# BALANCING GROWTH AND COST: A STUDY OF VANKE'S FINANCIAL MANAGEMENT TACTICS

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Department of Business Strategy, Boston College of Business Studies, Boston, USA DOI:https://doi.org/10.5281/zenodo.16023515 Abstract: Vector calculus is a foundational mathematical tool extensively utilized in the natural sciences. While it has proven to be a robust and practical framework, the question of its absolute validity remains open. The foundations of vector calculus demand formal-logical scrutiny to establish a more comprehensive understanding. This work explores the critical analysis of vector calculus within the integrated framework of formal logic and rational dialectics. It offers an essential reevaluation of the foundations of vector calculus, emphasizing the necessity for a structured and logical basis. The unity of formal logic and rational dialectics provides a methodological foundation for this analysis. By doing so, this research contributes to a more profound comprehension of the theoretical underpinnings of vector calculus, ensuring its robustness and applicability in scientific practice.

**Keywords:** Vanke, Shareholding structure, Shenzhen Metro Group, Real estate Company, Top shareholders

#### 1. Introduction

# 1.1. Shareholdings and Background of the Company's Controlling Shareholders

The current shareholding structure of Vanke is very stable. Among the latest top ten shareholders of Vanke, Shenzhen Metro Group Co. Ltd. has become the largest shareholder with 27.9% of shares.

#### 1.2. Structure of the Company's Senior Management and its Changes (As shown in Table 1)

Founder of Vanke, Wang Shi, born in January 1951, originally from Jinzhai, Anhui Province, born in Liuzhou, Guangxi Province, graduated from Lanzhou Jiaotong University (formerly Lanzhou Railway Institute), majoring in water supply and drainage. 1989, Wang Shi gave up his original shares in the company, and his current shareholding in Vanke is quite small.

In 2000, Vanke was still an investment center-type headquarters structure. Under the general manager of the group, there are enterprise planning department, capital settlement center, financial management department, personnel administration department, general manager's office. By 2004, Vanke changed to a specialized managed headquarters structure. Under the General Manager of the Group, there are Management Line, Operation Line, Product Line, Internal Control Line and Board of Directors Office. In the management line, there are Group Office, Human Resources Department and Property Management Department; in the operation line, there are Financial Management Department, Capital Management Center and Corporate Planning Department; in the

product line, there are Planning and Design Department, Engineering Management Department and Marketing Department; and under the internal control line, there is Audit and Legal Affairs Department.

Vanke's management staff was also changed. Zhang Jiwen, Senior Vice President, is no longer in charge of the Southern Regional Group and is now in charge of the Education Sector; Sun Jia, Executive Vice President, is in charge of the Southern Regional Group and has been appointed Senior Vice President, and is no longer Executive Vice President and Treasurer; and Wang Wenjin, Executive Vice President, is the Treasurer of the Group. From the example of Vanke, prior to this adjustment:1, Chairman Yu Liang + President Zhu Jiusheng, constitute the strategic layer. 2. The three executive vice presidents, Zhang Xu, is in charge of the Business Development Center (including strategy, investment, operation, marketing, design, capital, customer relations, and research and development), Sun Jia is in charge of the Management Center (including finance, cost, manpower, information technology, and director's office), and Wang Wenjin is in charge of the Support Center (including branding, administration, planning and supervisory work, information communication, public affairs, legal affairs, and auditing). Thus, Yu Liang + Zhu Jiusheng + the three executive vice presidents constitute the decision-making layer that sets the direction and rules. 3. 5BG (Business Groups, including the four major regions + property) and 5BU (Business Units, including commercial, logistics, overseas, ice and snow vacation, and long term rental apartments) are under the responsibility of the Senior Vice Presidents and Vice Presidents respectively, and constitute the major businesses of Vanke.

And the structure of this restructuring is shown as Figure 1.

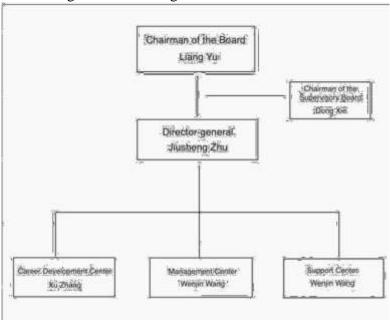


Figure 1: structure of this restructuring.

Sun Jia from the executive vice president, adjusted to the senior vice president, although are "vice president", but the core degree obviously become lower, from the referee into the athlete. Zhang Jiwen joined Vanke in 2001, served as vice president of Shanghai Vanke, design director of Vanke, senior vice president, from 2009 as the first person in charge of the southern region, internally honored as "Zhang Da", has a high reputation, and has made important contributions to the development of Vanke.

#### 1.3. Basic Competitive and Development Strategies of the Company

Vanke has recently put forward the business strategy of "shifting from development to development and operation". This is in fact an upgrade of Vanke's business model, pushing Vanke further towards an asset management platform type enterprise. But under the current financial management framework existing in Vanke, this strategy is not very friendly to the growth of net profit.

As we all know, Vanke's investment property is measured by the cost method, is unable to assess the value-added and need to depreciate, Vanke 2020 year-end investment real estate is close to 80 billion, according to 40 years of depreciation, a year of depreciation of about 2 billion yuan, the impact of about 1.5 billion yuan of attributable profit. There is no real estate company that owns investment real estate of more than \$50 billion in size that does not use fair value measurement, and all of them carry out appraisals to increase their value.

This back and forth has a greater impact on the growth of performance.

In addition, it is estimated that Indus has not been consolidated for the same reason. If property holdings are included in the group's consolidated statements without being evaluated for value-added, the assets and liabilities will be increased in vain, and Indus's operating results will not be able to add much to the group's overall performance under the influence of depreciation, and it will also drag down the group's overall ROE.

Therefore, under the management strategy of "shifting from development to development and operation", it is more important to address the issue of how to enhance the contribution of the operation business to the Group's performance.

The cost approach model will, firstly, drag down performance, secondly, fail to judge the quality of the operations of the various operating businesses, and thirdly, make it difficult to enhance the voice of the operating businesses in the Group.

#### 2. DuPont Analysis

#### 2.1. Solvency

#### (1) Short-term solvency analysis

In the course of the study, the author found that the firm's asset liquidity is positively related to the current ratio. Often, the financial position of a company is also affected by the current ratio, which produces more pronounced changes. Between 2018 and 2020, the company's current ratio is below the industry average. It is important to note that non-quick assets are an important component of the current ratio. After removing the non-quick assets, the management has to use the quick ratio as a basis to improve the solvency and liquidity of the company. It is generally accepted that this ratio should be maintained at least at 1:1 to be considered financially sound. The table shows that the quick ratio is also decreasing, indicating that it has poor short-term solvency. It is understood that indicators such as inventory turnover and accounts receivable turnover can also have a significant impact on a company's short-term solvency. The reason for this is that there is a strong correlation between the above financial indicators and cash flows as well as cash ratios. Vanke's cash ratio declined in 2019 before recovering in 2020 and the cash flow ratio is slowly increasing. This shows that the short-term solvency of the company is always on an upward trend.

#### (2) Long-term solvency analysis

As seen from the relevant indicators, Vanke enterprise assets and liabilities in the past three years are more than 80%, usually enterprise assets and liabilities in 40% to 60% is more safe and normal, however, real estate belongs to a more special industry. The reason for this is that operating in debt is the main mode of operation for real estate companies. Simply put, a business would use a loan to purchase land use rights from the state and complete the construction of the building. Subsequently, the enterprise will use the building as collateral and apply for another bank loan. In this case, the debt situation of such enterprises has little to do with the gearing ratio. Therefore, for the real estate industry, the net debt ratio can better reflect the corporate debt situation.

In practical terms, the net debt ratio of a company can be affected by the net assets as well as the amount of liabilities, resulting in more significant changes. It is important to note that shareholders' interest, cash flow, and the amount of debt are all core elements of a firm's net debt ratio. After repeated arguments, scholars generally agree that a firm's asset structure is closely related to its net debt ratio. In 2019, Enterprise has a net debt ratio of 33.87%. With a net debt ratio of only 18.09% in 2020, it has an extremely low debt ratio.

The total cash-to-debt ratio of a business is extremely important in the course of its operations. The reason for this is that a firm's risk tolerance and profitability are both affected by cash flow, resulting in more pronounced changes. It is understood that the business has a large amount of long-term debt and is under less pressure to service the debt. However, Vanke's cash flow is falling instead of rising, severely hampering its growth. In 2019, the enterprise's cash total debt ratio is not high. In 2020, the enterprise's total cash debt ratio gradually stabilizes.

#### 2.2. Profitability

Vanke's net sales margin declined about 2.4% from 16.55% in 2018 to 14.15 in 2020. This shows that in 2020, the profitability of companies shows a downward trend. In this case, the management has to continuously improve the strategic development plan based on the nature of the product. In this way, it helps companies to reduce their financial risks so that they can better cope with market competition.

Shareholders' equity is extremely important for firms. The reason for this is that shareholders' equity can have a significant impact on willingness to invest. Therefore, the management has to do its best to ensure that the shareholders' rights are not violated. In this, both return on net assets and return on total assets are core elements of return on investment. In recent years, the return on net assets and return on total assets of companies have become increasingly low. As a result, Vanke's ability to obtain returns on its capital has shrunk significantly.<sup>[2]</sup>

#### 2.3. Operational Capacity

The company's inventory turnover days are getting fewer and fewer, and the inventory turnover ratio is skyrocketing. As a result, a company's inventory becomes more liquid, and financial risk and storage costs will decline. Therefore, the management should continuously optimize the internal management mode to improve the inventory turnover rate while gradually widening the profit margin.

Typically, an enterprise's accounts receivable turnover is closely related to resource utilization. Specifically, accounts receivable turnover can have a significant impact on a firm's solvency, the speed of asset flows, and the incidence of bad debts. Therefore, the management has to take into account the current situation of the enterprise and formulate a detailed collection plan. In this way, the accounts receivable turnover rate is improved and the business is fully promoted. Vanke Enterprises is a real estate development company, the purchase of land and investment in construction are included in inventories, and the finished products are commercial properties. Since China often sells term homes, there are few accounts receivable, but instead, more advance receipts are reflected on the liability side. In this case, the firm's accounts receivable turnover is negatively correlated with inventory turnover.

In recent years, the current asset ratio of the firm has been relatively stable. It can be seen that there is not much change in the turnover rate of current assets of the enterprise. In other words, the profitability and operational efficiency of the enterprise are relatively satisfactory.

Vanke's total asset turnover ratio for several consecutive years has not changed much but in general has been low, which indicates a weaker sales capacity and a decrease in profits for the company. For enterprises, operational efficiency is closely related to the business cycle. At the same time, the profitability of the enterprise will be affected by the asset utilization rate, which produces more obvious changes. In this case, the management should take the asset structure as the basis, improve the internal management mode, improve the utilization rate of resources, and enhance the market competitiveness of the enterprise.

#### 3. Profit Quality Analysis

#### 3.1. Cash-to-Cash Ratio

Vanke A's cash received from sales of goods and services and revenue for the last five years are shown in the Table 1 below, respectively:

*Table 1: sales of goods and services and revenue for the last five years.* 

<i>y</i> 0	Cash received from sales of goods and provision of services	Revenue (billions of dollars)	cash-to-cash ratio
	(billions of dollars)		
2021	4641	4528	1.025
2020	4722	4191	1.127
2019	4327	3678.9	1.176
2018	3981	2976.8	1.337
2017	3684	2429	1.517

By looking at Vanke's 5-year cash-to-cash ratio, Vanke's decline in consecutive years has had a large negative impact on the realism of its profits.

The cash-to-cash ratio is an indicator that reflects how much of a company's revenue per dollar of income from principal activities is actually received in cash. Generally speaking, the larger its value indicates that the company's sales cash collection ability is stronger, the higher the quality of sales. This ratio is equal to or simply equal to 1. It indicates that the cash received from sales in the current period is simply in line with the sales revenue in the current period. The company's sales in the current period did not form a pending account, and the liquidity is good.

Vanke's sales-to-cash ratio for the last 5 years has simply been in a stable state, fluctuating within a small range. Moreover, the value is greater than one in all these years, which shows that Vanke is strong in sales cash collection, its sales quality is high, and it is running well by itself.

### 3.2. Earnings Cash Ratio Table

#### 2: Earnings Cash Ratio.

	Net cash flows from operating activities (billions of dollars)	Operating profit - finance costs (billions of dollars)	Earnings cash ratio
2021	411.1	525.3-13.8=511.5	80.3%
2020	531.9	799.6-43.8=755.8	70.3%
2019	456.9	766.1-33.3=732.8	62.3%
2018	336.2	675.0-17.4=657.6	51.1%
2017	823.2	508.1-18.7=489.4	168.2%

As shown in Table 2, the Earnings Cash Ratio reflects the relationship between the ratio of net cash flows from operating activities for the period, and in general, the greater the ratio, the stronger the quality of the company's

earnings. When the ratio is less than 1, it means that there are unrealized cash receipts remaining in the net profit of the enterprise for the current period, in which case, even if the enterprise is profitable, a cash shortage may occur, which may lead to bankruptcy in severe cases. [3] As can be seen from the data in the table, the realized realized investment income of Vanke in recent years has declined year by year, and the quality of investment income has decreased.

#### 3.3. Relationship between R&D Expense Ratio and Gross Profit Margin for the Past Five Years Table

3: Relationship between R&D Expense Ratio and Gross Profit Margin.

	R&D expense ratio	gross margin
2021	9.2 / 4528=0.20%	380.7 / 4528=8.41%
2020	6.7 / 4191=0.16%	415.2 / 4191=9.90%
2019	10.7 / 3678.9=0.29%	388.7 / 3678.9=13.06%
2018	9.5 / 2976.8=0.32%	337.7 / 2976.8=11.34%
2017	7.9 / 2429=0.33%	280.5 / 2429=11.55%

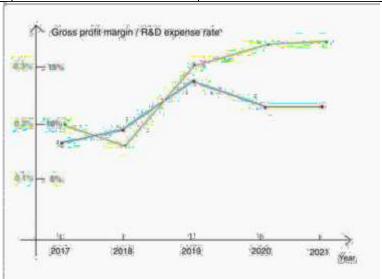


Figure 2: Relationship between R&D Expense Ratio and Gross Profit Margin.

As can be seen from Table 3 and Figure 2, there are R&D expense ratio and gross profit rate rising in the same direction, but there are also segments in different directions, and the effect of technological differentiation is not good.

# 3.4. Relationship between Sales Expense Ratio and Gross Profit Margin for the Past Five Years <u>Table</u>

4: Relationship between Sales Expense Ratio and Gross Profit Margin.

	sales expense ratio	gross margin
2021	128.1 / 4528=2.82%	380.7 / 4528=8.41%
2020	106.4 / 4191=2.53%	415.2 / 4191=9.90%
2019	90.4 / 3678.9=2.46%	388.7 / 3678.9=13.06%
2018	78.7 / 2976.8=2.64%	337.7 / 2976.8=11.34%

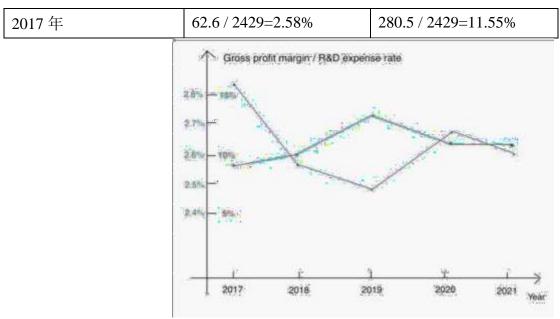


Figure 3: Relationship between Sales Expense Ratio and Gross Profit Margin.

As can be seen from Table 4 and Figure 3, there is no situation in which the gross profit margin is in the same direction as the sales expense ratio, so the brand differentiation effect is poor.

#### 4. Asset Quality Analysis

## 4.1. Overall Status of Assets

In recent years, by the industry consolidation and the impact of the epidemic, real estate enterprises to accelerate the "downsizing", asset impairment provisioning phenomenon is common, which also pulled down the level of net profit to a certain extent, and even become part of the main cause of corporate losses, the impact can not be ignored.

At present, the market downward pressure continues, real estate enterprises asset impairment losses "pain" or still inevitable. But in the long run, asset "slimming" is also a good signal for the industry to return to rationality and sound development. The following article will specifically analyze the current situation of asset impairment in the industry, the causes and the main risk points faced by real estate enterprises.

From the perspective of the 2021 financial report, many real estate enterprises have made large asset impairment provisions, and the size of the provision has increased significantly, resulting in different degrees of impact on net profit, and the head real estate enterprises are no exception. At the end of 2021, Vanke conducted a comprehensive impairment test of assets, and made asset impairment provisions of 3.53 billion yuan for some projects and individual equity investments, which is 1.55 billion yuan more than that at the end of 2020, and the total reduction of net profit from equity is about 2.55 billion yuan. China Merchants Shekou also recorded asset impairment of 3.39 billion yuan, an increase of 31.9% from the end of 2020.

Risky real estate enterprises is also the hardest hit by asset impairment, these enterprises to deal with liquidity difficulties, have through price cuts in sales, low-priced assets to return to the capital, thus facing greater challenges. 2021, Huaxia Happiness (600340), the provision of asset impairment amounted to

13.188 billion yuan, compared with 7.338 billion yuan in 2020 year-on-year increase of 79.7%. In addition, Sunshine City (000671), Blu-ray respectively, the provision of asset impairment of 6.929 billion yuan, 6.576 billion yuan, are in the industry's high zone.

Overall, after a period of rapid growth, there are few enterprises with "inflated" assets. As the industry returns to rationality, under the downward pressure of the market, more real estate enterprises have been driven by asset impairment. Especially in the second half of 2021, the industry is mired in liquidity difficulties, corporate defaults, mines, frequent occurrence of events, the confidence of homebuyers seriously frustrated, market demand into the winter period, sales price expectations, asset evaluation more cautious, which also led to large amounts of asset impairment phenomenon is common.

#### 4.2. Market analysis

Market uncertainty, inventory or aggravate the risk of asset impairment.

From the current industry inventory status, subject to policy regulation, capital constraints, real estate enterprises generally tighten investment, accelerate depolymerization, the overall inventory growth rate continues to slow down, the head of the real estate enterprises Biyuyuan, Vanke, China Sea, etc. The total amount of inventory is still leading, in addition to the Overseas Chinese Town, C&D International, Huafa, and other state-owned enterprises inventory is also ranked in the high zone. However, due to the strategic inertia of each enterprise, inventory structure, de-emphasis efficiency is different, the future risks faced are not the same.

In addition to the impact of the market, the risk of inventory decline also depends to a greater extent on the inventory turnover efficiency of real estate enterprises and the inventory backlog of existing houses. Combined with the enterprise inventory turnover rate and the proportion of existing housing inventory (completed inventory/total inventory), real estate enterprises with low inventory turnover rate and high proportion of existing housing inventory have a higher risk of inventory asset impairment. For example, although Hersen Creation has been actively making strategic adjustments and accelerating the depolymerization in recent years, the feature of "slow turnover" is still significant, with an inventory turnover cycle of only 0.15 in 2021, and the inventory of existing homes accounting for as high as 34.1%. In the context of the market downturn, housing price expectations are not optimistic, and the pressure to depolymerize, inventory, if further squeezed, will inevitably bring more asset impairment pressure.

The bottom of the industry is gradually apparent, asset impairment charges or subsequent contraction. At present, the market is still in the bottoming stage, under the principle of prudence, the reasonable provision of asset impairment has its necessity. There are real estate enterprises to protect the stability of future financial results, the implementation of a one-time provision.

In the medium and long term, real estate development to "stable" as the main keynote, through the sale, investment, financing, camp all-round policy has landed, implementation, regulation has basically hit the top, the bottom of the market gradually revealed, stabilization, consolidation is the development trend. Under this trend, asset impairment charges will also be contracted, according to the market recovery, some real estate companies may be able to reversal of losses on inventory write-downs, the formation of income.

Under the background of market cooling and low expectations, real estate enterprises have entered the peak period of asset impairment accruals. 2021 The large amount of accruals appear frequently, Vanke, China Merchants Shekou, Greenland, Xincheng and other real estate enterprises have a significant increase in asset impairment accruals, which all amount to billions of dollars, and bring varying degrees of impact on corporate earnings.

#### 5. Analysis of the Quality of Cash Flows

#### 5.1. Preliminary Analysis of the Overall Position of the Statement of Cash Flows

On the whole, the net increase in cash and cash equivalents of the Company for the year was RMB 6,992,137,600, with a large year-on-year increase. Among them, the net cash from operating activities amounted to 982,152.46 million yuan: the net cash flow from investing activities amounted to 15,710.83 million yuan; and the net cash from financing activities amounted to -30,766.72 million yuan.

#### 5.2. Specific Analysis

#### (1) Analysis of cash flows from operating activities

As can be seen from the cash flow statement, cash inflow from operating activities increased by 759.66% yearon-year, mainly due to a 19.65% increase in cash inflow and a 26.79% decrease in cash outflow for the period. Cash received from sales of goods and services" was 24.48% year-on-year, and the proportion of cash inflow from operating activities to total cash inflow rose to 71.00% from 67.99% in the previous year. This indicates that the vast majority of the company's total cash inflows come from operating activities.

It is easy to see that the company's ability to receive cash inflows from the sale of goods and provision of services has not weakened, and the main reason for the increase in net cash flow from operating activities is that cash inflows from operating activities increased while cash outflows decreased year-onyear.

#### (2) Analysis of cash flows from investing activities

As can be seen from the statement of cash flows, the company's net cash generated from investing activities increased more than last year. On the one hand, it shows that the company's long-term investment got investment return and the return received better cash, and on the other hand, it shows that the company's cash generated from the disposal of fixed assets has also increased. The proportion of cash outflow from investing activities in the total cash outflow decreased from 7.54% in the previous year to 0.88%, mainly due to the decrease of 89.51% in cash outflow from investing activities compared with that of the previous year, of which "net cash paid for acquisition of subsidiaries and other business units" accounted for 87.72% of the entire cash outflow from investing activities and decreased by 85.70% compared with the previous year. This indicates that the Company did not have any significant investment projects during the reporting period.

#### (3) Analysis of cash flows from financing activities

From the cash flow statement, it can be seen that the net cash flow from the company's financing activities amounted to -307,667.17 million yuan. The year-on-year decrease of 225.85% was mainly due to the cash paid by the company for debt repayment distribution of dividends, profits or interest repayment. Since the company's net cash flow from operating activities is positive, and the net cash flow from investing activities is also positive, there is sufficient cash to meet the cash required for financing activities to repay debts to distribute dividends, profits or repay interest. That is, the clubhouse, the company's own funds are partly used to invest in new projects, partly used to pay cash dividends, debt repayment, there is still a large amount of cash on the books.

#### 6. Forecast of the Company's Development Prospects

Vanke has \$17.3 billion in short-term borrowings, \$36.985 billion in non-current liabilities due within one year, \$77.146 billion in long-term borrowings, and \$27.058 billion in bonds payable.

If there is a debt risk in the short term, Vanke's 94.35 billion in money funds minus 17.3 billion in short-term borrowings and minus 36.985 billion in non-current liabilities due within one year equals 40.065 billion in money funds. In other words, Vanke can pay off all of its liabilities within one year at once, and even has 40.065 billion dollars of money funds left over.

Then the long-term liabilities are all replaced to see, 40.065 billion plus 4.316 billion available-forsale financial assets, equal to 44.381 billion, minus 27.058 billion of bonds, equal to 17.323 billion, plus 66.45 billion of long-term equity investments and 18.98 billion of investment properties, equal to 102.753 billion, minus 77.146 billion of long-term loans, equal to 25.6 billion. billion. That is to say, if we force Vanke to pay off all the debts slowly, that is, the existing family background is also no problem, can still be left 25.6 billion. At the same time, Vanke's interest-bearing liabilities total only 44.45 billion, and the financing rate is less than 5%, according to 5% to calculate, the cost of capital is less than 2.2 billion per year.

The current market capitalization of Vanke is more than 320 billion. Static point of view is not like the new city holdings and sunshine city has a significant increase in market value of the imagination space. But as I said in the

previous section, Vanke can actually pay off all of its short-term liabilities immediately, and has the ability to pay off all of its liabilities without selling houses. This implies extraordinary safety.

At the same time the existing Vanke's total land bank of 60 million square meters, unsold equity land bank of 45 million square meters, almost can be completed in nearly a year and a half time to realize the net profit of deconstruction.

If the real estate market is difficult in the future, Vanke will have a large amount of cash on hand to make acquisitions and will not be affected by the cost of financing. It will have no trouble diversifying into logistics real estate, commercial real estate, long term rental apartments, and Vanke properties. So is it a good deal to spend \$320 billion on a risk-free Vanke with a static value of \$270 billion? At the same time, Vanke will continue to grow in the future. About 20% to 30% annual net profit growth.

So even if the real estate market slows down, the value of the goods can not be quickly realized,

Vanke will not be affected in any way, and even still have enough money to buy mergers and acquisitions.

#### 7. Summary

Real estate has some cyclical properties, but it is not completely cyclical. Because the upward cycle is so long, valuation has to be viewed in a comprehensive manner. Vanke A valuation is currently low, second only to the extreme case of 2014.

Housing prices are falling, land prices continue not to fall, real estate companies are not having a good time. The upstream and downstream of the industry chain, the upstream land belongs to the state monopoly type resources, the price is strictly controlled, very strong. The downstream is related to the national economy and people's livelihood, is also subject to long-term control, can not arbitrarily increase prices. In such a crowded space at both ends, the company's profit margin is very fixed, the only thing you can do is to expand the market share, and to expand the market share, the need for a very large capital requirements, if reflected in the debt side, it means a very big risk. This is also the root cause of the current risk of frequent mines in real estate enterprises similar to Evergrande and Wanda.

But even though the industry is not doing well right now, Vanke's sales unit price is still very strong and it is rare to see Vanke trying to maintain the quality of its properties.

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