Universe Scientific Publishing

# Comparative Analysis on Evergrande and Lehman Brothers

**Anqi Liu**
**School of Economics and Management, Fuzhou University, Fuzhou 350108, China.**

***Abstract*：** This paper provides a comparative analysis of Evergrande and Lehman Brothers by contrasting the general economic environment and the driving factors of the default events. In terms of the macro-economic environment, the two countries witnessed an expansion of the capital market with loose policies in the pre-crisis period. The housing market saw a boom due to the thriving market, which allowed the enterprises to expand with high debt. In the view of individual development, they do have divergent nature. However, the expanding strategy, financing mode, and their close relations with the real estate industry are similar, which are the critical drivers of crises.

***Keywords:*** Real Estate; Evergrande; Lehman Brothers; Finance

## 1. Introduction

Evergrande, the second-largest property developer in China, has been under the spotlight since its default. In December, it announced that the company could not pay back the US dollar debt. According to the annual report, for the fiscal year of 2020, Evergrande owes more than $300 billion, which sent a shock to both the housing and capital market.

What happened to Evergrande reminds us of the collapse of Lehman Brothers. The crises that emerged in the two companies has parallels and differences. The critical elements in the events were external shock and internal management that triggered liquidity and credit crises. This study aims to conduct a comparative analysis from both internal and external perspectives and approaches the problem of comparability from different angles, including a broad macroeconomic setting and individual analysis focus on the companies.

## 2. Literature Review

Many pieces of research have been proposed to explain the demise of Lehman Brothers. Regarding the macro-economic environment before the failure of Lehman Brothers, there is "almost universal agreement that the fundamental cause of the crisis was the combination of a credit boom and a housing bubble"[1]. The loose monetary policy allowed the capital market to become excessively prospered, which led to the housing bubble[2]. From an individual perspective, Lehman Brothers adopted a relatively radical strategy that had significant exposure to the U.S. subprime mortgage and real estate market. When those markets began to soar, they turned to rely heavily on the short-term market.

The macroeconomic setting appeared to be similar. Under the influence of the 2008 financial crisis, China's policy continued to emphasize the engine position of the real estate industry. According to Liu et al., the bubble in the Chinese housing market increased significantly after 2010, especially in first-tier cities like Beijing, Shanghai, Nanjing, etc[3]. Like Lehman Brothers, high leverage and radical diversification strategy of Evergrande were the key factors of the crisis.

## 3. Macroeconomic environment

### 3.1 Macroeconomic settings and policies

The US: In order to shake off the impact of the 2000 foam burst, the United States began to adopt a quantitative easing monetary policy, released a large amount of monetary liquidity to the market. Under the positive sentiment, leverage ratio of the residential sector increased rapidly. Since mid-2004, the Federal Reserve has raised interest rates to control economic overheating, which led to an inflection point in real estate prices in 2006. The rapid cooling of the real estate market soon reached the real economy, and the GDP growth rate fell from 3.79% in 2004 to 1.78% in 2007.

China: China also bore the burnt of the 2009 crisis. To resist the crisis, China adopted an expansionary fiscal policy and moderately loose monetary policy in the second half of 2008, and had driven China's economy to respond well. Like the U.S. Chinese central bank also sent a large amount of money from the banking system flow into the market. However, excessive liquidity accelerated house price inflation, the foam of real estate was more extensive and continued to heat up in the following years.

## 3.2 Real estate and financial industries

The US: Before the financial crisis, the market was prospering. Yet, housing bubble was in the making at the same time. Kohn and Bryant stated that the excessive demand for housing for over a decade caused a housing boom[4]. The weakening credit standard spurred by the mortgage innovation, coupled with the tendency of house prices to over-and under-shoot[5], made the housing market more delicate and vulnerable than predicted. So when house prices started to fall in 2006, it intensified the default situation and made the industry panic.

China: The loose policies from 2009 to 2010 had brought the real estate market into an era of rapid development. Due to the continuous development of China's economy and very few of investment methods, the demand for residents' housing kept increasing. As result, the house prices rocketed up. The analysis of Liu et al. supports that foam of first-tier cities rose rapidly in 2010, and it has started to rise rapidly in both second-tier and third-tier cities since 2014[3]. Even if the government had issued policies to curb the rapid rise of house prices in the later stage, the effect was moderate.

# 4. Internal perspective

One of the most notable reasons of the collapse of Lehman is the leverage ratio. The leverage ratio of Lehman Brothers in 2007 was 31:1, while in some assets related to subprime loans, Lehman had as much as 60 times leverage. Although it was common for investment banks to have high leverage ratios, Lehman Brothers was on the higher end of the peer group, indicating a more significant risk.

Table 1 Leverage Ratio of the Industries

| Leverage Ratio of Five Major Investment Banks in the U.S. | | | | | | |
|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Evergrande | 81.22 | 85.75. | 86.25 | 83.58 | 83.75 | 84.77 |
| Sunac | 83.15 | 87.92 | 90.27 | 89.8 | 88.12 | 83.96 |
| Greenland | 84.62 | 82.03 | 83.15 | 84.55 | 83.29 | 86.58 |
| Wanke | 77.7 | 80.54 | 83.98 | 84.59 | 84.36 | 81.28 |
| Poly | 75.76 | 74.76 | 77.28 | 77.97 | 77.79 | 78.69 |
| Leverage Ratio of Major Property Developers in China | | | | | | |
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Lehman Brothers | 29.1 | 23.7 | 23.9 | 24.4 | 26.2 | 30.7 |
| Bear Stearns | 29 | 28.4 | 28.5 | 27.1 | 28.9 | 28.1 |
| Merrill Lynch | 19.7 | 16.6 | 20 | 19.1 | 21.6 | 31.9 |
| Goldman Sachs | 18.7 | 16.6 | 20 | 19.1 | 21.6 | 26.2 |
| Morgan Stanley | 24.2 | 24.2 | 26.5 | 30.8 | NA | NA |

Since 2006, Lehman had adopted a radical expansion strategy: by expanding its potential investment business in the field of high-yield business like commercial lands or derivatives in order to pursue higher profits. This operation was carried out even in the case of the subprime mortgage crisis in 2006. In addition, they used shorter-term debt maturities in their capital structures[6], so the debt structure was maturity mismatched. On the asset side, Lehman Brothers hold a large number of CDOs and CDS which were "involve the merger of both prime and subprime securities"[7]. When the asset price changes, the impact on Lehman Brothers increases exponentially.

Evergrande also has a high leverage ratio. Evergrande's interest-bearing liabilities increased by nearly 300 billion yuan between 2015 and 2019, and brought tens of millions of interest expanses to the company. Though Evergrande has tried to use different financing methods, bank loans remained the most commonly used. So when the Chinese government put forward the "three red lines" in 2020 to control the growth of interest-bearing liabilities of real estate enterprises, it violated all three red lines and is not allowed to obtain loans from banks.

Compared with Lehman Brothers' relatively single investment strategy, Evergrande has made more diversified investments. It has invested hundreds of billions of RMB in a short time. However, the correlation between these industries is weak, most of them are projects that require a large amount of long-term investment and have a slow capital return, which greatly reduces the profitability of the main business. Although the starting point of diversification in the process of gradual cooling of the real estate market is good, what it brought out is liquidity crisis.

Table 2. Diversified Investments of Evergrande

| Industries | Time | Content | Main business and major events |
|---|---|---|---|
| Sports | 2009 | Guangdong Evergrande Women's Volleyball Club | The Guangdong Women's volleyball club was established by injecting 20 million yuan in 2009, and the contract with the Guangdong Women's volleyball team expires on September 30, 2021; |
| | 2010 | Guangzhou Evergrande Taobao Football Club | In March 2010, Evergrande group bought out all of the team's equity, and the club was renamed Guangzhou Evergrande football club. On November 6, 2015, Evergrande Taobao was officially listed |
| Culture | 2010 | Evergrande Cultural Industry Group | It has six sections: Evergrande film company, Evergrande brokerage company, Evergrande distribution company, Evergrande record company, Evergrande cinema company, and Evergrande animation company. China Evergrande withdrew from Evergrande culture in June 2021 |
| Fast moving consumer goods | 2013 | Evergrande Spring | It covers the four sectors of mineral water, grain and oil, dairy and fresh food. In September 2016, China Evergrande sold all interests in mineral water business The total investment is nearly 20 billion yuan, and the project has been in a state of loss since its establishment" |
| Health | 2015 | Evergrande Health | It has four business lines: Evergrande Healthy Land, Boao Evergrande International Hospital, Health Management Services and Maintenance Service |
| Insurance | 2015 | Evergrande Life | It invested RMB 4 billion to acquire Zhongxin grand Oriental person's Life Insurance Co., Ltd. to establish Evergrande life |
| High-tech | 2015 | Hengteng Networks | Cooperate with Tencent and sign a gambling agreement with Ruyi Film. In November 2021, Evergrande group sold all its shares |
| | 2018 | Evergrande High-Tech | Its business includes smart home, smart community, new energy charging service and community energy service |
| Automobile | 2019 | Evergrande New Energy Auto | Nearly 300 billion yuan has been invested in production base construction, new energy industry chain, and other related projects. Some models are expected to go on sale in June 2022 |

Executives at Both Lehman and Evergrande will receive larger bonuses and dividends than their peers Lehman was accused of paying excessive bonus to Directors[8]. And Richard Fuld was reported to have paid himself $300 million within eight years. The Hui Ka Yan family received dividends about HK $60 billion during 2009 and 2020, shareholders' dividends and directors' salaries of Evergrande are also very high, so it is easy for the company to adopt a more aggressive expansion strategy, thus increasing the overall risk of the company's operation

# 5. Discussion

There are multiple parallels between Lehman Brothers and Evergrande as for their financial situation, expanding strategy and management methods, and the general economic environment did appeared to be worrisome. To address the problem smoothly could be very difficult. However, Evergrande is an property developer in essence, the assets and liabilities it had is not that complicate as that of Lehman Brothers, the impact of its failure is comparatively limited. Moreover, based on previous experience, the government tend to maintain the real estate industry, it is not likely to let Evergrande fail directly. What's more, according to the performance of other property developers in China, we can see that it is not only Evergrande that is having debt fueled developing, so the government's action towards Evergrande might influence other companies that are already in risk. The experience of Lehman Brothers is teachable and can shed some light on the Evergrande event.

# References


[1] Vurak V. A. Causes of The Financial Crisis. Critical Review. 2009;21(2-3):195-210.

[2] Mcdonald JF, Stokes HH, Moentary Policy and the Housing Bubble[J]. The Journal of Real Estate Finance and Economics 46(3): 1-15.

[3] Jun L, Kui Z, Ping Z. Measure of China's Real Estate Bubble Based on Wavelet Analysis. Statistics & Decision. 2020; 3:13-16.

[4] Kohn J, Bryant SK. Modeling the U.S. Housing Bubble: An Econometric Analysis[J]. Research in Business and Economics Journal.

[5] Abraham JM, Hendershott PH. Bubbles in Metropolitan Housing Market[J]. NBER Working Papers. 1994; 7: 171-192.

[6] Chen RR, Chidambaran NK, Imerman MB, & Sopranzetti, BJ. (2014). Liquidity, leverage, and lehman: A structural analysis of financial institutions in crisis. Journal of Banking and Finance, 45(1), 117-139.

[7] Mawutor, JKM. “The Failure of Lehman Brothers: Causes, Preventive Measures and Recommendations.” ERN: Banking & Monetary Policy (Topic) (2015): n. pag.
[8] Murphy, A, An Analysis of the Financial Crisis of 2008: Causes and Solutions (November 4, 2008). Available from SSRN: https://ssrn.com/abstract=1295344.

\