

Comparisons of PE and PB between SDB and Vanke A

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Abstract

Due to real estate and financial industry respectively characterized by strong and weak periodicity, this article aiming to investigate which kind of cyclical industry in the listed companies will Price/Earnings (PE) and Price/Book value (PB) be more suitable for evaluating selects the data of Shenzhen Development Bank (SDB) and Vanke A from Feb. 28 1991 to June 30 2009, uses mean-variance comparison method and analyzes their PE and PB. The results are that PE is more suitable for the evaluation of SDB and PB is more suitable for the evaluation of Vanke A. It shows that to some extent PE is more suitable for the evaluation of weak cyclical industry and PB is more suitable for the evaluation of strong cyclical industry.

Keywords : Price/Earnings (PE), Price/Book value (PB), Mean-variance, Periodicity, Evaluation

Introduction

Cyclical stock which is the stock type with the largest number refers to the stock of which the dividend payment is very high (of course, stock price is relatively high), and the stock which fluctuates with the ups and downs of economic cycles. The real estate is the typical strong periodic industry. Take Vanke for example, when the economy is growing rapidly, the market demand for the products of this industry is also increasing and the performance improvement of the company will be very obvious then its stock will attract great concern of investors but when the economy is gloomy, the investment in fixed assets is decreasing and the demand for the products is declining so the performance and the stock price will fall back quickly. Huang Hao using econometric methods researched the objective existence of China's real estate cycle in the empirical study of China's real estate cycle and indicated that there was a positive relationship between real estate cycle and macro-economic cycle in the country and the wavelength of one was in accord with the other on the whole (Huang, 2003). While the financial service sector (excluding insurance) with SDB as its representative also has significant cyclical features for it is closely related with business and resident consumption but belongs to weak cyclical industry relatively with the real estate. Li Qun-rong in the research on cyclic swing of real estate and risk of commercial bank mortgage loan investigated the relationship between real estate and commercial bank. Behind the rapid increase of China real estate investment and the booming development of real estate industry, there was a large-scale inflow of commercial bank's financial capital for real estate. But for the single financing channel, commercial banks become the main undertaker in real estate financial risk and the risk was continuous accumulating in the period of economic expansion which had infinite fatalness. Once it broke out in recession, it would rapidly spread to the entire financial system and even affect the stability and development of the national economy(Li, 2004).

Among the important indexes which reflect the investment value of cyclical stocks PE refers to the ratio of the market price per common share and earning per common share and PB refers to the ratio of the market price per common share and book value per common share. They are both the widely used tools for assessing the value of stocks so many scholars conduct studies of the effectiveness of PE and PB. In reality, the use frequency of PE is much higher than PB because PE directly reflects the earning ability of one enterprise thus it decides the expected revenue of stockholders and in similar the researches of PE are much more. Shang Yue analyzed the influence factors of PE in listed companies(Shang, 2007); He Hong-lei using multiple regression models analyzed the influence factors of PE from macro and micro and it had a certain guiding function to the analysis of the actual stock market(He, 2008). While Chu Chao believed that investors could not excessively take PE as the investment basis because the computing formula of PE itself had defects and the authenticity of data sources could not be ascertained besides there were different mistaken ideas when investors used the index and they would misemploy it(Chu, 2008). Thus PE and PB affect the evaluation of stocks in different degrees.

Foreign scholars also research on the evaluation of stock. Bakshi Gurdip and Chen Zhiwu developed a stock evaluation model and the generated stock evaluation formula had three variables to input: earning per share, expected increased revenue and interest rate by proposing three kinds of assumptions (Bakshi and Chen, 2005). And there are many researches in the point of the relationship of the enterprise revenue and book value. For example, Ballas Apostolos A. and Hevas Dimosthenis L. discussed the differences between evaluations of earning and book value: Was it regulation influence or industry influence? (Ballas and Hevas, 2005) Foreign scholars' researches on evaluations of stocks are based on foreign data and they can not be necessarily adjusted to the domestic situation, moreover they didn't explain the relationships among PE, PB and cyclical stocks.

Therefore using the domestic stock data from the year 1991 to 2008, combining the features of cyclical stocks and adopting the mean-variance comparison method to the evaluations of stocks of Vanke A (strong cyclical) and SDB (weak cyclical), the paper investigates and obtains which kind of cyclical industry in listed companies will PE and PB be more suitable for evaluating.

The data in this article derive from RESSET financial research database and the paper adopts the month datum of PE and PB of Shenzhen Development Bank (SDB) and Vanke A from February 28, 1991 to June 30, 2009 and uses Excel software to process and analyze the datum.

1. Comparisons of PE of SDB and Vanke A

In December 1990 and June 1991 Shanghai Stock Exchange and Shenzhen Stock Exchange were established in succession and China security market was formally formed. As a new security market China security market has made great achievements in these ten years but also has occurred severe fluctuations many times. The paper gets the datum of PE of SDB and Vanke A since 1991 from month stock comprehensive data and uses Excel to get the graph of comparison of PE between SDB and Vanke A (Figure 1), the graph of year-on-year growth rate comparison of PE between SDB and Vanke A (Figure 2) and the graph of sequential growth rate comparison of PE between SDB and Vanke A (Figure 3), as follows:

As can be seen from Figure 1 the ups and downs of PE of SDB and Vanke A are closely related with the development of the stock market in these years. China real estate industry has begun to take shape as the result of the development since 1980s while from 1992 to 1993 the relative abnormal development also gave the world a warning. The development of the real estate industry has affected the overall development of the national economy to a great extent. Into the 1990's, along with the establishment of Socialist Marketing Economics Theory China real estate industry become a hot industry of the national economy rapidly and it formed the prosperity stage of industry characterized by real estate craze from 1992 to 1993. However, after the national real estate industry experienced a short prosperity, its growth rate has begun to fall back generally since 1994 and the market investment structure appeared to adjust so the development of the industry has entered into a stage of consolidation, stagnation and digestion. And then the financial crisis in recent years has a certain impact on the increase of real estate industry and financial industry but in the long run China real estate and banking have entered into a relatively stable stage of development.

Figure 1 put the curves of PE of SDB and Vanke A in one graph to do the comparison and analysis. From a direct view it can be seen that the ups and downs of PE of SDB is faster. Again from the data analysis of PE of SDB and Vanke A in Table 1 we can see the mean of PE of SDB is higher than that of Vanke A and the variance is slightly higher than that of Vanke A but the fluctuations of PE of SDB and Vanke A are both intense. PE reflects the market view to enterprise profitability so the high PE implies the market thinks highly of the prospect of enterprise profitability. During the year-on-year analysis and sequential analysis of PE of SDB and Vanke A we can see the fluctuations of them have a linkage and year-on-year growth rates of PE both have wider band changes (Figure 2). In a specific point of view using mean-variance method the average level of year-on-year growth rate of PE of SDB is lower than that of Vanke A and its fluctuation is also lower (Table 2), so it is clear that PE of SDB has a relatively constant change year by year. While the average level of sequential growth rate of PE of SDB is higher than that of Vanke A and its fluctuation is higher (Table 3), so it can clearly be seen that PE can accurately reflect the changes in stock market. This shows PE is more suitable for the evaluation of SDB.

Therefore, the change of PE of SDB is more sensitive than Vanke A and it reflects the change of the stock market better so PE is more suitable for the evaluation of weak cyclical industry, which is the evaluation of SDB.

In addition, the respective comparison of year-on-year growth rate and sequential growth rate to PE of SDB and Vanke A can also get the following conclusions.

The variation ranges of year-on-year growth rates of PE of SDB and Vanke A are both higher than that of sequential growth rates and in about 1997 and 2007 they both have violent changes, which shows that using PE

to do the evaluation does reflect the situation of the stock market(Figure 4, Figure 5). Through the mean-variance point of view, the average levels of year-on-year growth rates of PE of SDB and Vanke A are both higher than that of sequential growth rates and the variations of year-on-year growth rates are also larger than that of sequential growth rates (Table 4, Table 5).

2. Comparisons of PB of SDB and Vanke A

The month datum of PB of SDB and Vanke A come from RESSET financial research database. For PB of SDB only has the data from March 2008 to the present so this paper adopts the data in old standard of evaluation index provided by RESSET financial research database and obtains the following graphs of comparisons.

The mean of PB of Vanke A is lower than that of SDB. Because PB is the value obtained by using stock price divided by book value so relatively speaking the smaller PB is the more valuable the investment will be. And the variation of PB of Vanke A is smaller than that of SDB obviously so PB of Vanke A is more steady (Table 6), which shows PB evaluation has relative stability in cyclical industry and its variation is smaller so the risk of PB evaluation to Vanke A is smaller, thus it is suitable for evaluation. Also through the comparisons of year-on-year and sequential growth rates of PB of SDB and Vanke A both the mean of year-on-year growth rate and sequential growth rate of PB of Vanke A are higher than that of SDB while the variations are pretty much the same (Table 7, Table 8), so PB is more suitable for the evaluation of Vanke A, that is the evaluation of strong cyclical industry.

3. Conclusions

Ever since PE and PB have been put forward scholars have done many researches in different directions to the evaluation ability of them and the cyclical stocks. This paper chooses the month stock comprehensive datum from the early 1991 to the first half of 2009, uses Excel software to respectively make graphs of PE and PB of Vanke A and SDB and adopts mean-variance method to compare and analysis. The results show that PE is more suitable for the evaluation of weak cyclical industry and PB is more suitable for the evaluation of strong cyclical industry.

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Table 1. Means and Variances of PE between SDB and Vanke A

Mean-Variance \ PE	PE of SDB	PE of Vanke A
Mean	38.04	25.31
Variance	293.70	237.37

Table 2. Means and Variances of Year-on-Year Growth Rate of PE between SDB and Vanke A

Year-on-Year Growth Rate of PE \ Mean-Variance	Year-on-Year Growth Rate of PE of SDB	Year-on-Year Growth Rate of PE of Vanke A
Mean	17.54%	27.14%
Variance	0.64	1.08

Table 3. Means and Variances of Sequential Growth Rate of PE between SDB and Vanke A

Sequential Growth Rate of PE Mean-Variance	Sequential Growth Rate of PE of SDB	Sequential Growth Rate of PE of Vanke A
Mean	4.49%	1.79%
Variance	0.27	0.04

Table 4. Means and Variances of Year-on-Year and Sequential Growth Rates of PE of SDB

Growth Rate of PE of SDB Mean-Variance	Year-on-Year Growth Rate of PE of SDB	Sequential Growth Rate of PE of SDB
Mean	17.54%	4.24%
Variance	0.64	0.29

Table 5. Means and Variances of Year-on-Year and Sequential Growth Rates of PE of Vanke A

Growth Rate of PE of Vanke A Mean-Variance	Year-on-Year Growth Rate of PE of Vanke A	Sequential Growth Rate of PE of Vanke A
Mean	27.14%	1.56%
Variance	1.08	0.04

Table 6. Means and Variances of PB between SDB and Vanke A

Mean-Variance	PB	PB of SDB	PB of Vanke A
Mean		5.41	3.06
Variance		7.46	3.77

Table 7. Means and Variances of Year-on-Year Growth Rates of PB between SDB and Vanke A

Year-on-Year Growth Rate of PB Mean-Variance	Year-on-Year Growth Rate of PB of SDB	Year-on-Year Growth Rate of PB of Vanke A
Mean	0.15	0.30
Variance	0.67	0.54

Table 8. Means and Variances of Sequential Growth Rates of PB between SDB and Vanke A

Sequential Growth Rate of PB Mean-Variance	Sequential Growth Rate of PB of SDB	Sequential Growth Rate of PB of Vanke A
Mean	0.00	0.04
variance	0.06	0.07

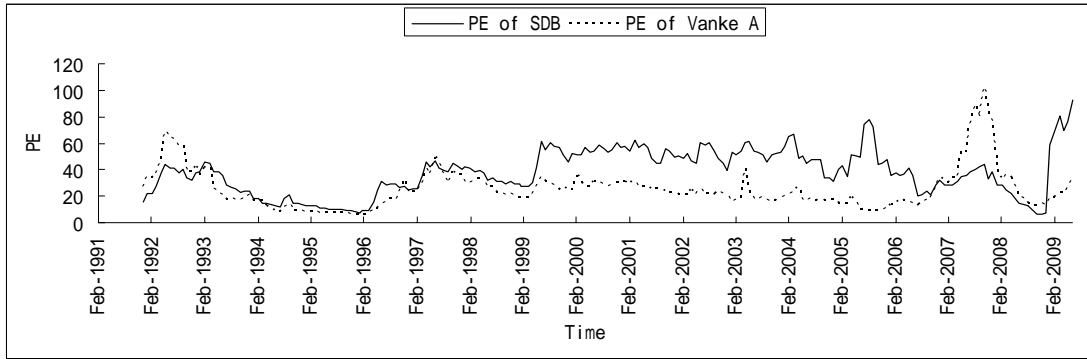


Figure 1. Graph of Comparison of PE between SDB and Vanke A

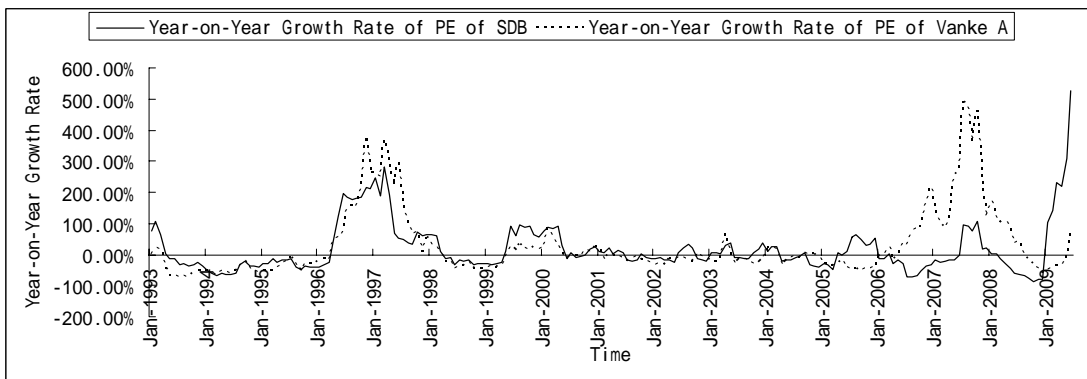


Figure 2. Graph of Year-On-Year Growth Rate Comparison of PE between SDB and Vanke A

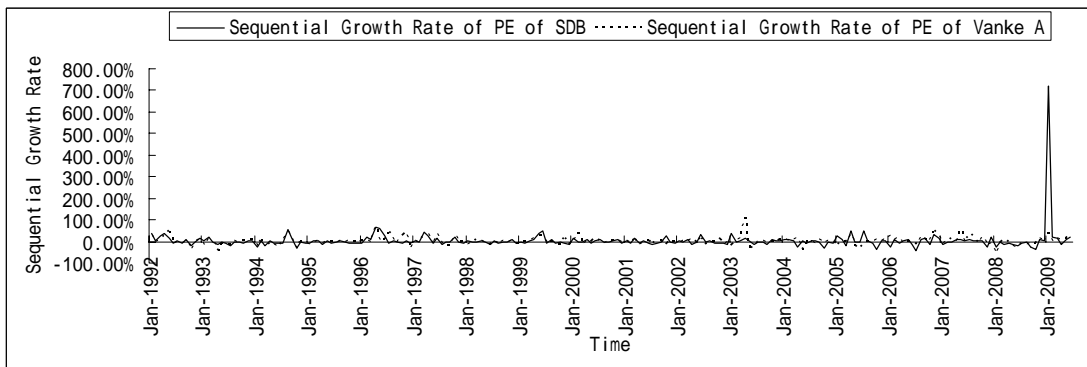


Figure 3. Graph of Sequential Growth Rate Comparison of PE between SDB and Vanke A

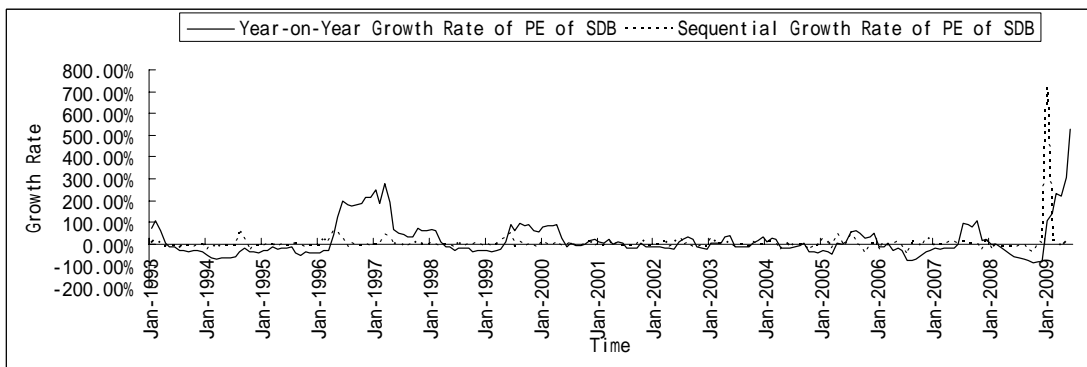


Figure 4. Graph of Comparison between Year-on-year and Sequential Growth Rates of PE of SDB

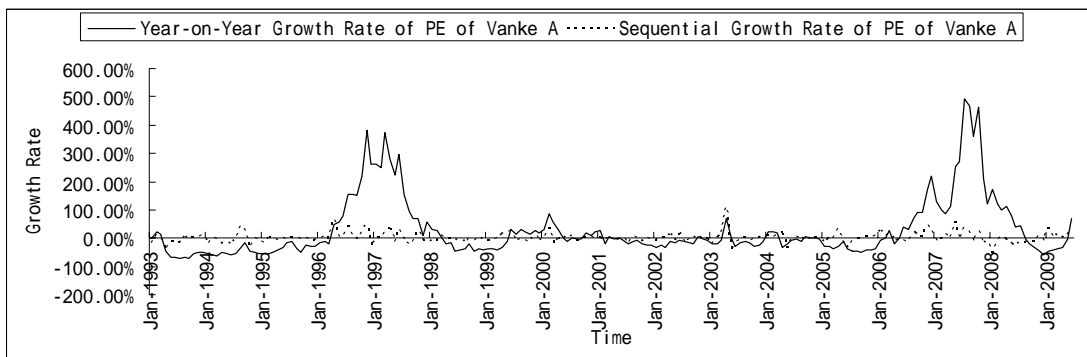


Figure 5. Graph of Comparison between Year-on-Year and Sequential Growth Rates of PE of Vanke A

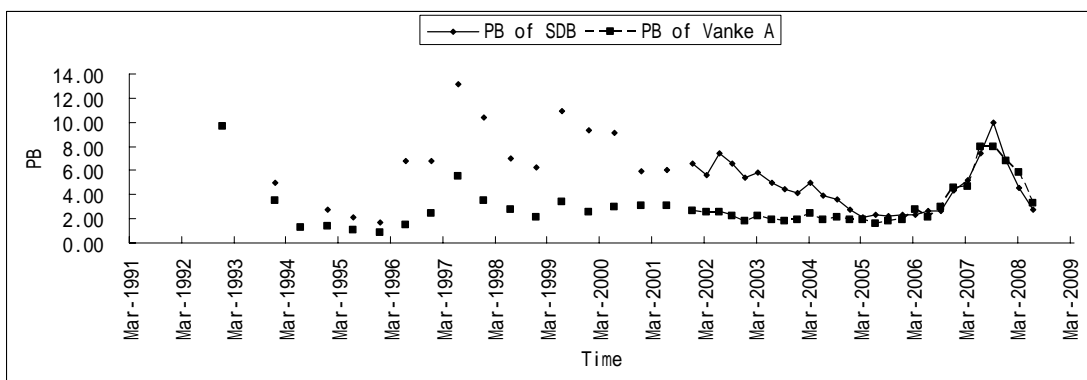


Figure 6. Graph of Comparison of PB between SDB and Vanke A

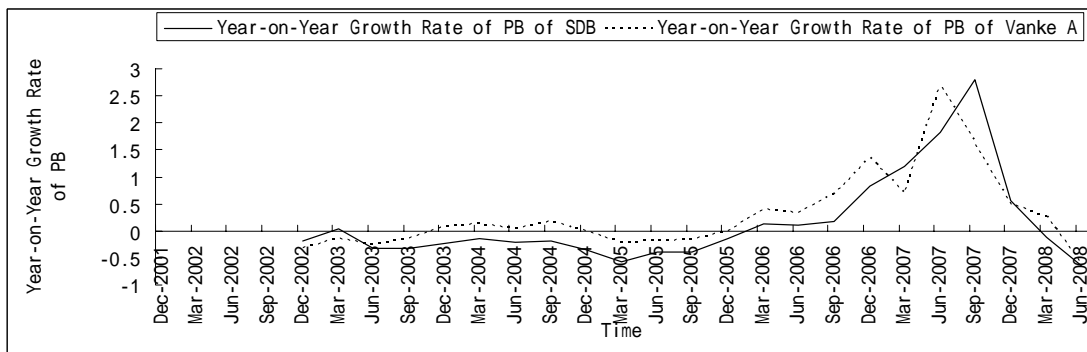


Figure 7. Graph of Comparison of Year-on-Year Growth Rates of PB between SDB and Vanke A

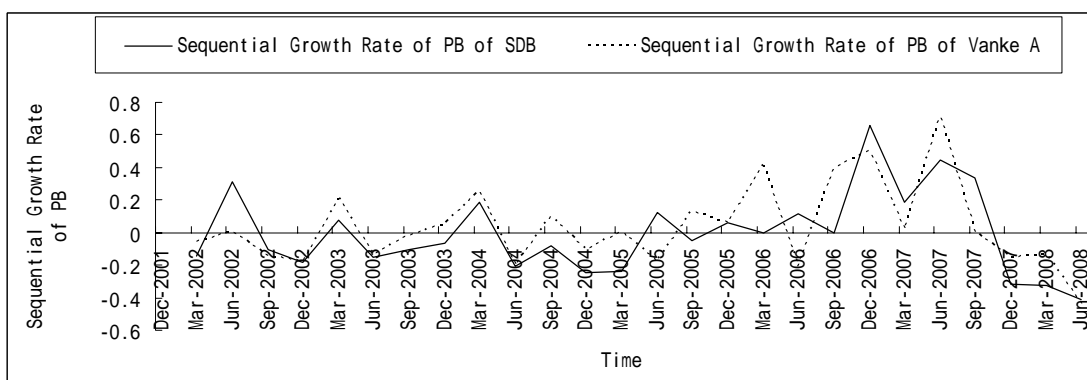


Figure 8. Graph of Comparison of Sequential Growth Rates of PB between SDB and Vanke A