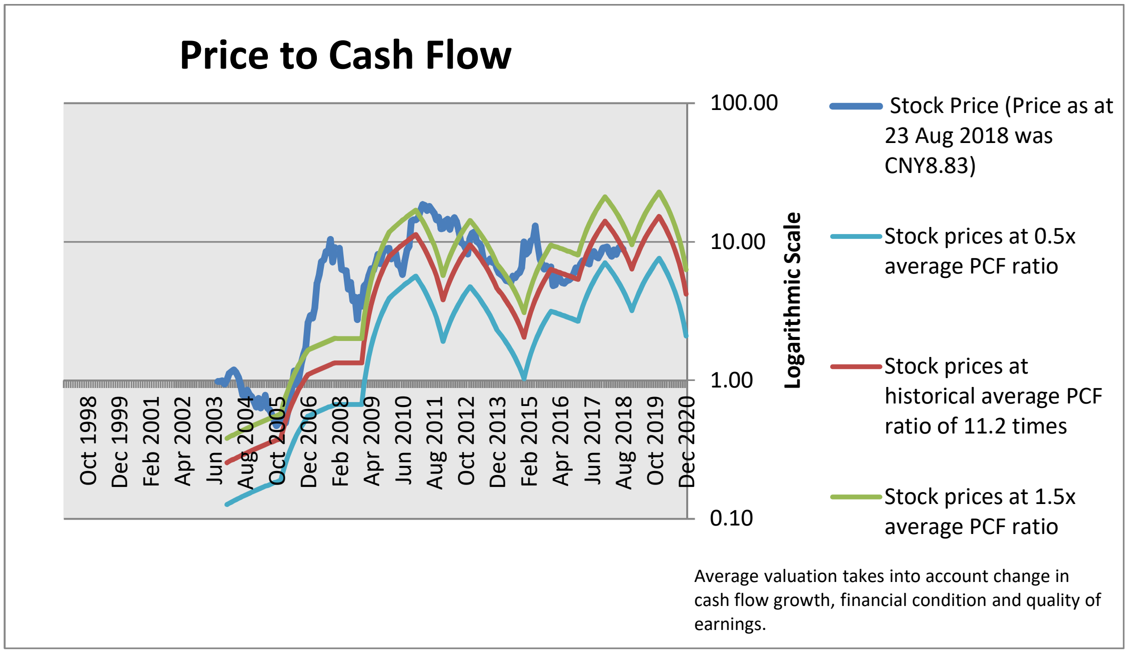
The Price Earnings (PE) Ratio is the most frequently used valuation indicator for a stock. However, there are times when this ratio cannot be used e.g. when the company reports a loss or profit is so minimal that it results in an abnormally high PE Ratio. Or Net Profit After Tax may be volatile and it is better to use Earnings Before Interest and Tax (EBIT) to value the company. We use the PE Band or Price/EBIT Band to show whether a stock is overvalued or undervalued based on its historical valuation.

At the price of CNY8.83 as at 23 Aug 2018, Sany Heavy Industry Co Ltd is trading at a PE Ratio of 18.8 times last 12 months earnings. This is a 13.0% premium to its historical average Price to Earnings Ratio of 16.6 times. (Price based on the historical average PE of the company is indicated by the red line.)



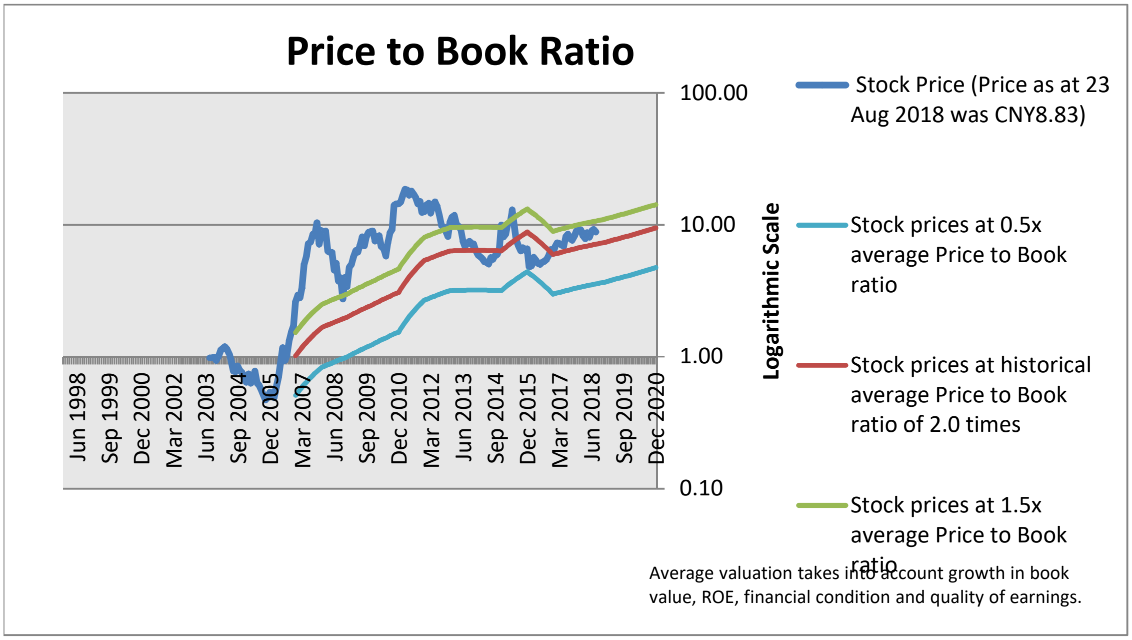
The Price to Sales Ratio is another commonly used valuation indicator for a stock. It overcomes some of the limitations of the Price Earnings Ratio in that it can be used even when the company is not making a profit or only making minimal profits. However, it should not be used by itself because a company may be achieving sales but not profits.

At the price of CNY8.83 as at 23 Aug 2018, Sany Heavy Industry Co Ltd is trading at a Price to Sales Ratio of 1.5 times last 12 months sales. This is a 8.0% discount to its historical average Price to Sales Ratio of 1.6 times.



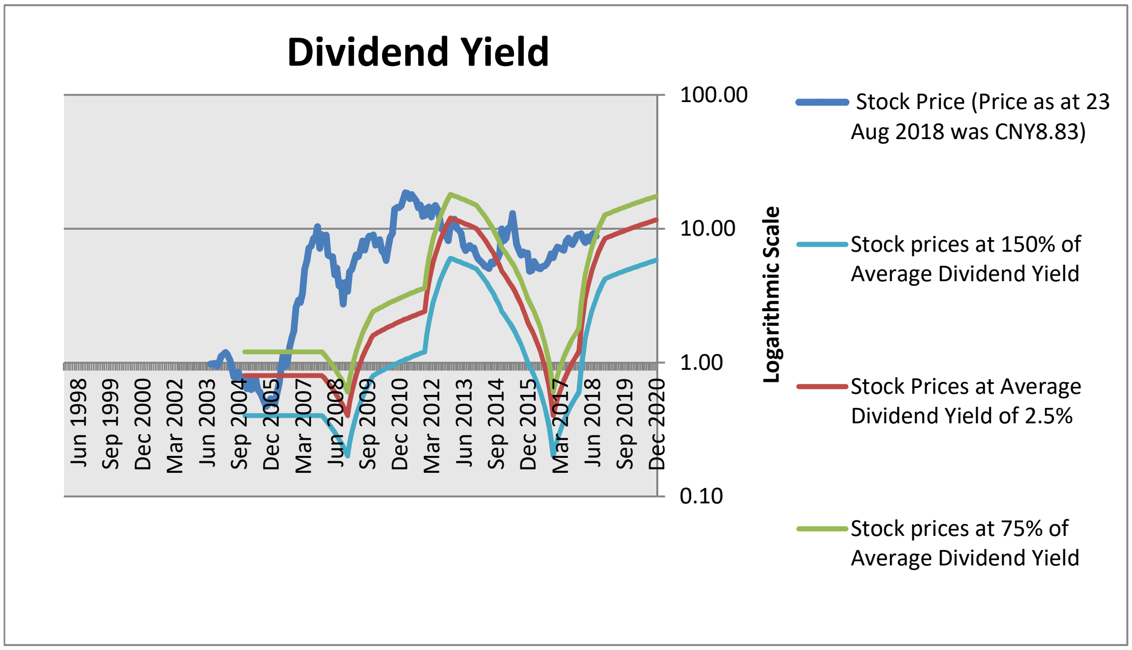
Price to Cash Flow is an alternative method to value shares. This is because accounting profits can be subject to manipulation. Therefore, some investors prefer to value a company based on cash flows generated by the operating activities of the company. It also acts as a reality check to valuation measures such as Price to Earnings and Price to Sales. If a company generates high profits and sales but not operating cash flows, it could be heading for trouble because it is cash that pays the operating expenses. However, the Price to Cash Flow ratio of most firms are volatile and should not be used in isolation to determine the valuation of the stock.

At the price of CNY8.83 as at 23 Aug 2018, Sany Heavy Industry Co Ltd is trading at a Price to Cash Flow Ratio of 12.5 times last 12 months cash flow.



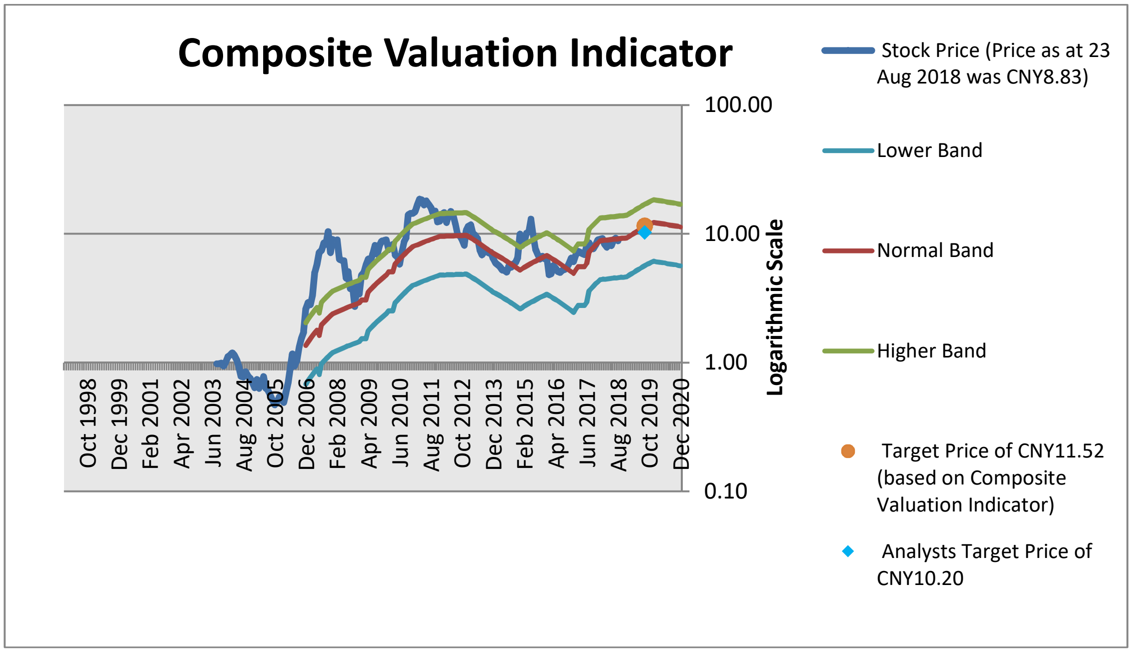
Price to Earnings, Price to Sales and Price to Cash Flow ratios all value a company based on what it is generating (i.e. profits, sales or cash flow). Price to Book ratio is different in that it values a company based on what it owns (i.e. its net assets). This is usually a suitable valuation indicator for a financial institution, which frequently revalues its assets and liabilities, or a company with huge asset base e.g. utilities company.

At the price of CNY8.83 as at 23 Aug 2018, Sany Heavy Industry Co Ltd is trading at a Price to Book Ratio of 2.4 times current book value. This is a 24% premium to its historical average Price to Book Ratio of 2.0 times.



For stocks that have a history of paying meaningful dividends, the stock price is often dependent on how much dividend the company pays.

At the price of CNY8.83 as at 23 Aug 2018, Sany Heavy Industry Co Ltd is trading at a Dividend Yield of 1.7%. This is a 31.7% premium to its historical average Dividend Yield of 2.5%. (Note: The lower/higher the dividend yield, the more expensive/cheaper the stock is.)

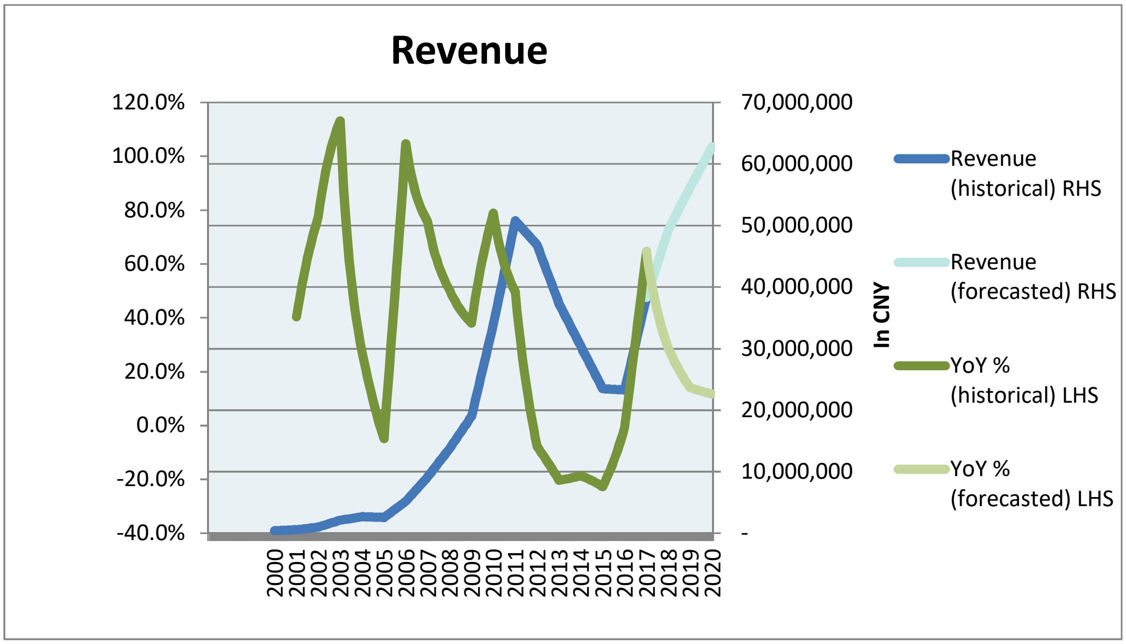


The Composite Valuation Indicator is derived using our proprietary method to put all the valuation indicators in a way that explains the stock price best. It recognizes that looking at a single indicator is dangerous and inadequate. It also overcomes the difficulty of different indicators pointing giving different signals and difficult to act upon if you do not have a composite valuation. Our Composite Valuation Indicator does not assume that valuation stays constant at the average level. If the growth of the company slows down, it will adjust the valuation downwards to reflect the slower growth. Please note, however, that the Composite Valuation Indicator does not account for situations when the market is willing to pay a much higher price for the stock because of an anticipated takeover or some other special event. It is also possible that investors are now attributing a lower valuation to the stock because the stock or sector's long-term prospects are poor.

Based on the Composite Valuation Indicator, the stock has a Target Price of CNY11.52 within a 12-month period. Our Target Price represents upside of 30.5% based on stock price of CNY8.83 as at 23 Aug 2018.

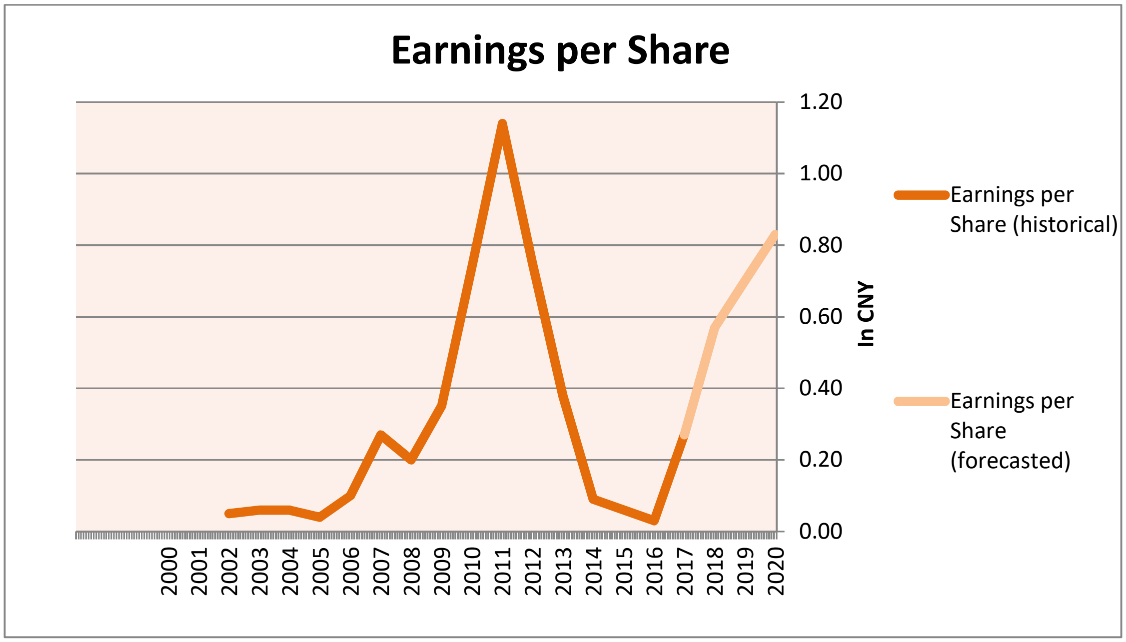
The target price takes into account the appropriate valuation of the company and analysts estimates for profit, sales, cash flow, book value, dividends, etc. as well as other factors such as financial condition, growth prospects and ROE.

Growth



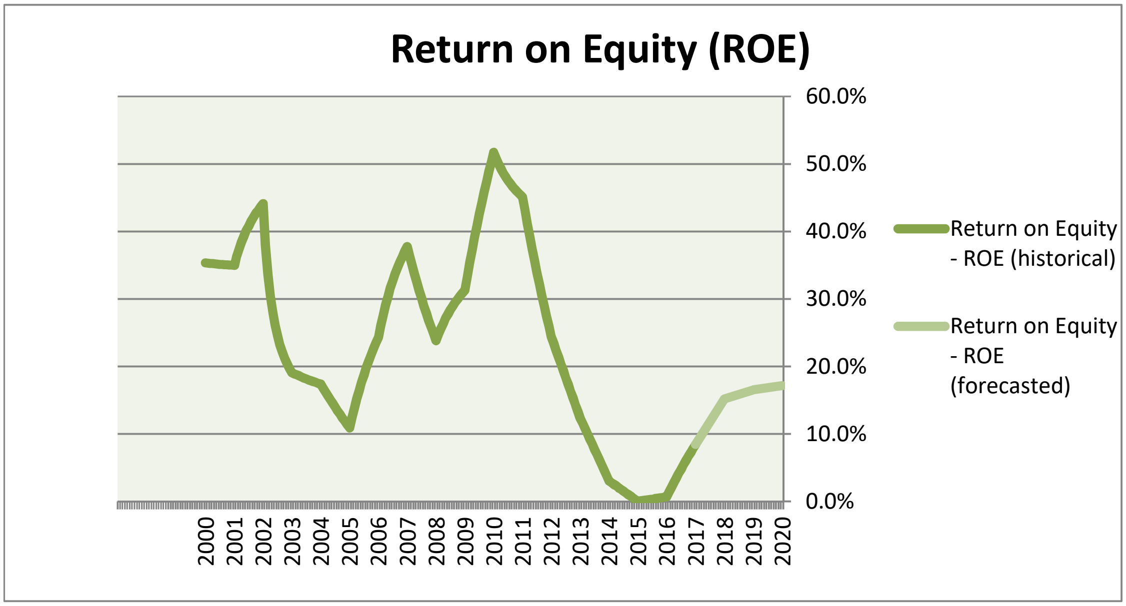
Revenue has been on a downtrend since 2011. Revenue growth has been on an uptrend since 2013. Below are analysts' forecasts of revenue for the next few years.

	Total Revenue	YoY growth
2018	49,327,000	28.7%
2019	56,228,000	14.0%
2020	62,799,000	11.7%



Earnings per Share has been erratic. Below are analysts' forecasts of the growth in EPS for the next few years.

	Earnings per Share		YoY growth
2018	0.57	CNY	111.1%
2019	0.70	CNY	22.8%
2020	0.83	CNY	18.6%

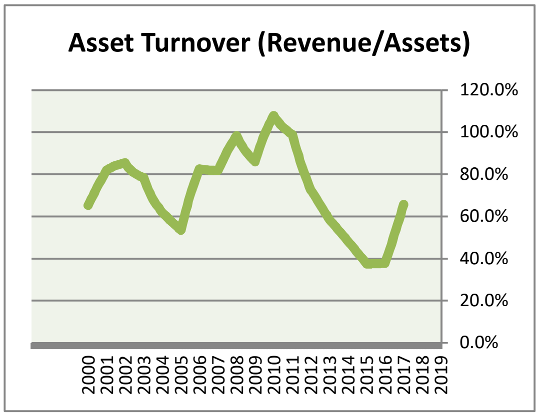


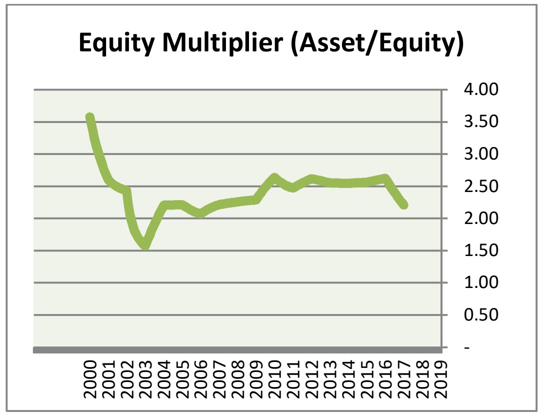
Return on Equity (ROE) measures the amount of profit a company makes with the money that shareholders have invested. A rising ROE is an indication of improving management efficiency. It is also an indication of how fast the company can grow in future through profits that are retained and not distributed as dividends.

When analyzing ROE trends, it is important to know why ROE is going up or down. There are three main ways ROE can improve.
1. If the company is able to generate more sales per dollar of assets (what we call Asset Turnover)
2. When the company is able to improve its Net Profit Margin
3. When the company borrows more (what we call Equity Multiplier)

The first two ways are healthy ways to grow its ROE but it may be undesirable for a company to grow its ROE by borrowing more if the company's financial condition is already weak. This is why it is so important to beyond determining whether a company's ROE is improving to determining what the company did to improve its ROE. If the company grew its ROE by borrowing more, it is important to gauge the company's financial condition to see if it is still healthy.

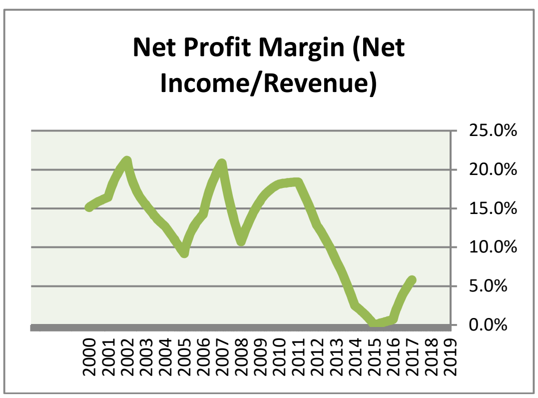
The company's Return on Equity has been deteriorating since 2010. During this period, Asset Turnover contributed negatively, Equity Multipler contributed negatively and Net Profit Margin contributed negatively to ROE.





Asset Turnover measures the amount of revenue a company is generating from its assets. Uptrend/downtrend indicates that the company is becoming more/less efficient in the use of its assets.
The company's Asset Turnover has been deteriorating since 2008.

Equity Multiplier measures the extend of borrowings the company has vs. its assets. Uptrend/downtrend indicates that the company is borrowing more/less. Companies borrow more to help them to leverage their operations and improve ROE.
On the other hand, companies may choose to reduce their leverage and have lower ROE.
The company's Earnings Multiplier has been on an uptrend since 2003, which means the company is borrowing more.



Net Profit Margin measures the amount of money the company makes after it deducts all expenses. Uptrend/downtrend indicates that the company is more/less profitable.
The company's Net Profit Margin has been on a downtrend since 2011

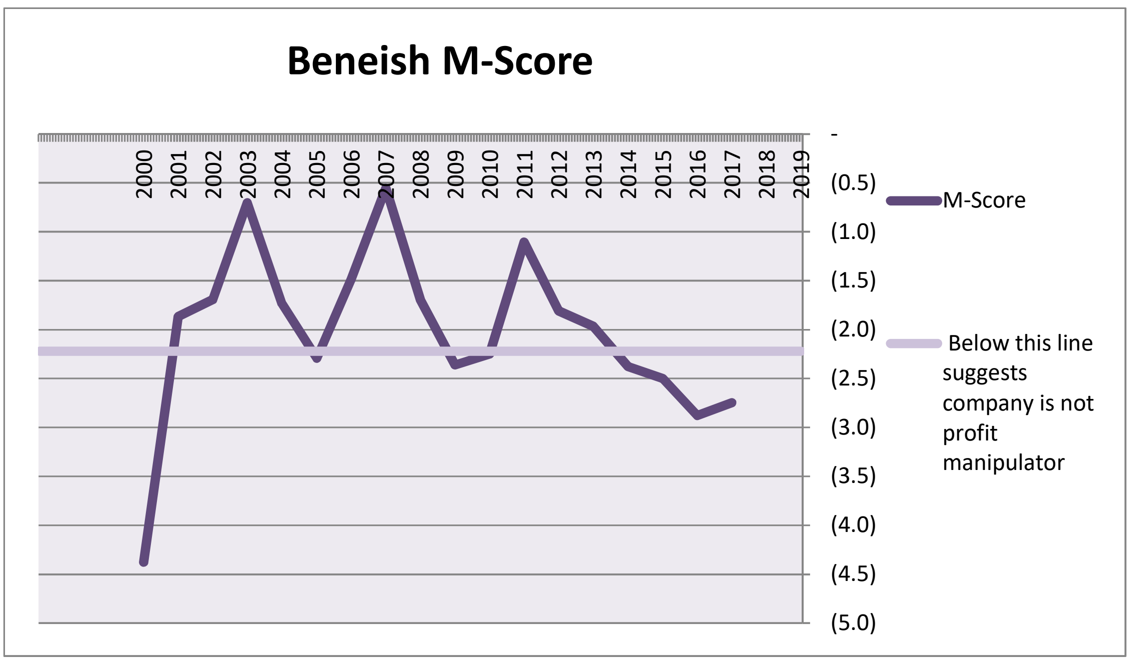
A company may be growing at a fast rate historically but how do I know this rapid growth rate is sustainable? Is the company inflating its earnings through suspicious accounting practices. These questions requires that we look in greater detail at the Quality of Earnings.

Quality of Earnings

A company's earnings should not be taken at face value. By that we mean that we should look deep into the accounts to gauge the probability that the company may be relying on account techniques to boost earnings. A company that has been showing strong profit growth or is expected to do so usually trades at a high valuation. This may put tremendous pressure on management to announce good growth to the extent of resorting to accounting techniques to do so. On the other hand, a company that is struggling to report growth in its business may also rely on accounting techiques to boost earnings. These methods will catch up with the company one day and when that happens there is usually a large negative earnings surprise and share price decline.

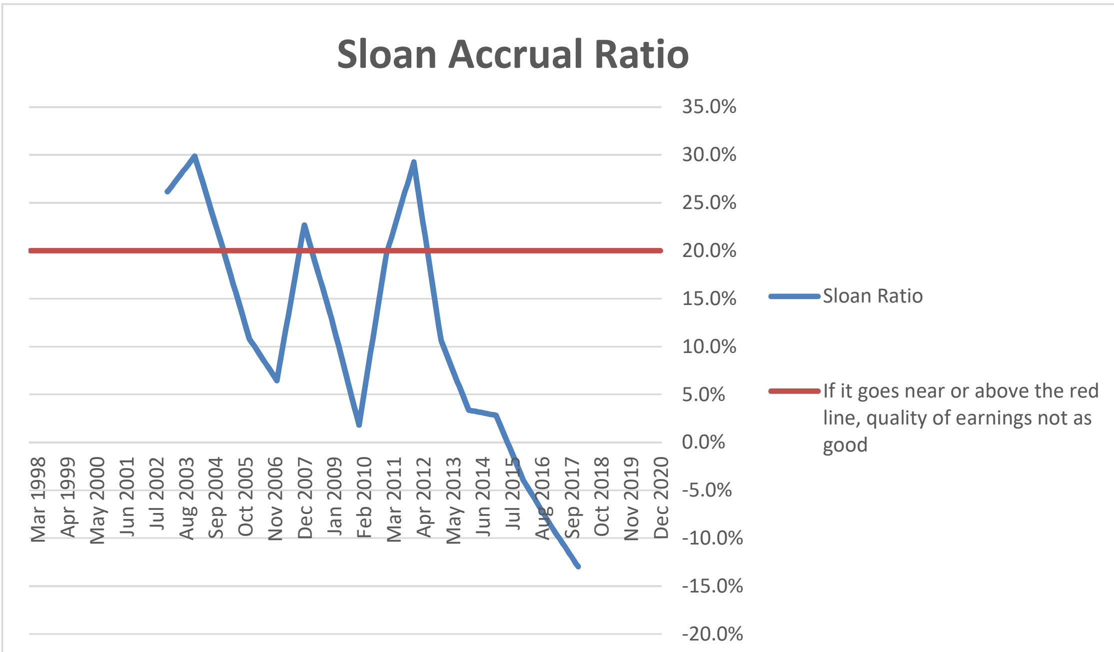
To detect the likelihood of earnings manipulation, two commonly used methods are the Beneish M-Score and the Sloan Accrual Ratio. Since it is difficult for one ratio to catch all occurences of profit manipulation, we put the two scores into a composite to have a better chance to spot earnings manipulation.

The Beneish M-score is a measure the likelihood of a company manipulating its earnings. Based on this formula, a company is more likely to manipulate earnings if:
* Sales is not translating to cash and receivables are growing
* Gross profit margin is declining giving the company pressure to manipulate earnings
* The company is growing its non-tangible assets which may be used to manipulate earnings
* High sales growth puts pressure on the company to continue to report high growth by manipulating earnings
* A lower rate of depreciation may be a sign that the company wants to boost its earnings
* Lower selling and admin expenses as a percentage of sales may point to the fact that some sales may not be rea



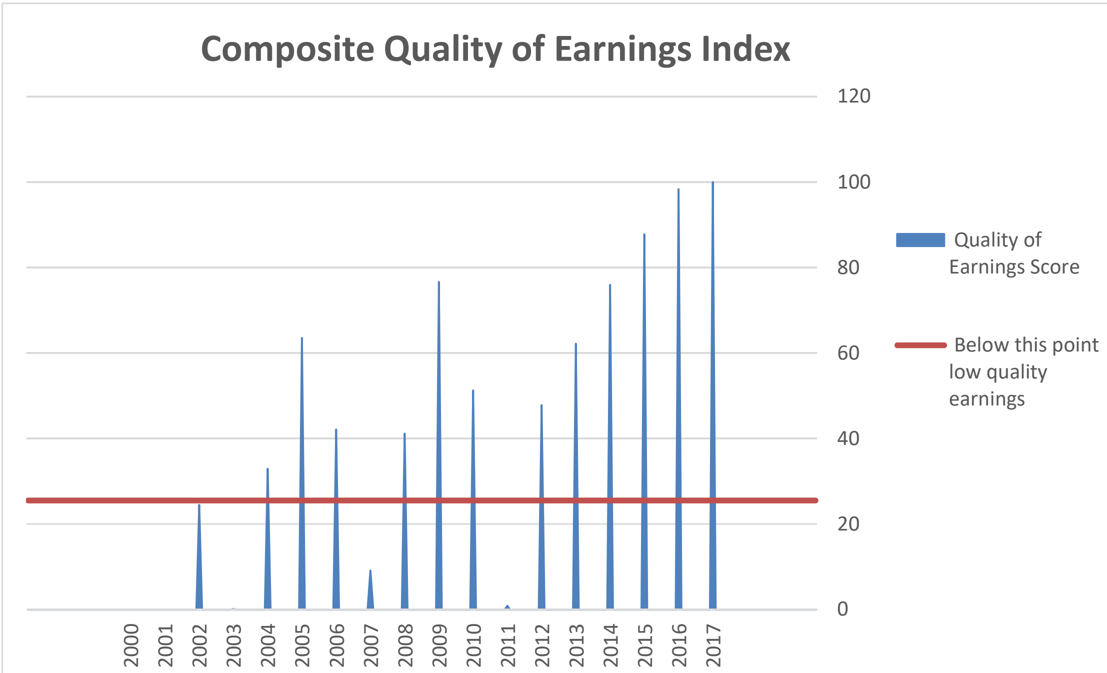
A score of less than -2.22 suggests that the company is not a profit manipulator and a score above -2.22 suggests that the company might be manipulating its profits. The company's M-score has been erratic. The latest M-Score of the company as at Dec 2017 was -2.75, which suggests that the company has not been been manipulating its profits.

The Sloan Accrual Ratio measures the extent to which a firm's earnings comprise of accrual (i.e. non-cash) items. In other words, the company makes profit but they do not translate to cash because of some of these reasons:
* Sales are made on credit to customers and not yet paid
* Money is spent on buying more inventory
* Increased earnings comes from reducing depreciation expense, which is non-cash
Earnings with high accrual (or non-cash) component are more likely to be reversed in future resulting in earnings disappointment and share price falls.



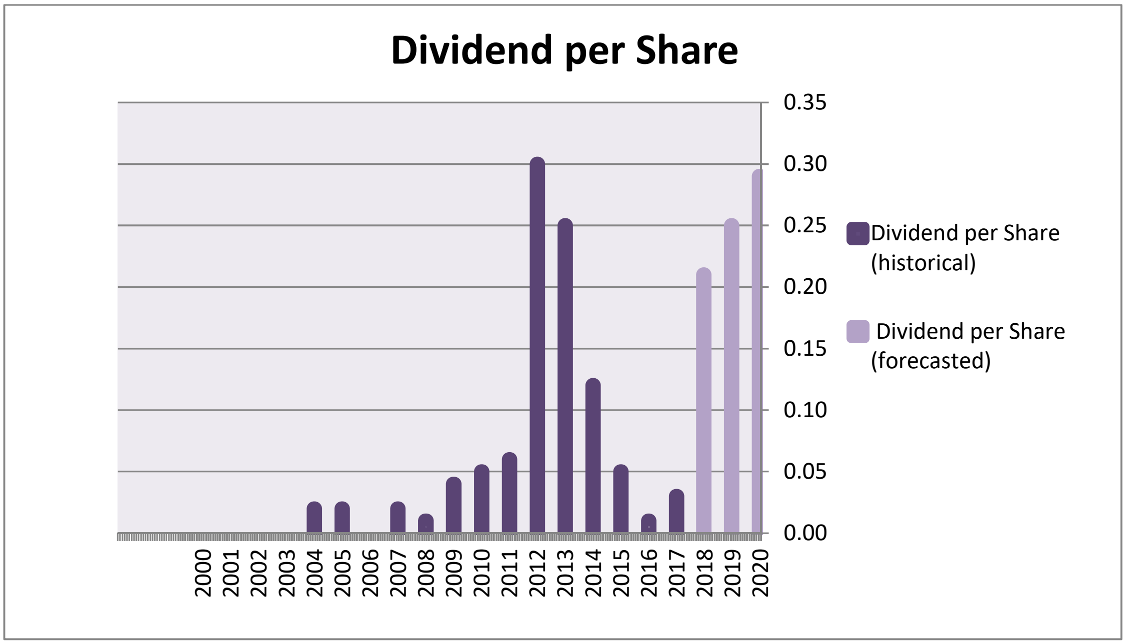
The latest Sloan Accrual Ratio is very healthy.

Since it is not possible for one indicator to capture all instances of earnings manipulation, whenever possible, ProThinker employs both methods to arrive at a Composite Score of the company's earnings quality. A score of 25 and below (the red line) indicates a higher probability that earnings may have been manipulated.



The quality of the company's earnings is very high.

Dividends



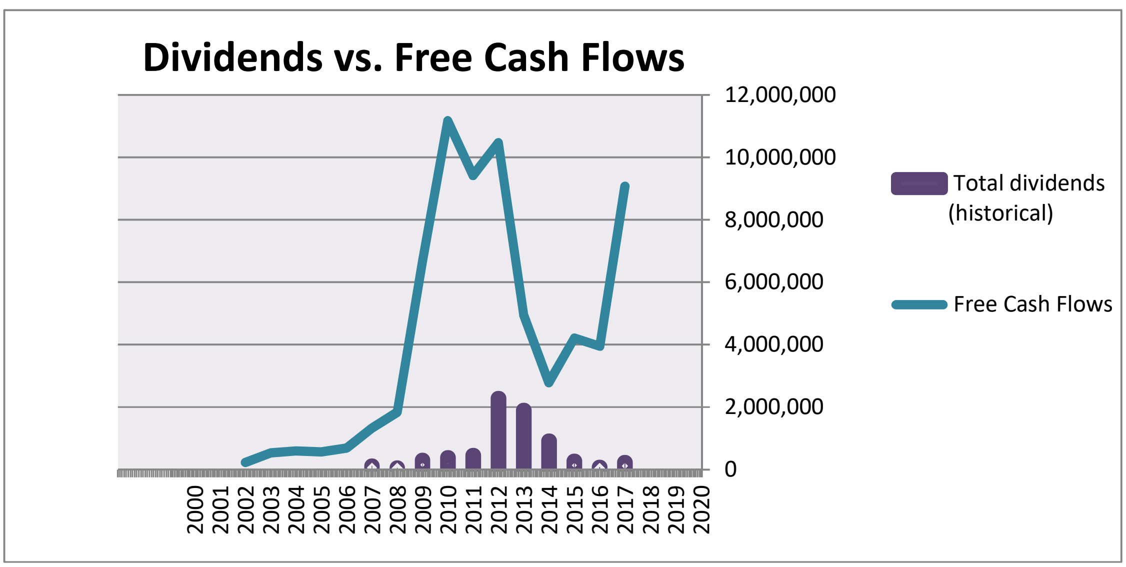
Dividend per share has been on a downtrend since 2012.

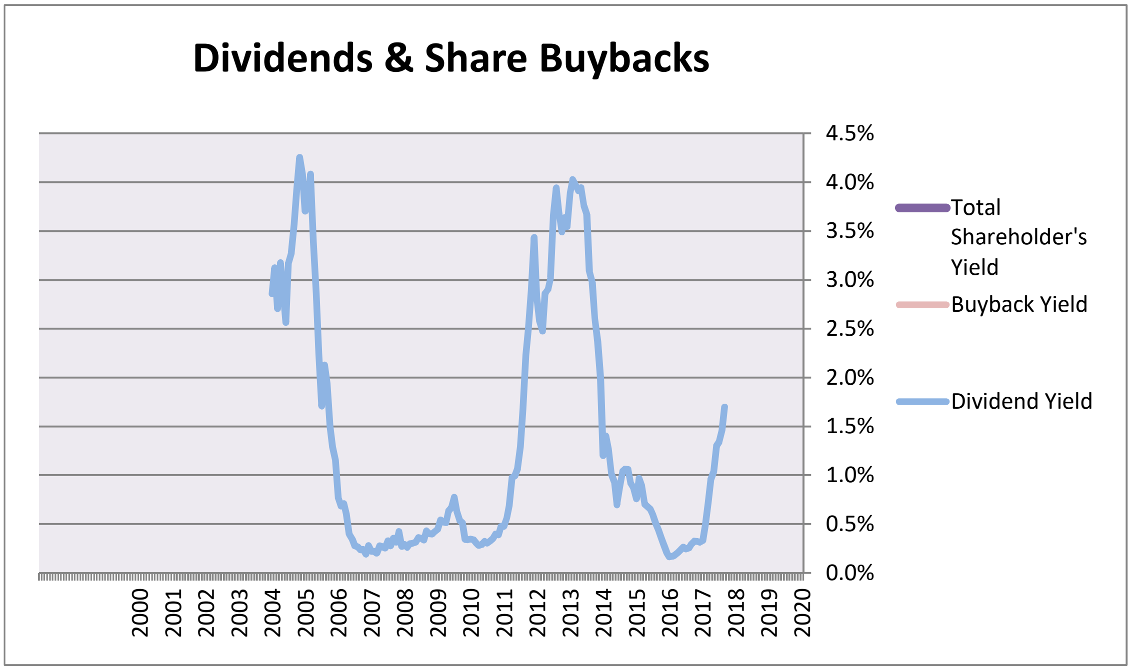
Forecasted future dividend per share growth are as follows:

2018	600.0%
2019	19.0%
2020	16.0%

We should not only be concerned about the amount of dividends, we should determine if the dividends paid out by the company are sustainable. One way to do that is to compare dividends paid out to the cash flows that the company is generating.

The company usually pays less dividends than its free cash flow, which is good.

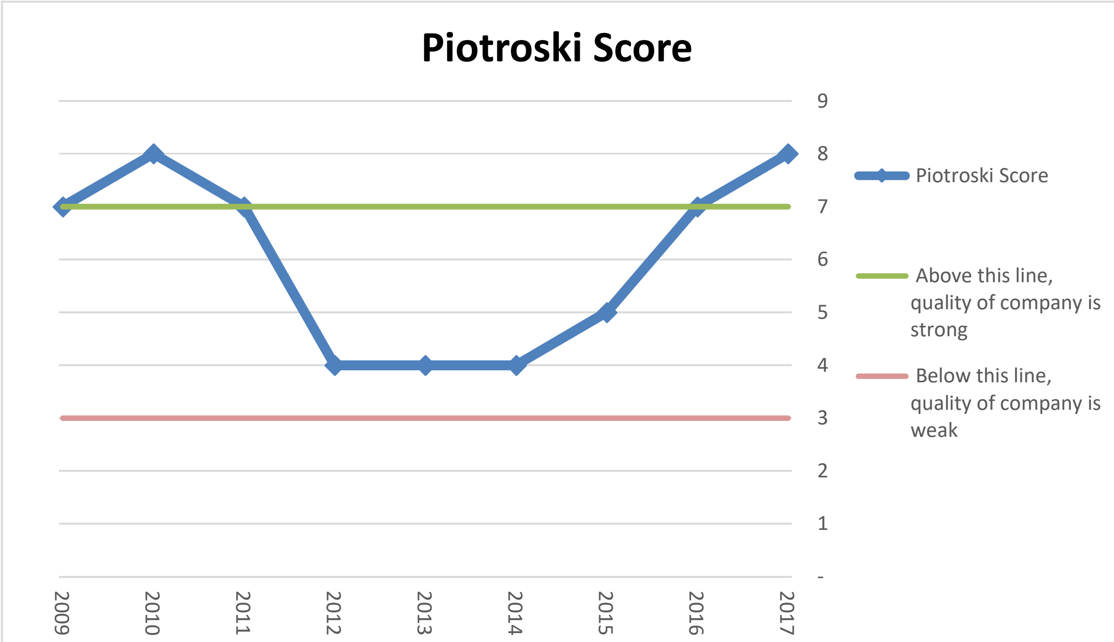




Dividend is not the only way that a company returns money back to shareholders. Any way it could do so is via share buybacks.

Dividend Yield has been erratic. There is not enough information on buyback yield to determine any trend. There is not enough information on total shareholder yield to determine any trend.

Operational Efficiency



The Piotroski Score measures the operational efficiency of a company. It is a well-rounded indicator that measures profitability, quality of earnings, financial condition and operating efficiency. Research has show that companies with high Piotroski scores outperform those with low scores. Piotroski scores range from a low of zero to a high of nine based on whether the company passes or fails certain criteria. This measure is not used to evaluate financial institutions as some of the components of the formula are not relevant.

Criteria	**Score**
Return on Asset (Net Income / Asset) is positive	1
Change in Return on Asset is positive over previous year	1
Return on Asset measures a company's ability to generate profits from the use of its assets.	
Cash Flow Return on Asset (Cash from Operations / Asset) is	1
Cash Flow Return on Asset higher than Return on Asset	1
Cash Flow Return on Assets goes one step further to ensure that it is not just paper profits but cash flow that the company is generating.	
Change in long-term debt / Asset is positive (i.e. borrowing less)	1
Change in Current Ratio (Current Assets / Current Liabilities) is	-
Current Ratio is a measure of a company's liquidity position and determines whether it has sufficient liquid assets to meet short-term liabilities.	
Number of shares this year less than last year	1

The number of shares is compared with the previous year as a company that is not generating healthy cash flow may end up raising new equity and this is indicative of the health of the company.

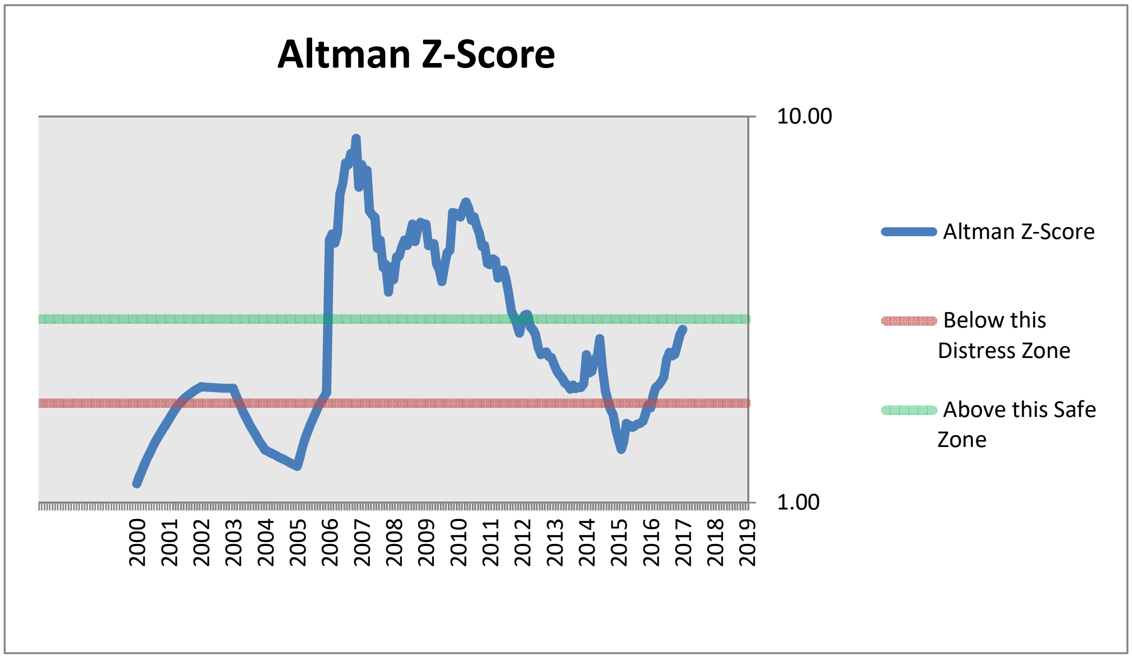
Change in Gross Profit Margin is positive Gross Profit Margin is a measure of whether the company is selling its products/services at a high enough margin to cover its operating expenses.	1
Change in Asset Turnover (Sales / Assets) is positive Asset Turnover is a measure of how well a company uses its assets to generate sales.	-
Total (Piotroski Score)	**8**

Piotroski score has been improving since 2013. The latest Piotroski score is 8, which is in the high zone.

Financial Condition

It is important to analyze the financial condition of the company you want to invest in because if a company goes bankrupt, the chances are high that you will lose all your investment. Even if the company does not go bankrupt, the deterioration in financial condition will cause more and more investors to avoid the company and valuation will drop. Weak financial condition also limits the opportunities that a company has to grow its business.

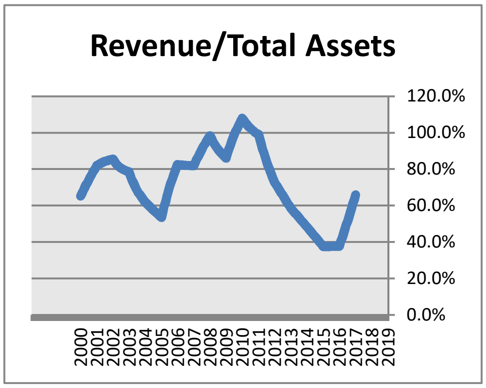
In order to determine the financial condition of the company, we usually use the Z score, which was introduced by Edward Altman, a Professor of Finance at New York University. This score is a composite measure of a firm's financial condition and has been proven to be able to predict with high accuracy whether a firm will go into bankruptcy within the next two years.



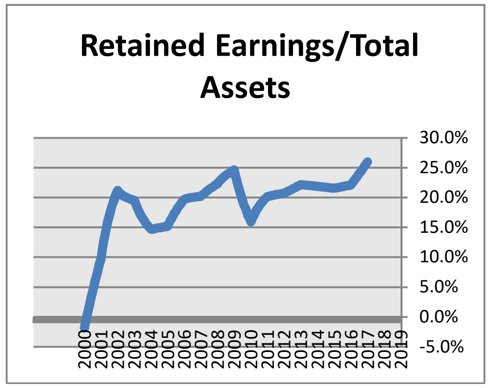
Z-score has been deteriorating since 2007. The main reasons for this are:
* lower working capital
* lower EBIT as a proportion of total assets
* higher level of borrowings
* lower revenue as a proportion of total assets

However, the latest Z-Score of the company as at Dec 2017 was 2.8, which is near the safe zone.

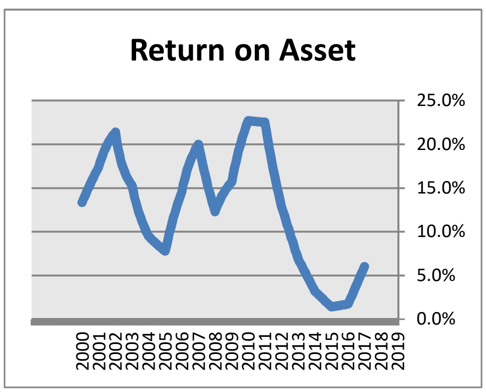
The various components that go into the Z-Score are shown below:



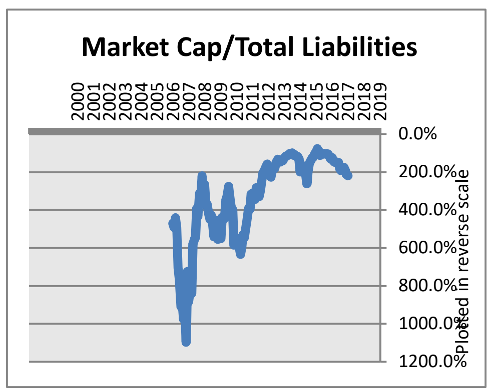
This is the Revenue Turnover ratio and it reflects the amount of revenue the company is able to generate from the use of its assets. Companies that have difficulty generating revenue cannot generate consistent cash flow to pay its bills.
The amount of revenue generated from assets has been on a downtrend since 2008.



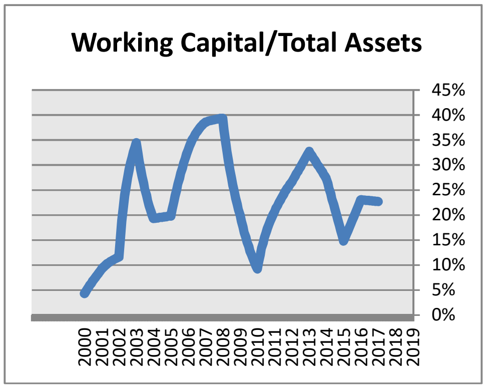
The more profits are retained within the firm, the greater the buffer of reserves for the company to weather difficult times.
The level of retained earnings relative to assets has been on an uptrend since 2010. Currently, retained earnings are at 26.0% of total assets.



This measures the ability of the company to generate EBIT (earnings before interest and taxes) from its assets.
EBIT as a % of assets has been on a downtrend since 2010. Currently, EBIT is at 6.0% of total assets.



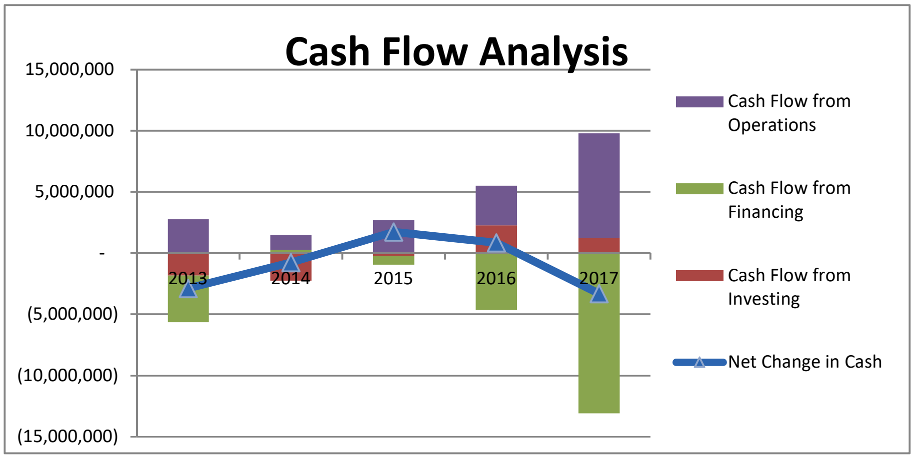
This is an indication of the level of borrowings of the firm. A high level of borrowings will affect survivability as it may not have enough cash flows to meet its debt obligations.
The level of borrowings has been on an uptrend since 2007.



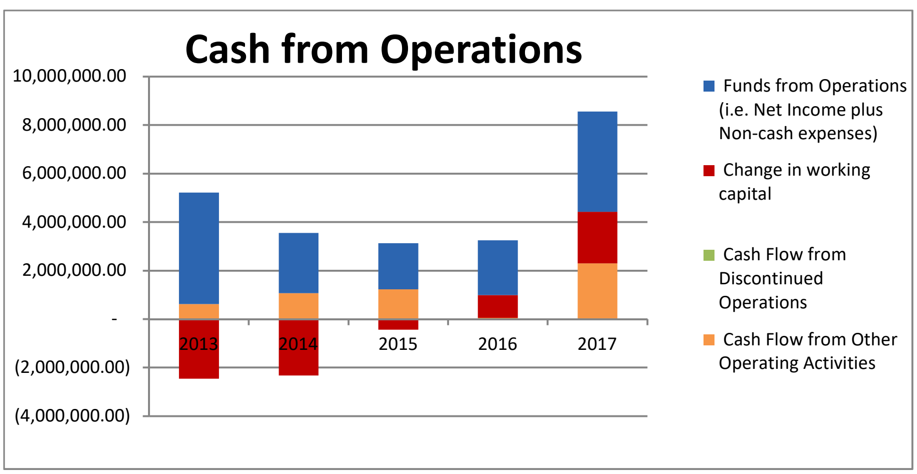
Working capital is essential to the operations of the company and a low level of working capital may result in liquidity problems. Working capital relative to total assets has been erratic.

Cash Flow Analysis

Cash is the lifeline of a business. The company needs cash, not profits to pay salaries, suppliers etc. Profits may not translate to cash if a company is not efficient in managing its Cash Conversion Cycle (more of that below). For example, when a company sells a product at a price higher than costs, it makes a profit. But until he collects payment from the customer, the profit does not translate into cash. Cash Flow Analysis is about analyzing whether a company is able to generate healthy cash flows, which are essential not only to grow the business but also to remain in business.

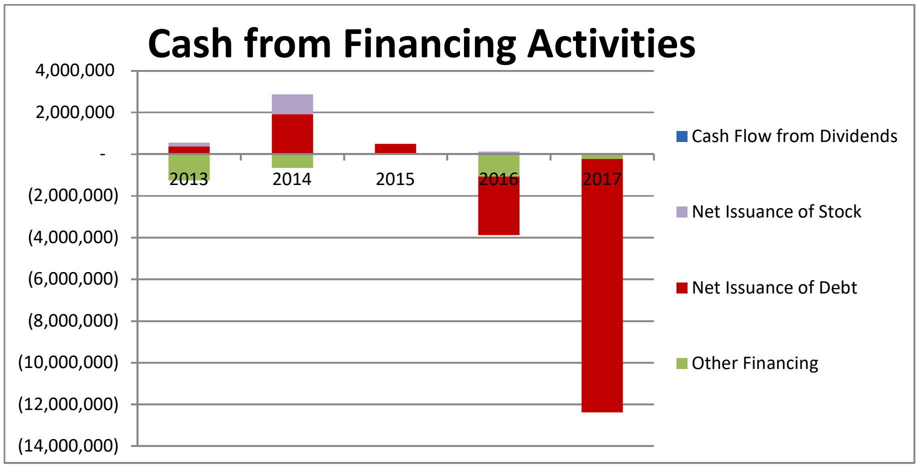


In the last 5 years, the company's cash decreased cash by CNY4,356,310. Cash from Operations increased cash by CNY18,512,140, Cash from Investing Activities decreased cash by CNY818,710 while Cash from Financing Activities decreased cash by CNY22,049,740. The most important contributor to cash is Cash from Operations, which is a healthy sign.



In a healthy situation, a company should get most of its Cash from Operations by increasing its Funds from Operations (i.e. Net Income plus Non-cash expenses). When a business grows, part of the profits may be tied up in working capital (as receivables and inventory increases) but this should not consume a significant portion of Cash from Operations.

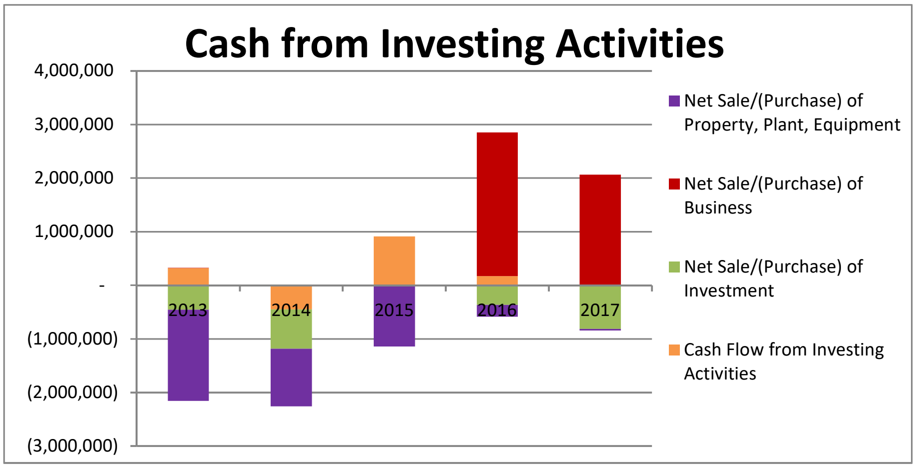
In the last 5 years, the company's Cash from Operations increased cash by CNY18,512,140. The biggest item affecting Cash from Operations is Funds from Operations (i.e. Net Income plus Non-cash expenses), which increased cash by CNY15,393,580. This is a healthy sign. This is followed by Cash Flow from Other Operating Activities, which increased cash by CNY5,259,300. This is a healthy sign.



A growing company may continuously need to raise funds via issuance of stock and debt. However, if this is done excessive, it will lead to an unhealthy situation. Too much new issue of stocks will dilute Earnings per Share and too much debt will cause the company's financial condition to weaken. Payment of Dividends or share buybacks are good if the company is profitable and generating healthy Cash from Operations. However, a company should not be issuing new debt in order to do these.

In the last 5 years, the company's Cash from Financing Activities decreased cash by CNY22,049,740. The biggest item affecting Cash from Financing Activities is Net Issuance of Debt, which decreased cash by CNY12,141,360. This is followed by Other Financing, which decreased cash by CNY3,183,460.

The company did not rely on borrowings to pay dividends and/or buy back shares, which is a healthy sign.



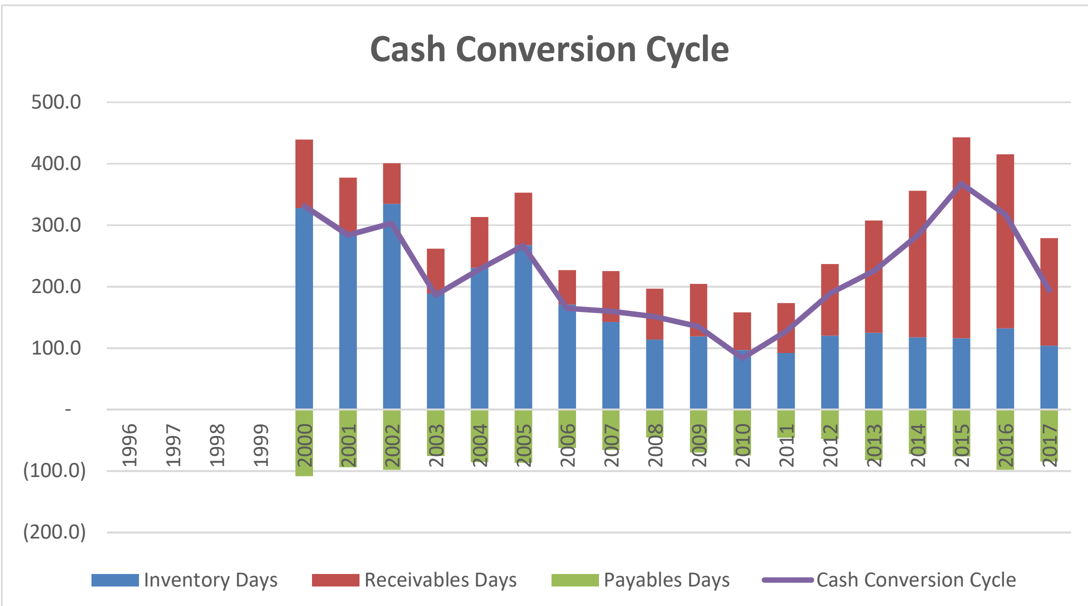
Cash Flow from Investing Activities refers to whether the company is spending money to purchase assets or businesses or raising cash by selling assets or businesses. This analysis goes hand-in-hand with the analysis of Free Cash Flows above. We want to ensure that a company is generating enough cash flow from its businesses even after making the necessary investments. Unless investment is a core component of a company's business e.g. financial institution, it should not be spending a large amount of cash to make investments.

In the last 5 years, the company's Cash from Investing Activities decreased cash by CNY818,710. The biggest item affecting this is (Purchase)/Sale Of Business, which increased cash by CNY4,726,490. This is followed by (Purchase)/Sale Of Property, Plant, Equipment, which decreased cash by CNY4,156,350. On a net basis, the company did not use any cash to purchase investments.

Cash Conversion Cycle

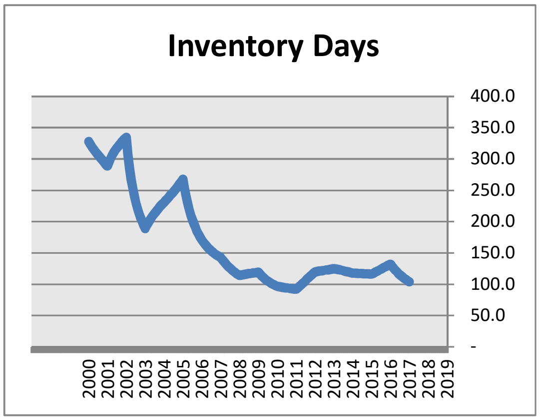
A company typically goes through this cycle: purchase inventory, work on the product, sell on credit and collect from customers. The period taken from the time it pays for the inventory in cash to the time it collects back cash from its customers is called the Cash Conversion Cycle.

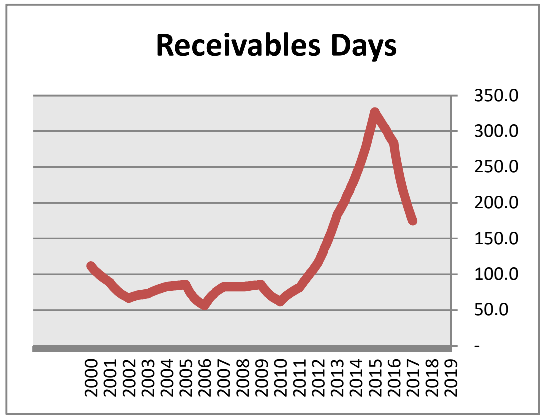
The Cash Conversion Cycle comprises the time inventory remains in the factory (production and selling cycle) and the time it takes for your customers to pay you (customer credit period), less the time you take to pay your suppliers (supplier credit period). The company's Cash Conversion Cycle is depicted graphically below. Generally, the shorter the cash conversion cycle the better.



Cash Conversion Cycle has been lengthening (deteriorating) since 2010. The latest Cash Conversion Cycle of the company as at Dec 2017 was 194.3 days.

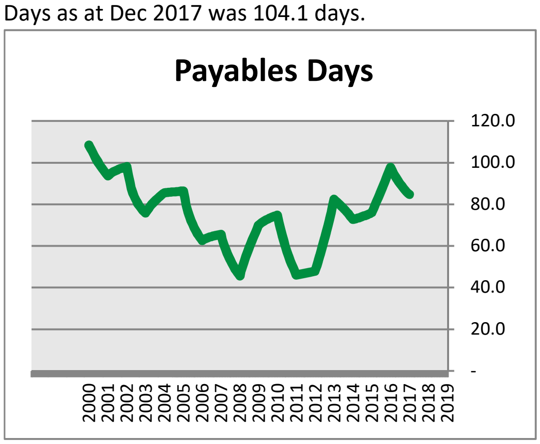
During this period...
* Inventory Days contributed negatively to the Cash Conversion Cycle.
* Receivables Days contributed negatively to the Cash Conversion Cycle.
* Payables Days contributed positively to the Cash Conversion Cycle.





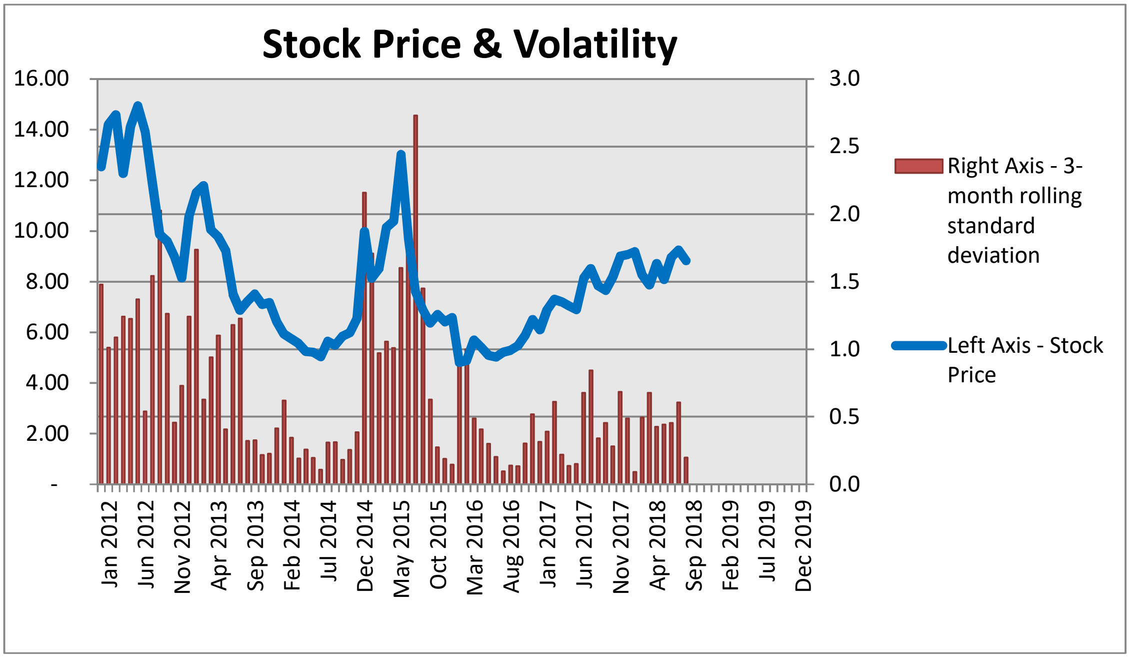
Inventory Days refers to the average number of days inventory stays in the company before being sold. Lengthening Inventory Days could be due to prolonged production or sales cycle. A service company does not have any inventory cycle.
Inventory Days has been shorterning (improving) since 2000. The latest Inventory Days as at Dec 2017 was 104.1 days.

Receivables Days reflect the average time it takes for the company to collect cash from its customers. If the company is increasingly collecting cash later than its credit terms, this may be an indication of potential bad debts.
Receivables Days has been lengthening (deteriorating) since 2008. The latest Receivables Days as at Dec 2017 was 174.9 days.

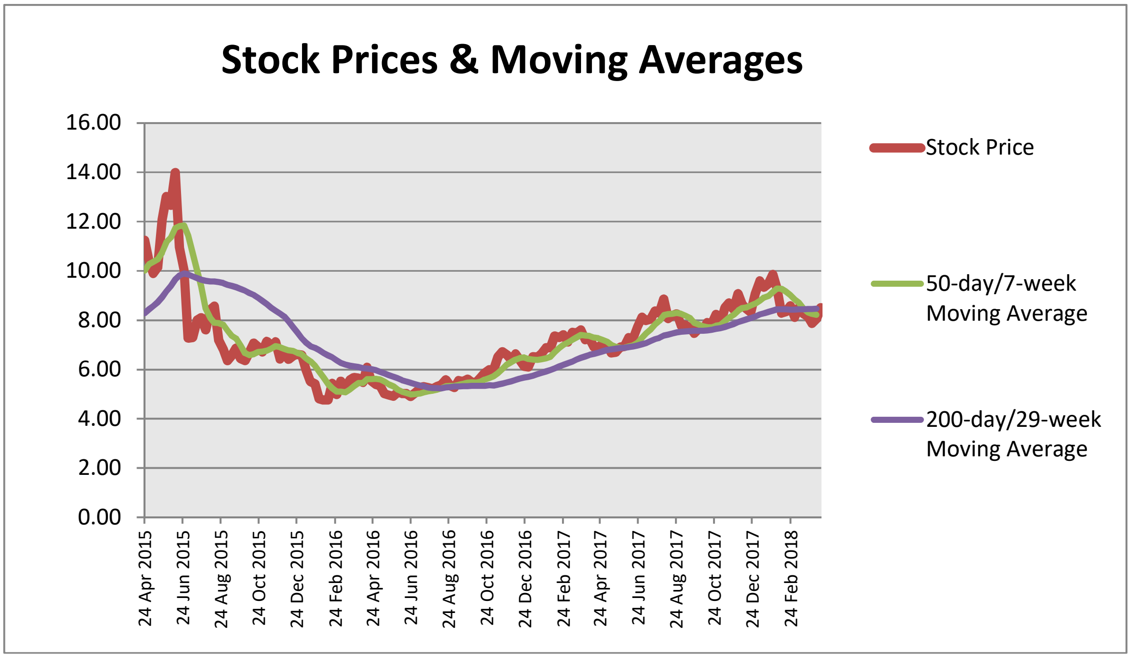


This measures the average length of time company takes to pay supplers. A lengtheneing period could mean company is able to extend credit term from suppliers but may also be symptomatic of payment problems.
Payables Days has been lengthening since 2011. The latest Payables Days as at Dec 2017 was 84.7 days.

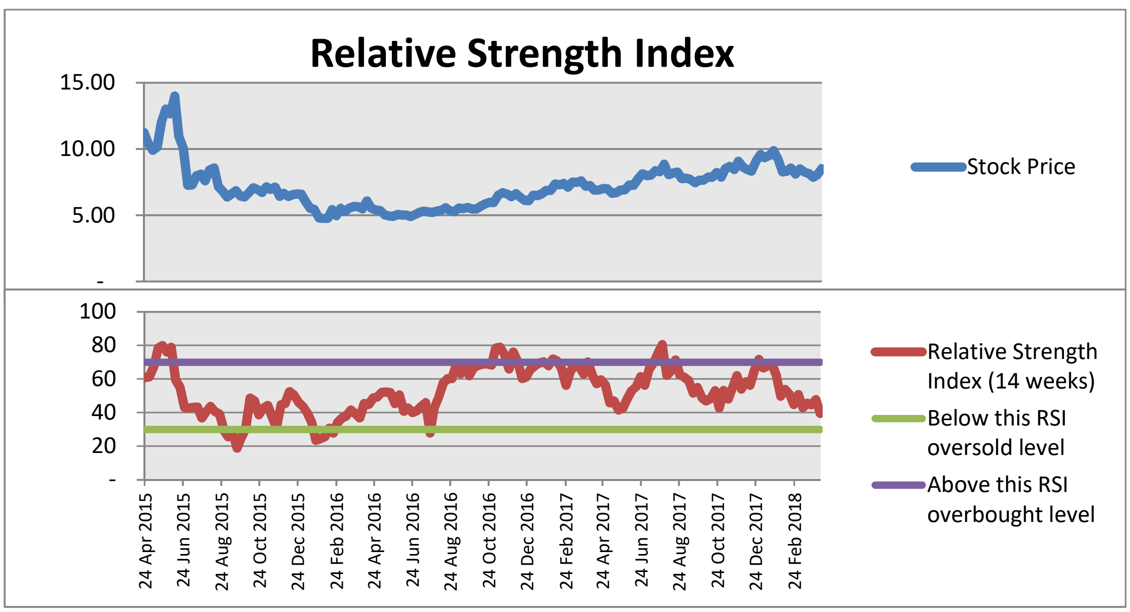
Stock Price & Technical Indicators



If the standard deviation of stock prices (as represented by the red bars) get higher (lower), it means that stock prices have become more (less) volatile.

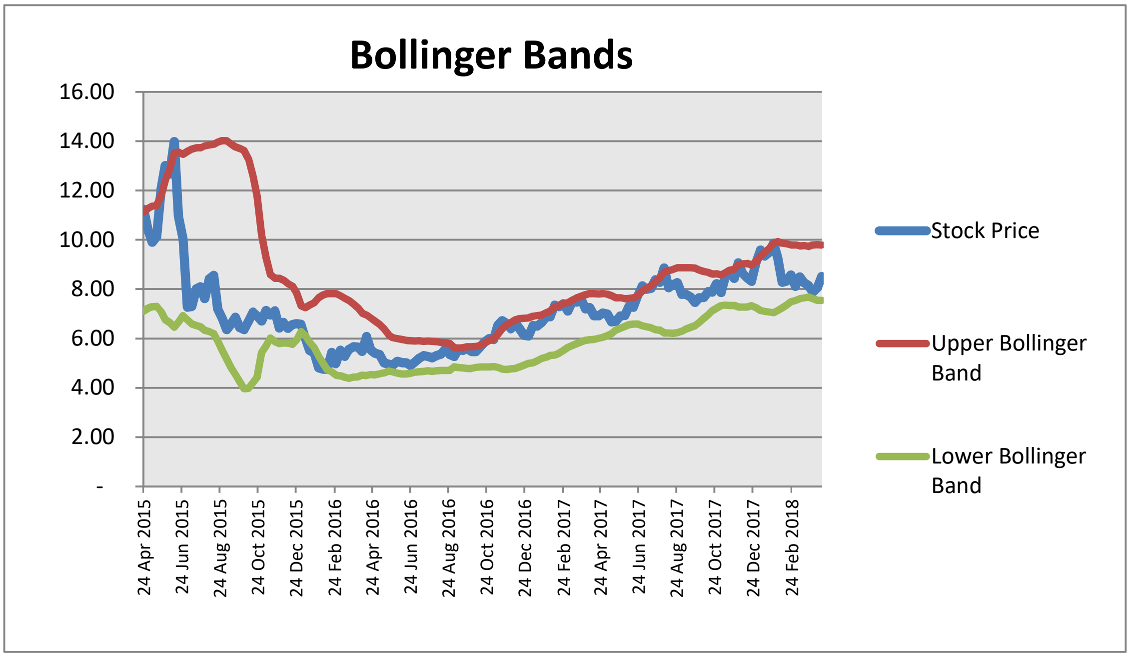


The 50-day/7-week moving average line crossed the 200-day/29-week line from the top in Mar 2018, which is a bearish sign.



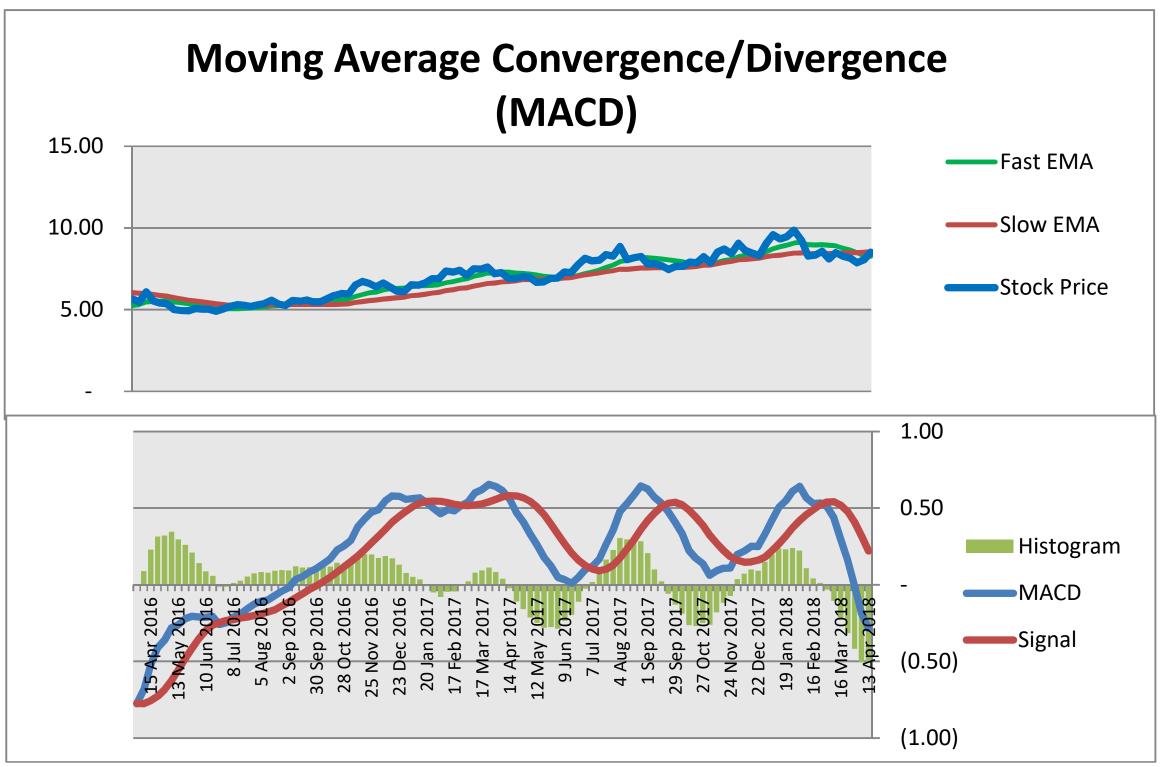
The Relative Strength Index is a momentum indicator that measures the speed and magnitude of price changes to detect whether the stock has reached overbought or oversold levels.

Based on the 14-week Relative Strength Index, the stock is in the neutral territory since 6 Apr 2018.



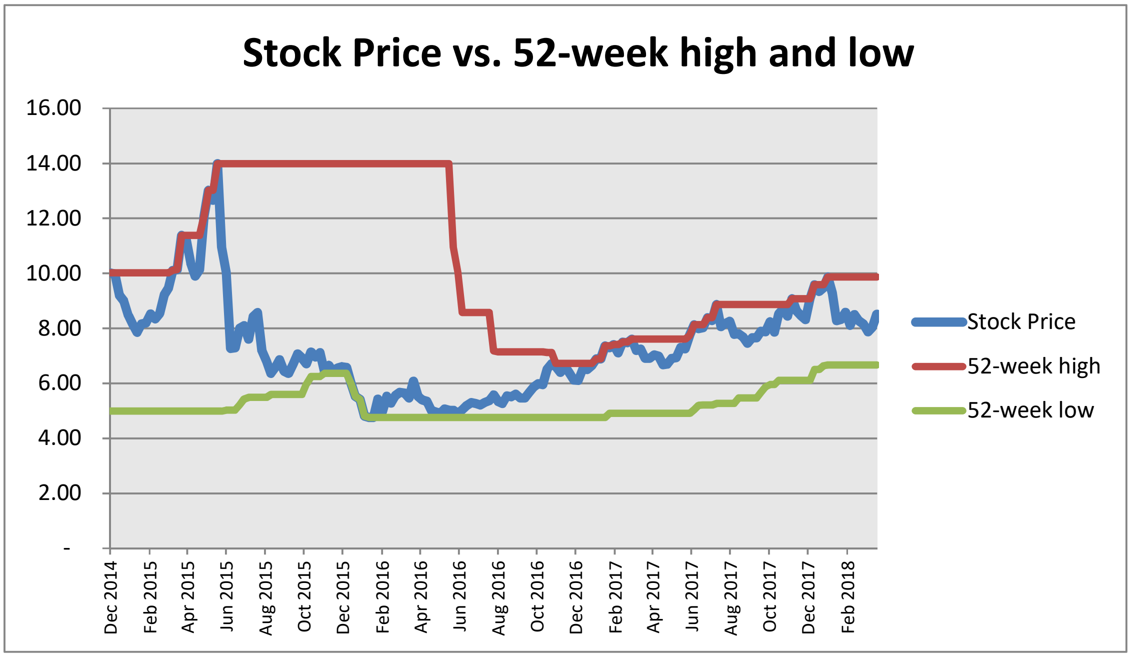
This Bollinger Band is a plot of two standard deviations (a measure of stock volatility) above and under the stock price. Based on this technical indicator, the closer the stock price is to the upper band, the more overvalued it is and the closer it is to the lower band, the more undervalued.

As at 6 Apr 2018, the stock is nearer to the lower band, which is an oversold situation.



The MACD is a momentum indicator that shows the difference between two moving averages of stock prices, a longer one for 26 periods and a shorter one for 12 periods. This "difference" is then smoothened out to trigger buy and sell signals as indicated by the histograms. If the histogram turns positive, it is a bullish signal and if it turns negative it is a bearish indicator.

As at 2 Mar 2018, the histogram has turned negative, which is a bearish indicator.



This is a technical indicator whereby a stock that is trading near its 52-week high is bought and a stock that is trading near its 52-week low is sold.

The stock, which is trading at CNY8.83 as at 23 Aug 2018, is nearer to its 52-week high, which is a bullish indicator.

Source of Data

Company description, historical financial statements data and price data are from gurufocus.com. Estimates are from gurufocus and/or 4-traders.com - Thomson Reuters.

Disclaimer

This report is for information purposes only and should not be considered a solicitation to buy or sell any security. Neither ProThinker nor any other party guarantees its accuracy or makes warranties regarding results from its usage.