Financial Analysis of Enterprises under Harvard Framework: A Comparative Study of Three Real Estate Companies

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Abstract. As a new financial analysis method, Harvard Analysis Framework is quite different from the traditional financial analysis method. It mainly investigates enterprises from four aspects: strategic analysis, financial analysis, accounting analysis and Prospect analysis. Traditional financial analysis mostly reflects the financial situation and operating results, and uses financial data to analyze the production and operation of enterprises. Harvard analysis uses the combination of non-accounting factors and accounting factors to better understand the actual operating environment and state of enterprises, and comprehensively reflects the real situation of the factors affecting the operation of enterprises. Using Harvard analysis framework, this paper takes three well-known real estate companies as examples, and puts forward suggestions for the future development of similar enterprises.

Keywords: Harvard Analysis Framework; Real Estate Companies; Financial Analysis.

1. Introduction

1.1 Definition of Harvard Analysis Framework

Harvard Framework is to evaluate the company's strategic objectives and competitive strategies by analyzing the internal and external environment as well as the advantages and disadvantages of competition. Through careful study of the company's financial statements, it predicts the future development trend of the company, and puts forward corresponding improvement measures and relevant suggestions. Harvard analysis framework consists of four parts: strategic analysis, financial analysis, accounting analysis, and prospect analysis. Strategic analysis is the starting point of financial statement analysis in Harvard Analysis Framework. Its purpose is to determine the main profit motives and operational risks, and to evaluate the profitability of enterprises. Accounting analysis is based on strategic analysis, aiming at evaluating the extent to which corporate accounting reflects the basic operating reality. The goal of financial analysis is to use financial data to evaluate the company's current and past performance. Prospect analysis focuses on forecasting the company's future. Based on strategic analysis, accounting analysis and financial analysis, it makes a scientific forecast of the company's future, points out the direction for the development of enterprises, and provides decision support for strategic decision makers (Huiqin, 2018).

1.2 Advantages and Application of Harvard Analysis Framework

Compared with traditional analytical methods, Harvard analytical framework has great advantages. Traditional methods only analyze the data of enterprises, so the investment decisions made by traditional methods are often misleading. The Harvard Financial Analysis Framework, with a brand new and strategic perspective, analyzes the performance reports of enterprises from four aspects. The analysis framework combines quantitative analysis with qualitative analysis, which can effectively grasp the direction of financial analysis. Through the research of Harvard analysis framework, the traditional management concept of enterprises can be changed and the competitive advantage of enterprises can be enhanced in the market. Therefore, it is of great significance to learn Harvard Framework to analyze the company's financial situation (Jundong, 2017).

Next, the Harvard analysis framework is used to analyze the financial situation of several real estate companies in order to provide useful reference for the relevant personnel.

2. Strategic Analysis

2.1 Analysis of Real Estate Industry

After entering the new century, the real estate industry has experienced more than 30 years of growth and entered a period of rapid development. With the substantial growth of housing sales, accompanied by the rise of land prices and housing sales prices. The real estate industry has a very high correlation. Therefore, while the real estate industry is booming, it has promoted the development of the land market, reinforced concrete and other construction industries, and the interior decoration industry has begun to be valued and developed. All these phenomena prove the rapid development of the national economy (Ye, 2015). In summary, according to the characteristics of the industry environment of A real estate, Porter's Five Forces Model is used:

2.1.1 Peer Competitors

Peer competitors are the most influential of the five factors. With the rapid development of China's real estate industry, competitors continue to enter the industry to share the high-profit cake. As a result, many real estate enterprises use their own advantages to rise rapidly, forming dozens of super-large real estate groups. Because there are many real estate enterprises, there is very fierce competition and low concentration. In this fierce competition environment, if A real estate wants to gain a place, it needs to have core competitiveness in many ways in order to survive and develop, such as cross-regional development competitiveness, resource possession competitiveness, scale competitiveness, brand competitiveness and financing competitiveness. Therefore, in the real estate industry, peer competitors pose a great threat.

2.1.2 Threats from Potential Competitors

Under the new situation of the real estate market, the threshold to enter the real estate industry has increased year by year, and the concentration of the industry has also increased year by year. Real estate enterprises are developing towards the trend of scale, collectivization and branding. After the outbreak of the financial crisis in 2008, some of the weaker SMEs were eliminated. It is not easy for non-real estate enterprises to occupy a place in the real estate industry. If they do not measure their own advantages, it is not a good thing for enterprises to rush into the real estate industry. Therefore, for A, potential competitors pose less threat.

2.1.3 Bargaining Power of Suppliers

As the most basic resource of real estate developers, the government in monopoly position is the only supplier, and there is weak price elasticity of land. Therefore, the bargaining power of real estate enterprises in acquiring land use rights is not high. However, in other aspects, such as building materials and equipment suppliers, bidding for construction projects, design and construction of specific projects, real estate enterprises have relatively high bargaining power because of their wide selection range.

2.2 Comparing the Basic Situation of Enterprises with the Representative Competitive Enterprises

A Real Estate was founded in 1992 and is now one of 121 large state-owned enterprises under the supervision of the State Supervisory Committee of the State Council. In July 2006, it was listed on the Shanghai Stock Exchange. In 2009, it ranked first in the comprehensive value of listed real estate companies. in 2018, Real Estate A achieved the contracted area target of 12.799.3 million square meters, maintained a high-speed and stable development trend, and has entered the stage of large-scale development. In Guangzhou, Foshan, Beijing, Shanghai, Wuhan, Chongqing, Shenyang and other 18 cities, a national strategic layout has been formed and embraced. There are 44 holding companies whose main business is to develop high-end high-quality residential and urban landmark commercial property. In the field of residential development, a unique commodity sequence has gradually been formed, named as "health", "treasure", "landscape" and "noble" series (Jiachen, 2017).

Group B was registered in Shenzhen in 1988. It began to operate real estate business in 1993. In 1996, it completed the joint-stock reform and listed on the Shanghai Stock Exchange. The core business of Group B includes the development of residential real estate, commercial real estate, property management services, real estate finance and so on. The most important core business is the development of commercial housing. At present, B has achieved the layout of seven major regions in the country, namely South China, East China, North China, Central China, Northwest China, Northeast and Southeast China. In 2012, B has established a commercial real estate business platform, which is responsible for the core business of urban complex development and operation management. Property is an important part of Group B's development at this stage. However, after 2010, enterprises are facing huge financial loopholes, declining sales and profit problems (Lijuan, 2017).

C Enterprise Co., Ltd. was founded in 1984, headquartered in Shenzhen, China. In 1991, C was listed on the Shenzhen Stock Exchange and became the second company listed on the Shenzhen Stock Exchange. C's real estate development is mainly concentrated in the Pearl River Delta, Yangtze River Delta and Bohai Rim coastal areas. C's real estate is located in more than 50 cities in China. It began to invest in overseas markets in 2013 and has now entered five overseas cities. After more than 30 years of development, C has become the largest professional residential development enterprise in China. By 2018, its sales scale ranked first in the world. The company has a high brand awareness, great added value and good social image. In product development, C pays attention to environmental protection and actively participates in green building. Every year, it invests a lot in product development. As the largest real estate developer in China, C is a competent enterprise. C's outstanding performance in all aspects of the industry has set an excellent example for other companies in the same industry, and has been playing a leading role in the real estate industry in China (Tan, 2015).

2.3 Competitive Advantage of Enterprises

A Real Estate has outstanding strategic management capabilities. In 2018, the strategy of "3+2+X" regional layout gradually developed, forming a market of "first-tier and second-tier cities as the center, developing the market of third-tier and fourth-tier cities". Promoting sustainable development strategy, forming a two-line development model. Establish excellent brand concept, development concept and product characteristics, and raise "harmony" to the height of the company's brand building. In order to create excellent corporate culture and staff culture, A has absorbed a series of real estate industry talents and enterprise management talents. A has a rich product line, covering the mainstream residential and commercial forms in the current market. Current company strategy is based on product specialization and related diversification. Based on the world trend in the company's product production, A cooperates with the world's top design companies to develop new real estate projects. A company has greatly improved in terms of quality management and living comfort.

A is also very forward-looking in terms of investment. A's long-term strategy is to insist on housing industrialization and use industrialized housing products to ensure its steady investment routes. Specifically, it is to use housing industrialization to reduce costs, improve scale efficiency and maintain high-speed turnover on the basis of low profit margin. In product development, A has identified target customer groups and developed residential products according to customer characteristics. Through in-depth investigation and analysis, product development aims at mid-to-high-end urban residential buildings. In addition, because A has always adhered to the principle of market-oriented access to development land through a standardized way, so the general location of land acquired by A is not good, often located in the suburban junction. This kind of area is most suitable for developing commercial residences for white-collar workers, so its business scope is further limited to commercial residences mainly for ordinary white-collar workers. A is positioned in the development of urban residences. Through different product series, it meets different customer needs and occupies different market segments (Shuangshuang, 2017).

3. Financial Analysis

3.1 Solvency

The solvency of the real estate industry mainly refers to whether the company has the ability to repay after the debt matures, and also refers to the safety of the company's financial situation. The solvency of a company can be divided into short-term solvency and long-term solvency. The liquidity ratio and the quick ratio reflect the short-term solvency. From a static point of view, these indicators reflect the ability of current assets to repay current liabilities, while the asset-liability ratio reflects the company's long-term solvency, mainly the ability to repay the principal and interest of long-term debt (Financial Center of Beijing Normal University. 2008). Because of the particularity of the real estate industry, it is not reasonable to just simply consider the ratio of assets to liabilities. The prepaid account in liabilities cannot be simply regarded as a liability. The advance receipt is actually unrealized income, which is recognized as income only when the owner actually receives the house. It is necessary to compare the asset-liability ratio with the actual asset-liability ratio excluding the advance receipt. Following are three real estate companies' debt serviceability analysis indicators from 2015 to 2018:

Table 1. A company's Solvency Index (unit: yuan)

Index	2015	2016	2017	2018
Liquidity ratio	2.92	2.08	2.18	2.24
Quick ratio	0.29	0.31	0.31	0.4
Asset-liability ratio	94.12%	93.83%	93.56%	93.47%
Actual debt ratio	50.47%	50.57%	52.61%	56.30%

Table 2. B company's Solvency Index (unit: yuan)

Index	2015	2016	2017	2018
Liquidity ratio	2.16	2.36	2.20	2.33
Quick ratio	0.59	0.67	0.66	0.66
Asset-liability ratio	85.2%	84%	82.8%	80.4%
Actual debt ratio	54%	55.2%	54%	63.6%

Table 3. C company's Solvency Index (unit: yuan)

Index	2015	2016	2017	2018
Liquidity ratio	1.69	1.68	1.61	1.61
Quick ratio	0.44	0.49	0.41	0.52
Asset-liability ratio	92.4%	93.6%	93.6%	92.4%
Actual debt ratio	48%	52.8%	60%	57.6%

As can be seen from the figure above A, due to the influence of the purchase policy in 2015, borrowing new short-term loans from 2015 to 2016 has reduced the short-term solvency. After 2016, the company adhered to the scientific strategic policy, developed a large number of new projects, hoarded a large number of inventories, and gradually improved its short-term solvency compared with C.

In terms of short-term solvency, from 2015 to 2018, the liquidity ratio and quick ratio of B and A are significantly higher than those of C. Compared with B and C, except 2016, B is significantly better than A, and the other years are similar. Secondly, B outperformed C and A in terms of asset-liability ratio, while A and C had little difference in asset-liability ratio between 2015 and 2018. The financing of Group B was mostly long-term borrowing and its current liabilities were relatively small. Therefore, in the analysis of short-term solvency, the three real estate companies ranked were B, A and C.

In terms of long-term solvency, because the advance receipt in the liabilities of real estate enterprises is the future income of the company, it does not constitute a real pressure to pay off debts. After deducting the advance receipts from the liabilities, the asset-liability ratios of B were 54%, 55.2%, 54% and 63.6% respectively in these four years, while those of A were 50.47%, 50.57%, 52.61%, 56.30%. Because of A's strong overall strength, financing strategy could be well promoted. Enterprises could get a lot of funds by relying on its comprehensive strength. A used financing to play the role of financial leverage. It could be seen that A's long-term solvency was stronger than B's.

3.2 Operational Capability

Real estate needs to invest a lot of resources, so the operation ability of real estate companies is closely related to the investment of assets. The basic operation capability is to analyze the actual situation inside the enterprise. Therefore, inventory turnover rate, accounts receivable turnover rate and total asset turnover rate are important indicators of operational capacity. The following are important indicators of operational capacity of three real estate companies from 2015 to 2018:

Table 4. Important Indicators of Company A's Operational Capability

Project	2015	2016	2017	2018
Inventory turnover	37.10%	43.60%	46.19%	48.98%
Receivable turnover rate	53.35	43.98	47.52	39.072
Total asset turnover rate	28.94%	32.92%	35.30%	35.78%

Table 5. Important Indicators of Company B's Operational Capability

Project	2015	2016	2017	2018
Inventory turnover	32.4%	39.6%	42%	50.4%
Receivable turnover rate	56.2	54.45	68.39	72.98
Total asset turnover rate	34.8%	40.8%	36%	44.4%

Table 6. Important Indicators of Company C's Operational Capability

Project	2015	2016	2017	2018
Inventory turnover	30%	33.6%	38.4%	38.4%
Receivable turnover rate	55.42	72.76	65.45	70.64
Total asset turnover rate	33.6%	37.2%	38.4%	36%

The figure of A shows that the turnover rate of total assets increased rapidly from 2015 to 2017, which shows that the operating efficiency of A real estate to total assets is increasing year by year and the quality of operation is also increasing year by year. The "3+2+X" regional layout strategy should be continued to adhere, but the growth rate slowed down during 2017 to 2018 due to the "fast turnover" model. The excessive pursuit of "fast turnover" mode can easily lead to quality problems, and it has a certain impact on the credibility, internal management and anti-risk mechanism of enterprises.

As can be seen from the table above, the assets operating capacity of B and C varies in fluctuations. From 2015 to 2018, B's overall operating capacity was stronger than C'. B's inventory turnover rate was rising, reaching a peak of 50.4% in 2018. Inventory turnover of A and C has been rising for four years, and turnover of A and B was much higher than that of C. From the total asset turnover rate, the overall trend of B was rising in large fluctuations, C was rising in small fluctuations, A was rising steadily year by year. Thus, A's operating capacity was better than C's and B's, and C's operating capacity was more stable than B's.

3.3 Profitability

Profitability refers to the profit that can be obtained in a certain period of time. The higher the profit, the stronger the profitability of the enterprise. Profitability can not only measure the performance of the company, but also find out the problems in the management link through the

profitability (Zhichao, 2017). The index of profitability is the gross profit rate of the main business and sales, net interest rate on sale and net asset income. The indicators for the three real estate companies from 2015 to 2018 are as follows:

Table 7. A company's profitability index

Financial Index	2015	2016	2017	2018
Gross Interest Rate of Main Business (%)	25.46	22.61	19.97	19.62
Net interest rate on sales (%)	18.79	17.38	15.42	15.66
Net asset income (%)	42.91	21.86	20.71	21.12

Table 8. B company's profitability index

Financial Index	2015	2016	2017	2018
Gross Interest Rate of Main Business (%)	47.17	38.45	31.61	34.24
Net interest rate on sales (%)	19.2	15.6	15.6	13.2
Net asset income (%)	19.2	18	15.6	15.6

Table 9. C company's profitability index

Financial Index	2015	2016	2017	2018
Gross Interest Rate of Main Business (%)	34.42	43.73	37.28	35.72
Net interest rate on sales (%)	19.2	18	16.8	16.8
Net asset income (%)	24	25.2	25.2	22.8

With the relaxation of A's policy and the gradual elimination of the initial price, the rate of interest rate decline began to slowly slow down. [A's real estate sales net interest rate is higher than C's, and after 2016 began to exceed B's. The net interest rate of A real estate sales slowly declined from 2015 to 2017 and returned to a slight increase from 2017 to 2018. Therefore, the formation of strategic layout is very helpful to improve the downward trend of A real estate affected by policies.

From 2015 to 2018, net sales interest rates of A fell first and then rose, while B and C were on the downward trend. B fluctuated more than C, showing that A's profitability was more stable than B's and C's, but B and C's sales ability was strong, above the industry average level. The return on net assets reflects the profitability of enterprises' net assets. The return on net assets of B has been decreasing in the past five years and is lower than that of A and C. When the return on net assets of B and A has been decreasing year by year, C can maintain a relative stability, indicating that C has a relatively strong profitability.

4. Prospect Analysis

4.1 Developing Commercial Real Estate and Implementing Light Asset Model

China's real estate industry has adopted the heavy asset model since its beginning of development. However, with the change of China's domestic market and the government's regulatory policies, the original heavy asset profit model of real estate enterprises is facing challenges. Therefore, the real estate industry has begun to seek new ways of development. One of the choices is to develop the light asset model. The main way to develop light assets is to increase new ways for businesses to make profits. For example, Wanda Real Estate began to enter the hotel industry. Overseas Chinese Town has developed Happy Valley project, developed tourism products, etc. The light assets model has the advantages of small investment, quick return and low risk, which can avoid the impact of policy adjustment on enterprises and maintain their sustainable business income (Rong, 2008).

4.2 Increased Differentiation of Real Estate Enterprises

Speeding up the differentiation of real estate enterprises is another development prospect of the industry. Leading enterprises focus on diversified development, while small real estate enterprises

choose multiple transformation. The differentiation of enterprises is mainly reflected in the input of land market. In 2015, the proportion of benchmarking enterprises in China's real estate industry in first-tier cities exceeded 48%. It is increasingly difficult for small and medium-sized enterprises to obtain high-quality land. For large-scale real estate enterprises, their development is more diversified. They take advantage of their advantages in real estate development and construction. Most of the new products are based on their own traditional products. Because of the high cost of capital acquisition, fierce competition and difficulty in capital operation, small and medium-sized enterprises cannot compete with the first-tier enterprises. Some medium-sized real estate enterprises begin to involve new business such as health, finance and so on while developing their main business, while small and medium-sized enterprises choose to withdraw completely.

5. Strategic Recommendations

5.1 Pre-financing Planning and Controlling the Scale of Financing

In view of the fact that the liabilities of real estate enterprises are greatly influenced by macro-control policies, the real estate industry in China is in a great fluctuation. Faced with such industry situation, Chinese real estate enterprises should learn from the financing experience of Company A, such as broadening financing channels, reducing financing costs, or financing from overseas financing markets.

The financing of real estate enterprises should be more accurate and prudent. At the same time, according to industrial investment planning and pre-financing strategy, external financing should be launched in advance to maintain the stability of financial leverage. Only in this way can ensure the efficiency of project management and fund utilization and maintain the stability of asset-liability ratio.

5.2 Strengthening Risk Assessment of Land Investment

For large and medium-sized real estate enterprises, with the expansion of investment scale, operational risk will also increase. Therefore, it is necessary to control the investment budget, especially to strengthen the budget of land investment, integrate investment analysis tools and methods, take into account both benefits and risks, improve the quality of investment, save investment costs, and achieve the goal of reducing operational risks. Cheap land can be acquired through mergers and acquisitions and other means, as a necessary resource for development reserve. At the same time, risk early warning and handling mechanism should be formulated, and land investment strategy should be studied and scientifically deployed.

5.3 Accelerate Strategic Upgrading and Transformation to Adapt to Market Changes

From the analysis of this paper, it can be seen that China's real estate industry has some problems, such as serious macro-control by the state, immature development of the industry, narrow financing channels, high financing costs, huge investment and so on. The downward trend of the real estate industry shows that the major real estate enterprises are under great pressure in terms of inventory and capital, and there are high business risks (Lianger, 2018).

Faced with this background, most of China's large-scale real estate enterprises have made transformation attempts, and the development direction of real estate enterprises has shown a diversified trend. More and more enterprises have begun to expand commercial real estate, property services and other new real estate products. A is worth learning in this respect. A real estate has created a strategic model of combining light and heavy assets with real estate management as the main part and real estate finance and community consumption as the supplement. These are the transformation measures taken by real estate enterprises in the face of market changes. The representative transformation measures are to develop new business models. For Chinese real estate listed companies, the establishment of a profit model of light assets can help enterprises develop healthier financial strategies. Through the light assets model, under the same asset's conditions, enterprises can maintain a larger scale of operation and gain a larger market share. Enterprises can get rid of the dependence of performance growth on equity financing and improve the ability to

feedback shareholders. Through this mode, they can also reduce the pressure of financing and reduce financial expenditure. In the aspect of real estate finance, enterprises need financial innovation to improve the ability of asset management and accumulate management experience. Real estate enterprises under the light assets model can reduce their own investment, use other resources, and ultimately achieve greater value. The real estate industry has the characteristics of high investment cost, long payback period and high investment risk. Therefore, it is more significant for enterprises to have enough cash and smooth turnover.

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