經營學碩士 學位論文

A Comparative EVA Analysis of 242 Chinese Companies:

Business Jet Users vs. Non-users

韓國航空大學校 大學院

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2018 年 2 月

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Acknowledgements

It was a huge leap to take two years away from work to pursue my dream of entering the aviation industry. At times, the journey was not easy, but it was hugely rewarding, and I received a great deal of help along the way. I would like firstly say thank you to my family, who went through this process with me.

To Jungeun, Kyle, Josh and Isla, thank you for your support. You are the only reason I wanted to do so well. I always had you in my mind during these 2 years. To Myeong-ja and Jong-Man, thank you for so much everything. To Pauline and Colin, thank you for the amazing help from afar.

I want to say a huge thank you to Professor Hur for showing me so much guidance over the past two years. You pushed me to study hard, and I got to see how hard you work, which was a great lesson in how to be dedicated. To all the other professors at KAU, thank you so much for understanding my situation and helping me learn so much. To my fellow classmates, I also want to extend my appreciation for your help. My research lab partners were so good to me too. To my friends, thanks for keeping my sanity, especially Loris, who always checked on how I was doing. Lastly, to Avjet Asia, and Kim Gyeong-ho for giving me the opportunity to enter this exciting industry.

This thesis is the result of two years study and will be something I can always look back at it with fondness for everything it represents. My goal was to make a shift in my life, and now I have done it!

2018.01

Anthony John Boocock

Abstract

This paper analyses the financial performance of 242 Chinese companies, to see if the companies that utilize business aviation produce better results compared with non-users. This type of research has been done in North America and Europe but has not yet been done in China. The companies were analysed using the economic performance metric Economic Value Added (EVA). This indicator was used to assess if the companies added or destroyed economic value through their operations. Primary data was gathered from published financial statements of all companies for the six-year period 2011-2016. This paper aims to quantify the argument that the use of business jets helps companies to be more productive. The main finding of this study is that companies that utilize Business Jets added more collective value to EVA than non-users, however the total number of positive producing companies fell. In line with similar studies in the USA, Canada and Europe, it is concluded that companies that use Business Jets produce superior economic growth to non-users.

Keywords: Business Aviation, economic value added, financial performance, business jets, China

242 개의 중국 회사에 대한 EVA 비교 분석 : 비즈니스 제트 사용자 수와 비 사용자 수

요 약

이 연구는 비즈니스 제트를 이용하는 회사가 비 사용자와 비교하여 더 나은 결과를 산출하는지 확인하기 위해 242 개의 중국 회사의 재무 실적을 분석합니다. 이러한 유형의 연구는 북미와 유럽에서 이루어졌지만 아직 중국에서는 이루어지지 않았습니다. 회사는 경제 성과 메트릭 Economic Value Added (EVA)를 사용하여 분석되었습니다. 이 지표기는 회사가 운영을 통해 경제적 가치를 추가했는지 또는 파괴했는지 평가하는 데 사용되었습니다. 1 차 데이터는 2011-2016 년 6 년간 모든 회사의 공표 된 재무 제표에서 수집되었습니다. 이 연구는 비즈니스 제트의 사용이 기업의 생산성 향상에 도움이된다는 주장을 수치화하는 것을 목표로합니다. 이 연구의 주요 결과는 비즈니스 제트를 사용하는 회사가 비 사용자보다 EVA 에 더 많은 공동 가치를 추가했지만 긍정적 인 생산 업체의 수가 감소했습니다. 미국, 캐나다 및 유럽의 연구와 마찬가지로 비즈니스 제트를 사용하는 회사는 비 사용자에게 우수한 경제적 성장을 가져올 수 있다고 결론지었습니다.

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1. Introduction

1.1 Background

With business aviation firmly established in North America and Europe, the past decade saw the attention of the industry begin to turn to Asia. The region was seen as the engine of world economic growth and countries such as China and India as the drivers of global GDP. However, a key event during this period impacted the industry and called into question the necessity of business aviation use by companies. This event was the 2008 Global Financial Crisis. The industry took a double blow during and after the crisis as orders for new planes fell and public perception turned sour. The Chief Executives of America's big three automakers flying to Washington in corporate planes to ask for public funds became the enduring image of corporate greed. Companies across America were made to defend the use of corporate aircraft and even President Obama weighed in, criticising the use of corporate jets by fat cats.

The argument for the value and necessity of business aviation still goes on. The industry has both its supporters and opponents. Those in favour point to the benefits that business aviation can provide for its users. Those against argue that it is a waste of company resources. One way to provide an answer to this debate is to analyse the financial performance of users and non-users. By making an unbiased analysis of publicly reported financial results, conclusions can be drawn as to whether business aviation is a beneficial means of transport for those companies that make use of it.

Business aviation includes a range of aircraft, but this study focuses on the use of business jets, of which there are close to 20,000 worldwide. One of the primary uses for business aviation is to transport company employees. It is estimated that 60% of the world's business aircraft are owned by multinational corporations, 20% by governments, 17% by small and medium-sized enterprises and just 3% by wealthy individuals (Budd, 2013).

Beginning in 2009 the National Business Aviation Association (NBAA) commissioned a series of studies examining the performance of companies that make use of business aviation versus those that do not. The NBAA is a trade association based in the USA made up of 11,000 members. In its most recent study of S&P 500 companies for the period 2012-2016, they state that business aviation delivers extraordinary value, in both financial and non-financial measures (NEXA, 2017). As financial measures are quantitative they can allow an unbiased view of actual performance. The six measures used were, return on equity (ROE), return on assets (ROA), as well as the growth of: market capitalization, earnings and profit (EBITDA), net income (NI) and revenue. In all six measures business aircraft users outperformed non-users.

This paper does not attempt to discuss the reasons for why users of business aviation outperform non-users. The findings of the NBAA studies are a great example of a causality argument, or metaphorically speaking, 'the chicken or the egg' dilemma. Is it through the usage of business aviation that the companies outperform, or is it because they outperform that they use business aviation? The focus here is purely on factual, secondary data, as found in published company financial statements.

This research acknowledges the findings of the NBAA studies, but proposes a new research methodology to gauge the value of business aviation in terms of

financial performance. In addition, this research focuses on China rather than America. China was selected for a few key reasons. Firstly, the business jet market in China is still in an emerging phase, so it will be interesting to analyse the companies that are already utilizing these aircraft. Secondly, as Chinese companies have become and are becoming more prominent on the world stage, an analysis of their financial performance is worthwhile. Thirdly, there is lack of research on the use of business aviation by Chinese companies. Fourthly, as Chinese enterprises began scaling their operations internationally, business jet purchase and usage has become more about the functionality as business tool, rather than as a sign of prestige. This is in line with the NBAA studies, which stress that business aircraft in America are used as productivity tools (NEXA, 2017). Finally, under China's 13th five-year plan, approved in in March 2016, general aviation was highlighted a priority area for growth (business aviation falls under the category of general aviation). A significant change implemented in March 2017 was the abolishment of the need to gain government approval before buying and registering a business jet in China. As well the government is looking to free up more of the congested airspace. Less than 30% of airspace in China is available for civilian aircraft, compared to about 80% in the United States. Most of the airspace in controlled by the military. The focus by the government on general aviation means a study of the financial performance of business aviation users is timely.

The Chinese companies were analysed using the value-based indicator - Economic Value Added (EVA), which is a measure of economic profit. EVA measures the wealth a company creates (or destroys) each year. The management consultancy firm, Stern Stewart & Co developed EVA in response to their criticism that traditional indicators such as ROA, ROI, ROE and EPS didn't explain the value creation of a company (Berzakova, Bartosova & Kicova, 2015). This single value-

based measure attempts to test if actions taken by management have contributed to the creation of owner's wealth (Hanlon & Peasnell, 1998). Traditional indicators can give us a snapshot of a company's accounting profits, whereas EVA allows us to gauge a company's economic profit. This is because EVA recognises the opportunity cost of money. It assesses whether a company is generating earnings above what is expected by the shareholders (who are the owners and who provide capital to the company). The return on a firm's economic capital employed should exceed the cost of that capital (Wang & Wang, 2016). This paper incorporates the EVA formula as used by Jakub, Viera & Eva in their 2015 paper titled "Economic Value Added as a measurement tool of financial performance." EVA is used in this study to look past the financial performance of Chinese companies and to evaluate if they are gaining or losing economic value for their stakeholders.

Three sample groups are used in this study. The first group is called 'Business Jet Users' and is made up of 80 companies that are known users of business jets. The second and third groups are used as comparison groups for the business jet user group. The second group consists of 81 privately owned companies that are not known to have business jets, and has been labelled 'Non-users, Private'. The third group was formed using the Forbes Global 2000 list for 2017 and the 81 companies in this group are not known to own business jets and is called 'Non-users, Forbes'.

1.2 Research Aim

The aim of this research is to explore any difference in financial performance between the users and non-users of business jets in China. The prediction is that the users of business jets will outperform the non-users of business jets over the six-year period being examined. The prediction is based on the previous research done by NBAA.

This paper aims to answer two key following questions:

1. Do companies that utilize business jets outperform non-users?
2. Do more companies utilizing business jets have positive EVA than non-users?

Performance here is based and judged on a company's EVA. The collective EVA of users and non-users for each year from 2011 to 2016 forms the comparative metric used. Positive EVA is when EVA is above 0, and a minus (-) result equates to negative EVA.

This paper is written in the following order: a literature review has been carried out, the methodology is described, the results are presented and finally a discussion is made. Regarding the methodology, the selection criteria of the companies and the EVA formula that was used are explained in detail.

2. Literature Review

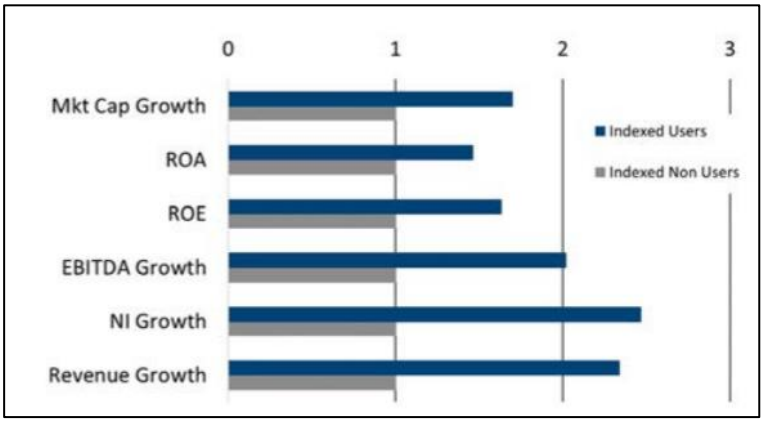
Several studies have been conducted regarding the importance and value of business aviation. However, none have yet to use an EVA based method of analysis, and none have yet to be done focusing on the Chinese business jet market. This section reviews literature on the value of business aviation and then literature on EVA.

2.1 Value of Business Aviation

In America, the NBAA has commission many studies aimed at garnering support for their claim that business aviation is important for the American economy. Their 2001, 2009, 2012, 2013 and 2017 studies all found that the largest companies in America that utilize business aviation outperformed non-users in a range of metrics. Their 1997, 2010 and 2015 research found similar results for small and medium-size enterprises (SME), and report that 85% of business aviation users in America are SMEs, which use this form of transportation as a productivity tool. The 2012 study found government use of business aviation provided significant taxpayer value. Finally, their 2006 and 2015 studies looked at the impact of general aviation on the US economy and reported that the industry supports 1.1 million jobs and supplies US$219 billion in total economic output (PwC, 2015). There have been around a dozen studies on the importance of business aviation in America. The 2017 study, titled 'Business Aviation and Top Performing Companies', concludes that companies that use business aviation financially outperformed non-users for the period 2012-2016. The research finds that users can multiply the

productivity and efficiency of business operations (NEXA, 2017). The financial metrics used in the 2017 study were market capitalization, revenue growth, earnings and profitability, asset utilization, asset efficiency, and return on equity. A summary of the results can be viewed in figure 1, where we see the difference between users and non-users.

Figure 1.1 *S&P 500 User vs Non-User Indices 2012-2016*



Source: NBAA & NEXA (2017)

In Europe there have been similar studies conducted by the European Business Aviation Association (EBAA). These studies looked at the economic impact and role of business aviation in the European economy. Key studies from 2008, 2012 and 2016 all discuss the beneficial part business aviation plays in the European economy. The 2016 was commissioned by the EBAA and was conducted by Booz Allen Hamilton, a management consulting firm. In this 2016 they report that €98 billion and 371,000 jobs stem directly or indirectly from business aviation in Europe (Booz Allen Hamilton, 2016). This study attempted to quantify the benefits of business aviation in terms of economic benefits. A key indicator used was gross

value added (GVA), which quantifies the monetary value of production generated by both firms from the business aviation sector and the sector's suppliers. The GVA for the sector was found to contribute approximately 0.2% towards European GDP.

Studies by the Canada Business Aviation Association (CBAA) on the economic impact of business aviation, have been performed regularly over the past 4 years. In the 2017 version they find the total impact of business aviation to support 47,100 jobs and CAD$12.1 billion in economic output (NEXA, 2017). Economic output is the total of the direct ($7.8 billion), indirect ($2.7 billion) and induced ($1.6 billion) impact of business aviation operations and business aviation manufacturing. The report states there are an estimated 1,900 business aircraft operating in Canada. The study analysed Canada's TSX 60 corporations and reported that users of business aviation on average outperformed non-users by 43% on top-line revenue growth, as well as improving EBITDA at a 50% higher rate.

The studies just mentioned by the NBAA, EBAA and CBAA have been either commissioned or undertaken by those associations, and they have a vested interest in the results. A key difference of this paper is that it has been independently completed as part of academic research. There are other research papers about business aviation, but none of them attempt to look at the financial performance impact of business aviation.

2.2 Other Research on Business Aviation

Yen & Chen (2017) looked the preference for business charter (business jet) or business class by 420 business travellers between Taiwan and China. A binary logit model was used to investigate the choice behaviour between flying business charter and business class on a scheduled flight. They gathered 420 completed

surveys of business travellers at Taipei airport between May 1st and May 8th, 2015. Senior Executives made up 140 of the 420 respondents. This group was deemed as important by the authors, as they are the potential customers for business charter. They found fare choice to be the only significant variable. Fares used in the survey were stated as USD$1,633 for a business class ticket versus USD$2,500 - $5,833 for business charter.

Berster, Gelhausen & Wilken (2011) explored the importance placed on business aviation traffic by airports in Germany. The main finding of the paper was that business aviation experienced scheduling problems at major airports. This was due to capacity constraints and slot allocation priority given to scheduled air transport (airlines). Business aviation is classed as non-scheduled as flight plans are not fixed. They suggest that a focus on business aviation by smaller, regional airports may be an appropriate business model, if they have surplus capacity and a runway long enough to accommodate business jets. However, they find that there are factors that affect the choice of airport by business aviation. Adaptable factors such as runway length and infrastructure location are important, but more important is the location of the airport (travel time), which is a fixed factor.

A paper by Budd & Graham (2009) found that air transport liberalization since the late 1970s led to the increased demand for private aviation. He argues that this increase is an unintended consequence, and not quite what legislators intended when they wanted to create a more competitive global air industry. The aim was to improve scheduled air travel (commercial flight), which was a success, but led to demand for private travel. This demand was stimulated from a desire to avoid the constraints of commercial flights such as crowed airports, rigid schedules, delays and the fact that planes carried members of the general public. The demand came from those with the means to afford this type of transportation. Budd mentions

China in his paper when he talks about the phenomenon of private aviation spreading to global markets, with evidence of an emerging market in China. This prediction has indeed come true with close to 450 business jets operating in China compared with around 50 when Budd's paper was published. China still has some way to go when compared with America though, with more than 12,000 jets in operation.

In 2012 a Delphi-based analysis for the future of the aviation industry in 2025 identified 40 scenarios. Of those 40 scenarios 5 pertained to business aviation, but only one was assessed to have a probable high impact on the aviation industry. The scenario deemed to have high probability was that dedicated business aviation airports will evolve (Linz, 2012). In the case of China, evidence of this scenario coming true can be found in a 2017 article which reports that Shanghai (Shanghai Airport Authority) is considering building a new business aviation airport to meet rising demand. In addition, China plans to build around 200 new general aviation airports between 2016 and 2020, bring the total in the nation to about 500 (Ying, 2017). The dedicated business aviation airport scenario falls in line with a chapter in a book from 2010. The authors write that many small, less crowded, previously underused airports would emerge into the global space of business flows, as private aircraft users attempt to avoid lengthy CIQ procedures at congested hubs, and at the same time allow them to stay away from the general public (Budd & Hubbard, 2010). Bester et al. (2011) say something similar when they suggest that business aviation focus on smaller, regional airports.

The International Civil Aviation Organization (ICAO), a specialized agency of the United Nations, in a proposed study titled 'Business Aviation: a Productive Booster' ask the following question: Why is Business Aviation important? They then answer by stating that "Business Aviation is a productive tool for companies

to build, operate and manage their business." In another statement ICAO says that business aviation industry increases the productivity of business aviation users. (ICAO, 2013).

2.3 Economic Value Added

Stern Stewart & Co, a management consultant firm, came up with Economic Value Added in the 1990s. An assessment of the value-based performance of firms was not a new concept, however Stern Stewart & Co formulated an equation that could be readily used in financial management. Two authors, William Fruhan (1997) and Rappaport (1986) are considered to be the early modern developers of the concept of value based management. A similar concept has existed for many years, with the economist Alfred Marshall discussing the notion of economic profit in the late 19th century (Zaratiegui, 2002). Economic profit is the real profit of a company after covering operating costs and costs of invested capital (equity and debts).

The goal of any enterprise is often described as being profit maximisation. Another view however is that the existence of any enterprise should be based on wealth creation, and therefore relevant indicators of value are required for measurement (Berzakova, Bartsova & Kicova, 2015). EVA combines and incorporates both economic performance and the associated degree of risk necessary to achieve this performance (Jakub et al., 2015). It is the best metric available for measuring value (Young & O'Byrne, 2000).

Generally, companies get their capital from two sources, debt and equity. If a company's profit is greater than the cost of capital, its EVA is positive and therefore the company is creating shareholder value. Another way to view EVA is to explore if the company is using the money it has been given to increase revenue. Are

management making the right decisions in their allocation of the money to generate revenue? If the EVA is positive, then the answer is 'yes'. Overtime, firms with high EVAs should outperform others with lower of negative EVAs (McClure, 2003). Unlike traditional accounting measures of performance EVA focuses on value creation (Lehn & Makhija, 1996).

2.3.1 Merits of EVA vs. Traditional Indicators

Several authors have explored the merits of using EVA rather than traditional indicators to assess corporate financial performance.

A seminal study undertaken by Chen and Dodd (1997) examined the EVA performance of 566 U.S. companies and compared the information usefulness of EVA with accounting earnings and residual income. They found that EVA is more powerful than traditional measures of accounting profit in explaining stock returns. However, they also added that accounting earnings are still of significant incremental information value, in addition to EVA.

Almeida, Neto, Ibanez, Oliveira Costa & Pimental (2016) find that accounting profit does not represent the value to stakeholders of any gain or loss made by a corporation, as traditional metrics don't consider the cost of opportunity or equity compensation.

Other studies suggest that EVA is an important tool of performance measurement, and should therefore be disclosed in financial statements, to let investors know the amount of value added by the company (Almomani, 2016; Bahadur & Deb, 2013).

A comparison of traditional indicators and economic performance measures concluded that there is a positive, significant relationship between EVA and

shareholder's wealth maximization (Panigrahi, Zainuddin & Azizan, 2014). A similar result from another study found that the EVA approach can be superior to accounting (ROE and ROA) approaches in having a positive effect on stock performance. The study also recommends that management focus on EVA to continuously create value for the company (Taufik, Isnurhadi & Widiyanti, 2008). The idea that management prioritise EVA to create value for shareholders was also proposed by Morard & Balu (2009).

Reddy, Rajesh & Reddy (2010) compared EVA with traditional measures such as ROE, Return on Capital Employed (ROCE), Return on Net Worth (RONW) and EPS. The paper shows how EVA can demonstrate if a company is adding shareholder value by generating profits over and above the capital charge. They conclude that EVA is the most appropriate measure for corresponding a company's value to shareholders.

3. Methodology

The basis of this research are the studies that have been done by the NBAA on the use of business aviation by American companies listed on the S&P 500. However, there are key differences to that study to adjust for the fact that Chinese companies are being analysed, by way of the value-based measurement indicator, EVA. This section is divided into two (2) parts. The first part will detail the way in which the companies were selected for inclusion in the research. The second part describes the EVA formula that was used and gives an example of a representative company to display how the formula was used in practice.

The period used in this study was six years, from 2011 to 2016. The initial plan was to analyse a five-year period using 2016 as the final year, being the most recently available data. However, a decision was made to include 2011 for a more thorough picture of the financial performance of business jet users in China. The reason 2011 is included is because of the change in Chinese leadership in 2012. The new President Xi vowed to crackdown on corruption in his drive for austerity. The booming demand for business jets suddenly cooled as companies became mindful of making extravagant purchases. Companies became conscious that the government would be focusing on any purchases that displayed conspicuous consumption. Including 2011 was therefore deemed necessary to see if Xi's campaign had any financial impact on the companies included in this study.

3.1 Company Selection

The 2017 NBAA study, undertaken by NEXA, looked at 500 companies from the S&P 500 and classified them as either ‘users’ or ‘non-users’ of business aircraft (NEXA, 2017). They then identified if public financial reports were available for the five-year period 2012-2016, leaving 415 companies remaining. No information is given as to how many of those 415 companies are users or non-users.

The starting point for the analysis of Chinese business jet users was a 2017 list compiled by the Chinese research institute, Hurun Report. A copy of the list can be found in Appendix A at the end of this paper. The report, written in Chinese, gives a list of 112 business jet owners from Greater China and their companies (Hurun, 2017). Of those 112 companies, enough financial information was publicly available for just 77 companies over the 2011-2016 period. Another three companies were added to this list during the course of the research when, for two companies, business jet departments were found, and for the other, news of business jet usage was reported in a news article. The total number of companies classed as ‘users’ was 80, and form the group labelled ‘Business Jet Users.’

Two comparison groups were then put together. One group was formed from the China Top 500 Private Enterprises 2017 list released by the All-China Federation of Industry & Commerce (ACFIC). The list can be found in Appendix B. The ACFIC was established in 1953 by the Chinese government. The list, released in Chinese, ranks China’s 500 highest earning private firms based on their 2016 revenue. The reason these companies were chosen as a comparison group is because almost all the companies in the business jet user group are private companies. In addition, it allowed the business jet user group to be compared with a group that should have strong financial performances, given that they were

selected as being the highest ranking private companies in China. This group is labelled ‘Non-users, Private’. To form a group that was similar in size to the business jet user group (80 companies), the top 200 out of the 500 companies were screened. Out of the top 200 private companies, 100 had publicly available financial records for the six years being used in this study. 19 of the companies were subsequently removed as they are business jet owners, and were already included in the business jet users group. Therefore, the total number used as the sample for the ‘Non-users, Private’ group was 81 companies.

The third group was formed using the 2017 Forbes Global 2000 list. The Forbes Global 2000 is a yearly ranking of the world’s largest public companies. This group was initially going to be the only group used for comparison with business jet users. However, after looking at the ownership structure of many of these companies, the second group – ‘Non-user, Private’ was deemed to be more appropriate for comparative purposes. Many of the companies from the Forbes Global 2000 list are either majority or partially owned by the Chinese Central Government. A total of 308 companies from Greater China made the 2017 rankings, with 4 companies in the top 10. Of the 308 companies, 200 are from China, 62 from Hong Kong and 48 from Taiwan. Globally, Industrial and Commercial Bank of China (ICBC) takes the top rank for 2017, ahead of second-ranked China Construction Bank, and third-ranked Berkshire Hathaway.

To get a sample size similar to the business jet user group (80 companies), the top ranked 125 out of the 308 companies were screened. From the 125 companies, the group ‘Non-users, Forbes’ was formed with a total of 81 companies included. The 44 companies excluded didn’t have the required financial details (22), or had already been included in the other groups – ‘business jet users’ (20) and ‘non-users, private’ (2). This group was still included in this study, even after a more suitable

group, ‘Non-users, Private’, had been formed. The reason for the inclusion of the Forbes Global 2000 companies was to discover how the companies that own business jets performed against some of the biggest companies in the world. The ‘non-user, Forbes’ group has 81 companies. The top ranked company of these 81, ICBC, is the biggest company in the world. The last ranked company of the 81, China Merchants Securities, is ranked 872nd.

3.2 EVA Formula

There are various methods available in which to calculate EVA. The basic tenant of EVA is to calculate changes in revenue and capital over the course of a year. EVA analysis sets out to explore the relationship between those changes. Three pieces of financial information needed when calculating EVA: Net Operating Profit After Tax (NOPAT), Total Invested Capital and the Cost of Capital (WACC). The EVA procedure used for this paper follows the calculation procedure as set out by Jakub et al. (2015).

Thus, the formula is:

$$EVA = NOPAT - WACC * C$$

Where:

NOPAT = Net Operating Profits After Tax.

C = Capital.

WACC = Weighted Average Cost of Capital.

The formula connects the change in value from operational activities (NOPAT) by reducing the amount by the average cost of the capital used for those activities (WACC * C).

To find NOPAT, the formula was further broken down as:

$$EVA = OP * (1 - t) - WACC * C$$

Where:

OP = Operating Profit

t = tax rate as a % multiplied by 1/100.

Operating Profit can also be referred to as Operating Income. Operating Profit is calculated by subtracting both the cost of revenue and operating expenses from the revenue figure. Operating Profit is used rather than Net Income as EVA analysis is interested in the amount earned from operating activities. Operating Profit is the amount of revenue leftover after accounting for the expenses necessary for running the company. Net income, however, includes the subtraction of non-operating expenses.

Two data providers were used in obtaining the financial data required for the EVA analysis. Morningstar, an investment research and management firm based in Chicago, was used to get the income statement (operating profit), balance sheet (capital) and effective tax rate for each company. Gurufocus, a value investing research firm based in Texas, was used to get the Weighted Average Cost of Capital (WACC) data. The financial statements were mostly published in Chinese Yuan (CNY), however some were published in either Hong Kong Dollars (HKD), Taiwan Dollars (TWD) or United States Dollars (USD). For purposes of analysis all financial results were converted in Chinese Yuan. The rates of conversion used are

displayed in table 2 below and the rates chosen were deemed to be an appropriate mid-point of each currency for the period 2011-2016.

Table 3.1 *Currency conversion rates*

1 HKD	0.83 CNY
1 TWD	0.21 CNY
1 USD	6.30 CNY

3.2.1 Example of EVA calculation

According to the Forbes 2017 Global 2000 list, Industrial and Commercial Bank of China (ICBC) is the biggest company in the world. By looking at ICBC's financial results for 2011 an example of the EVA calculation used in this paper is given in table 3 below:

Table 3.2 *ICBC EVA calculation for 2011*

2011 (Yuan, millions)			
Operating Profit	271,000		
Tax Rate	23.45%		
WACC	14.88%		
Equity	956,742		
EVA = OP * (1-t) - WACC * C			
= 271,000 * (1-0.2345) - 0.1488 * 956,742			
= 271,000 * (0.7655) - 142,363			
= 207451 - 142,363			
= 65,087			

Two data providers were used in obtaining the financial data required for the EVA analysis.

4. Results

The financial results for 242 companies from Greater China were used for this analysis. The initial number of companies that were targeted for analysis was 437, however only the final 242 companies had the required financial data available. The companies were analysed using the EVA metric which needed the following from each company for the period 2011-2016: NOPAT, Total Equity and WACC. All the calculations for EVA were done in excel. Statistical analysis was subsequently performed to examine the significance of the results using SPSS v21 software.

4.1 Industry Subgroups

The companies within each of the 3 groups were put into subgroups according to industry type. The industry subgroups can be seen in table 4 below.

Table 4.1 *Industry subgroups of the 242 Chinese Companies*

Industry:	BizJet User	Non-user (Private 500)	Non-user (Forbes 2000)
Retail/Consumer Goods	21	18	3
Construction/Real Estate	16	16	11
Manufacturing/Industrial Goods	10	19	6
Financial/Business Services	11	3	33
Energy/Resources	7	16	13
Technology/Telecommunications	7	3	8
Entertainment/Media	4	1	0
Pharmaceutical/Healthcare	4	5	1
Transportation/Logistics	0	0	6
Total:	**80**	**81**	**81**

For the ‘Business Jet Users’ group the biggest industry subgroup was Retail/Consumer Goods with 21 companies, while the smallest subgroups were Entertainment/Media and Pharmaceutical/Healthcare with 4 companies each. Transportation/Logistics had no companies represented.

For the ‘Non-users, private’ group the biggest industry subgroup was Manufacturing/Industrial Goods with 19 companies, while the smallest subgroup was Entertainment/Media with just 1 company. Transportation/Logistics had no companies represented.

For the ‘Non-users, Forbes’ group the biggest industry subgroup was Financial/Business Services with 33 companies, while the smallest subgroup was Pharmaceutical/Healthcare with just 1 company. Entertainment/Media had no companies represented.

4.2 EVA results for each group

EVA calculations were made for each of the companies using available data for the period 2011-2016. Table five (5), table six (6) and table seven (7) display the results of the calculations. All results are shown in CNY millions.

Table 4.2 *Business Jet Users EVA (in millions Yuan)*

		2011	**2012**	**2013**	**2014**	**2015**	**2016**
Retail/Consumer Goods	Huiyuan Juice	-273	-1119	-1760	-721	-477	-526
	Imperial Pacific	7	8	-14	-1367	-253	376
	Silver Base Group	596	-506	-543	-227	-70	-105
	Ningbo Shanshan	-84	-92	-129	118	404	-215
	Yurun Group	93	-2073	-1546	-381	-2880	-2507
	Bosideng International	496	311	116	-360	-341	-492
	Want Want	1763	2420	3004	2691	2656	2549

	Midea Group	5040	4434	5100	8039	8725	9732
	Tingyi	2300	1907	2115	2356	981	446
	Yihua Lifestyle	48	57	67	217	155	161
	Zonglu	-27	-28	-4	-27	0	-217
	GOME Electrical Appliances	305	-2568	-1508	-491	-1649	-2969
	Sparkle Roll Group	76	-134	-134	-489	-63	-63
	Chow Tai Fook Jewellery	3291	2181	3169	1879	920	1250
	Espirit	-1322	-890	-6092	-1843	-4215	-1475
	Metersbonwe	960	532	119	-118	-437	-218
	Renhe	4918	-433	-3148	-2671	-2330	-475
	New Hua Du	64	40	-255	-46	-285	-69
	Suning Commerce Group	3919	955	-2542	-3028	-2364	-3376
	Alibaba	1733	9204	19602	6908	8725	14722
	JD.com	-1682	-2118	-1503	-9552	-9525	-5534
Construction/Real Estate	Macrolink Culturaltainment	523	550	392	169	-48	242
	Zhonghong Real Estate	369	637	-69	-17	-50	-213
	CK Hutchison	-10815	-5344	-8751	-25694	-3963	8269
	Shimao Property	4710	4166	4723	7332	7258	6467
	New World Development	1176	2993	4747	1181	11660	2748
	Lai Sun Garment	596	810	1485	707	1193	106
	Chuang Consortium	623	687	159	295	340	1273
	Shenzhen Wongtee Int.	-204	-16	3105	-1196	-3832	-3634
	Evergrande Group	9564	6258	11167	14382	15860	21923
	Hopson Development	-81	-254	335	-90	-1217	326
	R&F Properties	3400	4343	6437	5309	5923	6679
	Suzhou Gold Mantis	528	790	1079	1515	1077	872
	Country Garden	3153	3718	4628	7665	7229	10694
	Longfor Properties	4859	3932	4454	5496	4914	4913
	Hong Kong International Const.	-77	74	163	319	375	30
	China Fortune Land Dev	1091	1560	2327	3230	4321	4946
Man/Ind Goods	Zhejiang Jinggong Sci & Tech	301	-334	-348	-58	-64	-6
	Hanergy Thin Film	-83	363	1869	2393	-1908	112
	GCL-Poly	2285	-937	-10	1851	2962	3681
	Hon Hai Precision	2338	5839	5378	8952	16445	11348
	Sany Heavy Industry	6776	2744	473	-1828	-1548	-333

	Nine Dragons Paper	41	569	968	1441	844	1622
	Nanshan Aluminum	-382	-649	-337	-185	-380	-719
	Lifan Group	-1	-80	-92	89	-92	-309
	Wanfeng Auto	182	191	194	548	676	736
	Wanxiang Qianchao	204	180	193	442	529	586
Fin/Business Services	Xinyuan Real Estate	584	740	483	166	237	416
	Henderson Land Dev	-2583	-10133	-10933	-8385	238	-82
	Chinese Estates	-1176	-333	148	71	-140	388
	CITIC Group	1178	2586	67977	61885	34196	31416
	Emperor Group	-75	-56	7	162	-369	-241
	Doyen International	-105	-69	-57	-81	-107	-88
	Chong Sing FinTech	41	36	-21	-60	-70	127
	China Oceanworld	-340	49	689	964	1984	1607
	Fosun International	3363	1238	7877	8592	14092	14577
	AIA Group	596	8069	6232	7786	3700	8952
	Sunriver	-45	-100	-47	-45	-147	-118
En/Resources	Zangge	4	-1	-45	-72	991	132
	Shunfeng International	-14	-33	-170	-6	-62	-244
	Nan Nan Resources	14	-39	-5	-36	6	-4
	Hengli Petrochemical	-101	-44	-54	-217	603	663
	Guanghui Energy	493	516	123	1006	-457	-521
	ENN Energy	1298	1773	1903	2562	2041	2436
	Pengxin International Mining	-77	262	121	126	-69	-96
Tech/Tele	Baidu	4283	6241	3018	3684	-1675	-2996
	Xinwei Group	-51	-82	1569	949	507	278
	Sohu	116	9	-70	-327	-44	-206
	Tencent	7485	9182	9976	17823	22127	29525
	Wingtech Technology	34	52	-14	-76	-609	-319
	Jiangsu Hongtu High Tech.	-59	-5	-19	62	-282	-95
Ent/Media	PCCW	2220	2286	2377	2603	4001	3815
	Wanda Film	177	201	326	441	281	243
	China Star Entertainment	-653	26	-15	37	-113	-414
	Phoenix Television	-758	220	166	163	-251	-241
	SJM	3819	5307	5734	4286	155	-98
Phrm/	Harbin Gloria Pharmaceuticals	-55	-24	-60	282	481	435
	Tasly Pharmaceutical	524	801	952	1283	1137	745

	Hengkang Medical Group	28	4	92	215	152	226
	Apeloa Pharmacuetical	20	55	-1	193	23	54
Each year AVERAGE:		**919**	**920**	**1963**	**1765**	**1859**	**2295**

If we look at the average EVA for each company over the six-year period, we can see that 60% of the companies produced positive average EVA. Out of 80 companies, 48 were positive, 31 were negative and there was one company which had no net gain or loss (Ningbo Shanshan). The company with the most positive EVA figure was CITIC group with CYN 33,207,000,000. The company with the most negative EVA figure was CK Hutchison with CNY -7,716,000,000.

If we compare 2011 with 2016 we can see a change in the amount of companies producing positive EVA amounts. In 2011 68% of the companies produced positive EVA, while in 2016 this fell to 56%.

Table 4.3 *'Non-users, Private' EVA (in millions Yuan)*

		2011	**2012**	**2013**	**2014**	**2015**	**2016**
Retail/Consumer Goods	Weiqiao Textile	-1814	-528	-1632	-79	558	289
	Sinoer Men's Wear	51	-20	-105	-200	-176	-149
	TCL Corporation	637	-314	501	1131	47	-1008
	Heilan Home	-37	-50	1214	1920	2526	2557
	New Hope Liuhe	2718	1483	1498	1542	1872	2364
	Jiangxi Zhengbang Technology	115	-5	-101	-59	70	615
	Inner Mongolia Yili Industrial	1276	1055	1722	2873	3053	3077
	Youngor Group	1331	981	1010	2236	2329	2144
	Tongwei Co	-26	-16	87	213	476	349
	Henan Shuanghui Inv & Dev	1227	2551	3093	3371	3347	3471
	Vipshop	-684	-127	97	433	1143	1480
	Shandong Ruyi Woolen Garm.	-13	-8	-27	-15	-16	-157
	Jiangsu Sanfangxiang Industry	-63	-66	-74	-24	-64	-54
	Shenzhen Aisidi	-1	-755	295	-198	-140	-134
	Skyworth Digital	713	1028	786	1191	1144	113

	Jiangsu Sunshine	-175	-1478	21	4	-25	15
	V V Food & Beverage	-56	-45	-109	71	-147	-156
	Better Life	171	243	171	212	-213	-440
Construction/Real Estate	Suning Universal	468	423	327	441	-151	494
	Zhejiang Guangsha	189	-80	-45	140	-661	174
	Yinyi Real Estate	609	717	581	514	373	630
	Zall Group	980	551	90	340	848	723
	Jinke Property Group	462	700	597	80	742	1038
	Binjiang Real Estate	434	757	1076	477	926	1183
	China Tianrui Group	1356	710	715	902	492	512
	Luyang Energy-Saving	1	-29	-73	-35	-55	-33
	Risesun Real Estate	1070	1410	2508	2725	1524	3382
	Baoye Group	340	522	373	404	184	-27
	Greenland	109	-56	-96	9140	2654	7461
	Wolong Real Estate	23	-8	-45	111	-91	-81
	Long Yuan Construction	125	99	11	-31	-98	-156
	China Vanke	8353	11868	14516	14168	20089	23430
	Future Land Development	1383	1392	1630	1417	1786	2386
	Zeda Group	-292	-364	-573	-340	-530	-325
Man/Ind Goods	Tianneng Power	352	622	135	-267	527	691
	Chaowei Power	569	615	393	52	523	697
	Bus Online	-25	-39	-56	-29	-39	-12
	Ningbo Sanxing Medical	19	70	6	227	267	164
	Zhejiang Dun	45	94	-101	-79	-254	-205
	Zhejiang Chint Electrics	736	1083	1281	1627	1588	1626
	TBEA Co	379	-72	29	217	404	1114
	Baota Industry	-34	-94	-150	-183	-166	-118
	Jiangsu Zhongtian Technology	70	80	28	232	391	741
	Fangda Special Steel Tech.	475	290	347	396	-20	499
	Far East Smarter Energy	105	-358	-134	-7	36	-217
	Henan Senyuan Electric	58	127	96	153	51	16
	Shandong Sun Paper	148	-26	71	318	276	726
	Tongding Interconnection Info	68	92	91	100	-10	280
	Huayi Electric	-73	-99	-138	-24	-229	-372
	Geely Automobile	575	426	735	-414	694	2112

	BYD Company	-513	-1415	-774	-732	1899	3496
	Great Wall Motor	1103	3658	5011	4348	3557	5333
	Yutong Bus	939	922	1510	1865	2661	3027
Fin/Bus	Ningbo United	123	-120	-92	157	97	130
	Chongqing Rural Com. Bank	-4847	-5249	-10243	-7976	-7437	-4601
	Eternal Asia	85	91	79	139	251	196
En/Resources	Jiangsu Shagang	406	-138	-170	-84	-272	206
	Zhejiang Hailiang	13	-8	53	303	256	234
	Hengyi Petrochemical	2034	-75	185	-638	-159	141
	China Oriental Group	1149	-58	-191	3	-731	282
	Shandong Huatai Paper	-215	-256	-246	-348	-376	-165
	Shanghai Dasheng	89	148	213	233	277	298
	Jiangsu Chengxing	-18	-72	-104	-42	-60	-16
	Inner Mongolia Yitai Coal	6997	6008	3118	2445	-193	1669
	Sichuan Hongda	-4	-525	-27	-523	-350	-133
	Tongkun Group	674	-252	-513	-495	-580	284
	Transfar Zhilian	31	50	114	217	187	-500
	Jiangsu Fasten	-21	-18	-30	-40	53	116
	Ningbo Fubang	-18	-19	-47	-44	-53	-29
	Zhejiang Jiahua Energy	-330	-165	476	426	469	465
	Shuangliang Eco-Energy	-7	-66	179	108	123	-66
	Jiangsu Aoyang Technology	-838	-111	-53	-131	-14	140
Tec/Tel	Hengtong Optic-Electric	151	193	106	137	355	891
	Lens Technology	1150	1755	2025	693	790	282
	EVOC Intelligent Technology	45	76	53	87	-19	-28
Ent/Media	Shenzhen Tempus Global Bus.	-36	-31	-19	82	52	55
Phrm/Hlth	Jointown Pharmaceutical	166	289	208	287	221	357
	Sichuan Kelun Pharmaceutical	715	500	271	531	27	92
	Sichuan Languang Development	-42	-40	-62	969	341	409
	Shenzhen Neptunus Bio.	-4	31	-60	14	338	9
	Shandong Weigao	376	382	160	336	486	447
Each year AVERAGE:		**417**	**381**	**417**	**614**	**618**	**937**

If we look at the average EVA for each company over the six-year period, we can see that 69% of the companies produced positive average EVA. Out of 81

companies, 56 were positive and 25 were negative. The company with the most positive average EVA figure was China Vanke with CYN 15,404,000,000. The company with the most negative average EVA figure was Chongquing Rural Commercial Bank with CNY -6,725,000,000.

If we compare 2011 with 2016 we can see a slight change in the amount of companies producing positive EVA amounts. In 2011 68% of the companies produced positive EVA, while in 2016 this rose slightly to 69%.

Table 4.4 *'Non-users, Forbes' EVA (in millions Yuan)*

		2011	2012	2013	2014	2015	2016
Rtl/Con	Gree Electric Appliances	2617	4557	8023	11141	7828	10542
	Kweichow Moutai	8429	12928	14430	13783	12418	13306
	Qingdao Haier	2902	3315	3833	5870	4315	4671
Construction/Real Estate	China State Construction Eng.	15607	18756	25299	23283	26295	28877
	China Railway Group	5177	5561	7554	3958	110	-1294
	China Railway Construction	6287	6417	7485	5011	5454	6192
	Sun Hung Kai Properties	9336	8920	-13602	-11044	-10140	-3199
	Poly Real Estate	5580	7430	9941	10718	12957	12035
	China Resources Land	3526	2884	6843	6708	7004	9003
	Metallurgical Corp of China	2194	-10304	1741	514	-1027	-79
	Wheelock	9017	5126	3890	3663	6293	5572
	Anhui Conch Cement	8001	892	3572	5916	2370	3377
	Link REIT	1311	15149	10615	16938	9085	8795
	China Gezhouba	1188	1218	1328	1046	1964	1405
Man/Ind Goods	SAIC Motor	25050	20807	21825	24141	26852	31577
	Dongfeng Motor Group	5295	-5320	-4587	-772	1339	1645
	Nan Ya Plastics	1477	-1943	-2749	-3673	-3234	-4364
	Chongqing Changan Auto	-359	-380	1216	5575	7714	7138
	Guangzhou Automobile Grp	-1098	-2403	-2551	-2388	-1523	-918
	Formosa Plastics	1857	-2145	-3576	-2264	-1060	-856
Financial/Business Servic	ICBC	65087	56715	38589	34705	-4436	-3663
	China Construction Bank	34163	20195	17144	21870	-8568	-12455

	Argriculture Bank of China	1887	3507	-3615	-4414	-42716	-34559
	Bank of China	5892	-10835	-9029	-18090	-44259	-73738
	Ping An Insurance Group	11570	14698	19970	20355	40917	50017
	Bank of Communications	-6204	-17557	-28174	-29259	-33265	-40406
	China Merchants Bank	8101	10012	2403	-8185	4016	16254
	China Life Insurance	2073	-4315	6455	-471	8066	-7287
	Industrial Bank	-3351	-10767	-19560	-21713	-17193	5586
	Shanghai Pudong Dev.	-18997	-17134	-24061	-23567	-8687	11343
	China Minsheng Banking	-5091	-1129	-15941	-12545	-16821	-9804
	China Communications Cons.	7843	8174	6545	10366	10628	11118
	China Everbright Bank	-5173	-6069	-6785	-6631	-6563	-392
	Jardine Matheson	41719	14570	10637	12508	12089	25756
	China Pacific Insurance	302	-3536	-112	-1868	6159	570
	People's Insurance Company	4499	4244	2920	4934	10513	-1422
	Cathay Financial	-2835	-1949	1895	2547	4759	-143
	Huaxia Bank	-7798	-8917	-6852	-8693	-6212	1157
	Bank of Beijing	-2739	-7005	-7492	-7173	-4264	2388
	Fubon Financial	1150	-442	964	4083	6111	959
	Chinatrust Financial	-835	273	-1502	1940	1787	244
	Haitong Securities	-2238	-4470	-3208	-940	7501	1637
	Bank of Nanjing	-1875	-2074	-2341	-1971	-1967	797
	Swire Pacific	10370	8236	2634	2053	3126	1023
	China Taiping Insurance	665	589	1256	1431	3898	2761
	Bank of Ningbo	-792	-296	-778	-425	854	3093
	GF Securities	-709	-4379	-1333	191	7399	2905
	Huatai Securities	-2176	-3017	-1992	-759	3378	-360
	Hong Kong Exchanges	3389	2195	2200	2835	3237	1221
	Shenwan Hongyuan Group	-591	-894	-339	2552	7012	766
	Chongqing Rural Bank	-4847	-5249	-10243	-7976	-7437	-4601
	Mega Financial Holding	-1360	27	-873	1120	48	-340
	China Merchants Securities	-461	-1225	-914	-1597	6568	713
En/Resources	China Petroleum & Chemical	43224	40516	33065	15788	3107	16791
	Petro China	90917	90896	90350	56519	-9784	-26892
	China Shenhua Energy	33297	35546	35537	25605	5495	13595
	China Yangtze Power	4753	7017	4675	6347	12110	12531
	Huaneng Power International	2888	9989	15248	14559	17156	6111

	Baoshan Iron & Steel	1080	-2121	1308	-1039	-5820	1529
	Formosa Petrochemical	854	-2911	525	-2783	5866	11337
	CLP Holdings	6996	6966	4423	8203	12090	8678
	CNOOC	47847	34349	25508	30527	-6363	-25851
	Formosa Chemicals	1932	-2727	-1293	-2772	248	2049
	China Resources Power	4778	6881	8656	5536	8148	6166
	GD Power Development	3644	6020	8584	6962	4942	4761
	China Steel	1602	-994	1827	2951	-914	1573
Tech/Tele	China Mobile	94944	94666	67108	36655	18722	21709
	Taiwan Semiconductor	18942	26206	26418	39490	39396	44213
	China Telecom	7175	4373	5021	3724	-1919	-2356
	China Unicom	-4577	1943	2969	2199	-6837	-14073
	Lenovo Group	1756	3116	4413	4816	-1627	2617
	Chunghwa Telecom	8380	6507	6824	6183	7338	6404
	Netease	1712	1776	1703	2956	4344	7617
	Quanta Computer	848	1946	844	740	1610	1519
Phrm/Hlth	Sinopharm Group	1696	2860	3423	4420	5062	5479
Trans/Log	CRRC	2313	725	-66	8392	3856	3326
	MTR	2450	1213	658	1408	2385	1522
	China Eastern Airlines	3163	2554	-307	3670	8579	6932
	China Southern Airlines	2329	2345	-995	1801	7834	8046
	Daqin Railway	8727	8695	8013	9072	6684	818
	Shanghai International Port	2565	2620	838	3302	2587	3493
Each year AVERAGE:		**7905**	**6353**	**5238**	**4698**	**2531**	**2645**

If we look at the average EVA for each company over the six-year period, we can see that 72% of the companies produced positive average EVA. Out of 81 companies, 58 were positive and 23 were negative. The company with the most positive average EVA figure was China Mobile with CYN 55,634,000,000. The company with the most negative average EVA figure was Bank of Communications with CNY -25,811,000,000.

If we compare 2011 with 2016 we can see a slight change in the amount of companies producing positive EVA amounts. In 2011 74% of the companies produced positive EVA, while in 2016 this fell slightly to 72%.

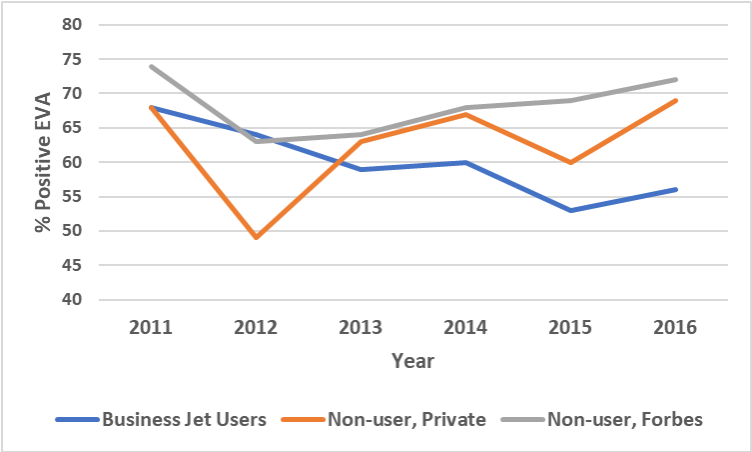
4.3 Companies producing positive EVA

By analysing the ratio of companies producing positive EVA we can see some general patterns in the movement of EVA. Table 8 below shows the % percentages of positive to negative EVA for each group's companies, for each year 2011 to 2016. Figure 1displays the same information in chart form.

Table 4.5 Percentage (*%) of companies with positive EVA*

	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Business Jet Users	68%	64%	59%	60%	53%	56%
Non-user, Private	68%	49%	63%	67%	60%	69%
Non-user, Forbes	74%	63%	64%	68%	69%	72%

Figure 4.1 Percentage *(%) of companies with positive EVA*



During the six-year period the ratio of companies producing positive EVA was almost always above 50%, with just the 'Non-user, Private' group slipping below 50% in 2012 when it dipped to 49%. All groups (companies) saw a fall from 2011 to 2012. However, after 2012 the non-user groups recovered back to their original values. The 'Business Jet User' dropped the most over the 6 years going from 68% to 56%.

4.4 Average EVA of the three groups

Table 9 below displays the average EVA for each group. Each years' average was calculated by adding the EVA from every company and then dividing the total by the number of companies in each group.

Table 4.6 *Average EVA for each group*

	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Business Jet Users	919	920	1963	1765	1859	2295
Non-user, Private	417	381	417	614	618	937
Non-user, Forbes	7905	6353	5238	4698	2531	2645

In 2011 the 'Non-user, Forbes' group was clearly producing the best EVA results, with the average EVA for the 81 companies being CNY 7,905,000,000. The financial performance of this group in 2011 dwarfs over the other two groups. However, over the six-year period that was analysed, this group on a whole, lost economic value every year except in 2016 where it made a slight (4%) gain. The biggest drop came in 2014 – 2015 when companies lost -46.1%. Through calculating the percentage % change for each year and then working out average of those changes, we can see that the average was -17.8%.

The 'Business Jet Users' group saw expansion in its average EVA every year, apart from 2014, when it fell by 10.1%. The average change over each of the six years analysed was 26.4%. The average EVA for the 80 companies in this group for 2011 was CNY 919,000,000. The average EVA of the companies in 2016 was CNY 2,295,000,000.

The 'Non-user, Private' group also experienced expansion in its average EVA every year, except for 2012, when it fell by 8.8%. The average change over each of the six years analysed was slightly less than the 'Business Jet Users' group at 26.4%. The average EVA for the 81 companies in this group for 2011 was CNY 417,000,000. The average EVA of the companies in 2016 was CNY 937,000,000.

Figure 2 and figure 3 display the changes in average EVA for the six-year period that was analysed in this study.

Figure 4.2 *Line chart of Average EVA for each group (2011-2016)*

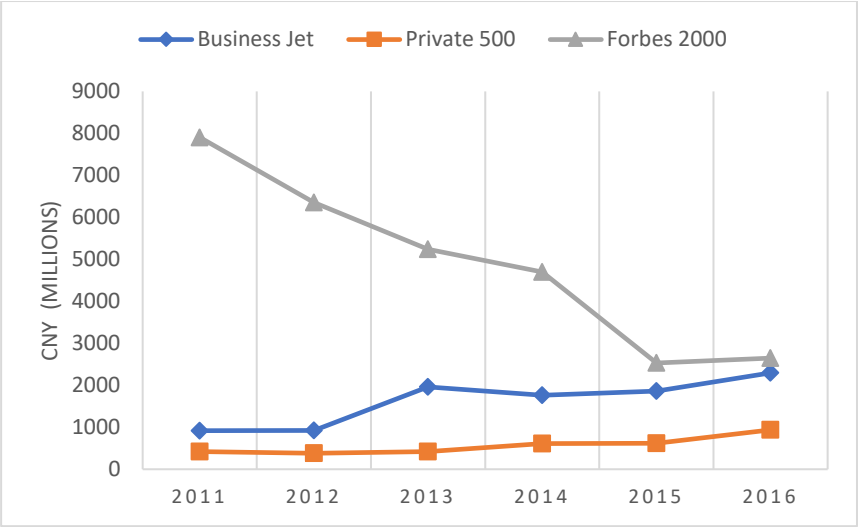
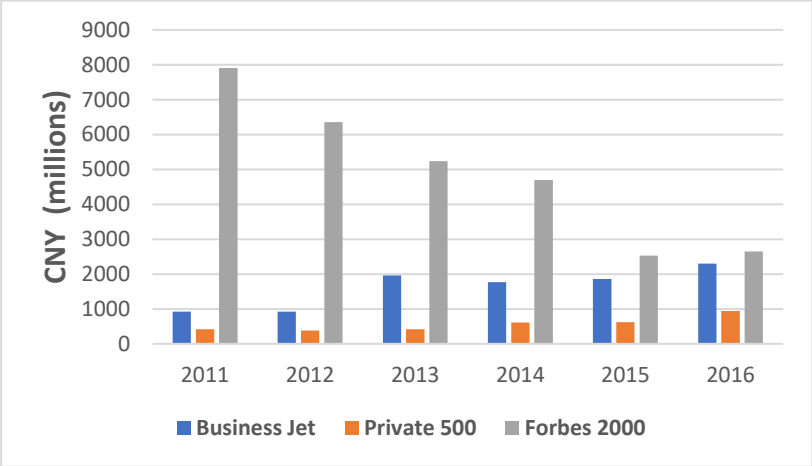


Figure 4.3 *Column chart of Average EVA for each group (2011-2016)*



By looking at the figures 2 & 3 we see that the average EVA of the 'Non-users, Forbes' group was significantly than the other two groups in 2011. However, over the period of the study we see steady gains made by both the 'Business Jet Users'

and ‘Non-users, Private’ groups. Gains made over the period are summarised in the following tables 10 & 11.

Table 4.7 *Comparisons of changes in EVA (yearly)*

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	Average
Business Jet Users	0.2%	113.4%	-10.1%	5.4%	23.5%	**26.4%**
Non-users, Private 500	-8.8%	9.6%	47.1%	0.7%	51.7%	**20.1%**
Non-users, Forbes 2000	-19.6%	-17.6%	-10.3%	-46.1%	4.5%	**-17.8%**

Table 4.8 *Comparisons of changes in EVA (2011 with 2016)*

	2011	2016	Difference	% Change
Business Jet Users	919	2295	1377	**150%**
Non-users, Private 500	417	937	520	**125%**
Non-users, Forbes 2000	7905	2645	-5260	**-67%**

4.5 Industry Averages Comparison

There were 9 different industry subgroups represented in this study. An analysis was done to see the average EVA changes of each industry subgroup. Three of the industry subgroups were disregarded for industry comparison analysis because the industry had either only one or no company represented in that subgroup. The industries not analysed were: Entertainment/Media, Pharmaceutical/Healthcare and Transportation/Logistics. Table 12 shows the subgroups and we can see the 3 disregarded groups highlighted at the bottom of the table.

Table 4.9 *Industry Subgroups*

Industry:	**BizJet User**	**Non-users (Private 500)**	**Non-user (Forbes 2000)**
Retail/Consumer Goods	**21**	**18**	**3**
Construction/Real Estate	**16**	**16**	**11**
Manufacturing/Industrial Goods	**10**	**19**	**6**
Financial/Business Services	**11**	**3**	**33**
Energy/Resources	**7**	**16**	**13**
Technology/Telecommunications	**7**	**3**	**8**
Entertainment/Media	**4**	**1**	**0**
Pharmaceutical/Healthcare	**4**	**5**	**1**
Transportation/Logistics	**0**	**0**	**6**
	80	**81**	**81**

Changes in average EVA for 6 industry subgroups were then calculated between each year and expressed as a percentage. Summarised calculations can be seen in table 13.

Table 4.10 *Changes in average EVA for each Industry Subgroup*

	2011 - 2012	2012 - 2013	2013 - 2014	2014 - 2015	2015 - 2016	AVERAGE
Retail/Consumer Goods						
Business Jet Users	-46%	17%	-94%	-362%	573%	**18%**
Non-user, Private	-27%	115%	73%	8%	-9%	**32%**
Non-user, Forbes	49%	26%	17%	-20%	16%	**18%**
Construction/Real Estate						
Business Jet Users	28%	46%	-43%	148%	29%	**41%**
Non-user, Private	19%	16%	41%	-8%	46%	**23%**
Non-user, Forbes	-8%	4%	3%	-10%	17%	**1%**
Manufacturing/Industrial Goods						
Business Jet Users	-32%	5%	65%	28%	-4%	**12%**
Non-user, Private	20%	40%	-7%	56%	61%	**34%**
Non-user, Forbes	-73%	11%	115%	46%	14%	**23%**
Financial/Business Services						
Business Jet Users	41%	3469%	-2%	-25%	6%	**698%**
Non-user, Private	-14%	-94%	25%	8%	40%	**-7%**
Non-user, Forbes	-75%	-198%	-4%	-66%	10%	**-67%**
Energy/Resources						
Business Jet Users	51%	-23%	79%	-9%	-22%	**15%**
Non-user, Private	-55%	-33%	-53%	-202%	305%	**-8%**
Non-user, Forbes	-6%	0%	-27%	-72%	-30%	**-27%**
Technology/Telecommunications						
Business Jet Users	30%	-6%	52%	-8%	29%	**20%**
Non-user, Private	50%	8%	-58%	23%	2%	**5%**
Non-user, Forbes	9%	-18%	-16%	-37%	11%	**-10%**

For the 'Business Jet Users' group the best industry performance came from Financial/Business Services, with a gain in average EVA of 698%. This result was skewered by the massive 2012-2013 gain of 3,469%. The next best performing industry was Construction/Real Estate with an improvement of 41%. The worst performing industry was Manufacturing/Industrial Goods, with a gain of just 12% over the six-year period.

For the ‘Non-users, Private’ group the best industry performance came from Manufacturing/Industrial Goods, with a gain in average EVA of 34%. The worst performing industry was Energy/Resources, with a loss of -8% over the six-year period.

For the ‘Non-users, Forbes’ group the best industry performance came from Manufacturing/Industrial Goods, with a gain in average EVA of 23%. The worst performing industry was Financial/Business Services, with a loss of -67% over the six-year period.

4.6 Statistical Analysis

Statistical analysis was performed using SPSS v21 software. Independent samples T tests were undertaken. In addition, a one-way analysis of variance (AVOVA) was completed.

4.6.1 Descriptive Analysis

From the table 14 below we can observe that the mean EVA of the ‘Business Jet Users’ group was 1620.1479 with a standard deviation of 6171.987. The ‘Non-users, Private’ group’s mean was 564.0761 with a standard deviation of 222.80774 and the ‘Non-users, Forbes’ group’s mean was 4894.8909 with a standard deviation of 16012.52076.

Table 4.11 *Descriptive Statistics*

Group		N	Minimum	Maximum	Mean	Std. Deviation
1.00	EVA	480	-25694.00	67977.00	1620.1479	6171.98709
	Valid N (listwise)	480				
2.00	EVA	486	-10243.00	23430.00	564.0761	2222.80774
	Valid N (listwise)	486				
3.00	EVA	486	-73738.00	94944.00	4894.8909	16012.52076
	Valid N (listwise)	486				

Table 4.12 *Independent Samples Test for Group 1 and 2*

		Levene Test for Equality of Variances		t-test for Mean Equality						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
EVA	Equal variances assumed	61.002	.000	3.546	964	.000	1056.07178	297.78203	471.69603	1640.44754
	Equal variances not assumed			3.530	599.861	.000	1056.07178	299.21181	468.44176	1643.70181

4.6.2 Independent samples T test

'Business Jet Users (Group 1) and 'Non-users, Private' (Group 2)

In order to find the mean difference in EVA between the companies of group 1 & 2, an independent samples T test was applied by using SPSS and the results can be seen in table 15.

The T value corresponding to the mean difference between group 1 & 2 was 3.546 and its corresponding p value was 0.000<0.05. Since the p value was less

than 0.05, we can conclude that there is a significant difference in the mean EVA of group 1 & 2.

‘Business Jet Users (Group 1) and ‘Non-users, Forbes’ (Group 3)

In order to find the mean difference in EVA between the companies of group 1 & 3, an independent samples T test was applied by using SPSS and the results can be seen in table 16.

Table 4.13 *Independent Samples Test for Group 1 and 3*

		Levene Test for Equality of Variances		t-test for Mean Equality						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
EVA	Equal variances assumed	93.617	.000	-4.184	964	.000	-3274.74303	782.65940	-4810.65566	-1738.83040
	Equal variances not assumed			-4.203	627.511	.000	-3274.74303	779.06034	-4804.62402	-1744.86204

The T value corresponding to the mean difference between groups 1 & 3 was 4.184 and its corresponding p value was 0.000<0.05. Since the p value was less than 0.05, we can conclude that there is a significant difference in the mean EVA of groups 1 & 3.

Table 4.14 *Independent Samples Test for Group 2 and 3*

		Levene Test for Equality of Variances		t-test for Mean Equality						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
EVA	Equal variances assumed	190.300	.000	-5.906	970	.000	-4330.81481	733.30765	-5769.86701	-2891.76262
	Equal variances not assumed			-5.906	503.685	.000	-4330.81481	733.30765	-5771.53333	-2890.09630

'Non-users, Private' (Group 2) and 'Non-users, Forbes' (Group 3)

In order to find the mean difference in EVA between the companies of group 2 & 3, an independent samples T test was applied by using SPSS and the results can be seen in table 17.

The T value corresponding to the mean difference between group 2 & 3 was 5.906 and its corresponding p value was 0.000<0.05. Since the p value was less than 0.05, we can conclude that there is a significant difference in the mean EVA of group 2 & 3.

4.6.3 ANOVA

In order to find the difference in EVA between the different types of industry, a one-way analysis of variance was applied by using SPSS and the results can be seen in table 18.

Table 4.15 *ANOVA of Industry Groups*

EVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4946947582.289	7	706706797.470	7.038	.000
Within Groups	145003650087.785	1444	100418040.227		
Total	149950597670.074	1451			

The F value corresponding to the mean difference between the different types of industry was 7.038 and its corresponding p value was 0.000<0.05. Since the p value was less than 0.05, we can conclude that there is a significant difference in the mean EVA between the different types of industry.

In order to find the difference in EVA between the three groups, ‘Business Jet Users’, ‘Non-users, Private’ and ‘Non-users, Forbes’, a one-way analysis of variance was applied by using SPSS and the results can be seen in table 19.

Table 4.16 *ANOVA of 3 Groups*

EVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4953124982.172	2	2476562491.086	24.749	.000
Within Groups	144997472687.901	1449	100067268.936		
Total	149950597670.074	1451			

The F value corresponding to the mean difference between groups of companies was 24.749 and its corresponding p value was 0.000<0.05. Since the p value was less than 0.05, we can conclude that there is a significant difference in the mean EVA of three groups of companies.

4.7 Answers to the key questions of this paper

This paper aimed to answer two key questions:

1. Do companies that utilize business jets outperform non-users?
2. Do more companies utilizing business jets have positive EVA than non-users?

By way of EVA analysis, some answers can be provided for these two questions. These answers can be found below:

1. Do companies that utilize business jets outperform non-users?

Yes, companies that utilize business jets outperform non-users. The change in the average EVA over the six-years of this study of Chinese companies gives the answer to this question.

- ➔ The average yearly change in EVA for the 'Business Jet Users' group was **26.4%,** for the 'Non-users, Private' it was **20.1%** and for the 'Non-users, Forbes' group it was **-17.8%.**
- ➔ Comparing the EVA for 2011 & 2016 shows us the change in results from the first year of this study and the final year of this study. The 'Business Jet Users' group grew by **150%,** the 'Non-users, Private' group by **125%** and the 'Non-users, Forbes' group it fell by **-67%**.

2. Do more companies utilizing business jets than non-users have positive EVA?

No, the results of this study show that both non-user groups have more companies producing positive EVA.

- ➔ For 2016: **72%** of 'Non-users, Forbes' and **69%** of 'Non-users, Private' had positive EVA. This compares with just **56%** of the 'Business Jet Users' group.
- ➔ For 2011: the results show **74%** for Forbes, **68%** for Private and **68%** for Business Jet Users.

5. Discussion

5.1 Summary

The paper aimed to analyse the financial performance of Chinese companies and to see if the companies that utilize Business Aviation produce better results compared with non-users. The Economic Value Added (EVA) metric was used to assess whether a selection of companies in China are adding economic value through their operations. EVA was selected as the metric because it is deemed to be a superior method to assess if a company's managerial team is adding or destroying value for its owners, for whom they bear ultimate responsibility to. If a company can produce a net operating profit above the cost of capital provided, then it is deemed to be creating positive economic value. A positive EVA result is an indicator of how a company is performing and it is one way to view the future direction of a company. EVA was selected rather than traditional indicators such as earning per share (EPS), return of equity (ROE) and return on assets (ROA), or market value added (MVA) indicators such as growth in market capitalization or growth in revenue. Traditional metrics give an historical view of a company's financial performance.

The six-year period analysed was important as came off the back of multiple years of strong GDP growth in China. The six years analysed (2011-2016) came at a time when the nation's economy began cooling off. Also, it was a crucial time for the business jet market in China, as the government began to crackdown on corruption, and began looks for signs of extravagance. Orders of business jets fell, and those users of jets already in the country tried to keep a low profile.

The results were mixed as to whether the companies utilizing business jets experience better financial performance than non-users. The overall growth in EVA by business jet users was very significant. The 80 companies that made up this group grew their EVA by a collective average of 26.4%. When compared with some of the biggest companies on a world stage, business jet users performed outstandingly. The 81 Chinese companies from the Forbes Global 2000 destroyed -17.8% in economic value over the period studied. Any injection of government money into these companies does not seem to be helping them produce added value. However, the number of companies producing positive EVA for the 'Business Jet User' group fell from 68% in 2011 to 56% in 2016.

The use of business jets is changing in China. Where once they were a sign of affluence, they are now genuinely being viewed as an important tool for business. As Chinese companies become more prevalent on the international stage, the use of this form of transportation is sure to be utilized more and more. Companies in China will most probably see them for the productivity benefits that they can bring. Also as the Chinese government moves to free up more airspace, promote general aviation and construct more facilities to support business aviation, we will most likely see more of these aircraft in the sky.

5.2 Limitations and Future Direction

Moving forward, it would be very worthwhile to repeat a similar study in a few years. A future study should get a more comprehensive list of users of business jets, as the existing users are very private, and it was difficult to find exactly who owned or operated these planes in China. If these jets become more accepted and prevalent, then information on which companies use them should become more readily

available. This study was also limited by a lack of publicly available financial results. A future study may have the chance to find more published data as more companies make public listings on stock exchanges in the pursuit of growth, because public listings will give companies access to funds. It would also be a good idea to include some traditional accounting indicators for the sake of comparison.

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Appendix

Appendix A. Hurun Report List.

	姓名	飞机型号	公司
北京 34 架	王健林家族	湾流 G550	万达
	李彦宏、马东敏夫妇	湾流 G550 庞巴迪环球 6000	百度
	卢志强家族	湾流 G550（2 架） 湾流 G650	泛海
	严彬	庞巴迪环球 5000、湾流 G650、赛斯纳奖状纬度 680A	华彬
	陈丽华	湾流 G550	富华
	刘强东	湾流 G650	京东
	李河君	湾流 G550（2 架）	汉能
	赵涛	达索猎鹰 7X	步长
	肖永明家族	达索猎鹰 7X（2 架）	藏格钾肥
	黄光裕家族	湾流 G550	国美
	傅军	湾流 G450、湾流 G650	新华联
	王靖	达索猎鹰 7X	信威
	基建虹	巴西工业莱格赛 650 巴西工业莱格赛 500	耀莱
	霍庆华家族	湾流 G550	庆华
	王永红	湾流 G450	中弘
	黄有龙、赵薇夫妇	庞巴迪挑战者 605	大漠金海
	张朝阳	庞巴迪里尔 60	搜狐
	朱新礼	达索猎鹰 2000	汇源
	贾鹏 **	达索猎鹰 7X	百悦集团
	蒋百荣 **	湾流 G550、湾流 G650	百荣控股
	王军 **	达索猎鹰 900	中信集团 前董事长
	吴小晖 **	达索猎鹰 7X	安邦保险
	王思聪 **	达索猎鹰 7X	普思投资
	张勇 **	湾流 G450	鑫苑置业
香港 25 架	李嘉诚	湾流 G550	长江实业
	李兆基	湾流 G550	恒基兆业
	郑家纯家族	湾流 G550	新世界 / 周大福
	刘銮雄家族	波音 787 Dreamliner 湾流 G650（2 架） 庞巴迪挑战者 605	华人置业
	许荣茂家族	湾流 G550	世茂
	邢李原	庞巴迪挑战者 300	思捷环球
	朱共山家族	空客 A318、湾流 G550	保利协鑫
	李泽楷	湾流 G550	电讯盈科
	杨受成	湾流 G200	英皇
	郑建明	庞巴迪环球 5000	顺风清洁能源
	刘长乐	湾流 G200	凤凰卫视
	罗方红、徐京华 **	空客 A318（3）	安中石油
	郑裕彤 **	湾流 G650	新世界集团、周大福
	林建岳 **	庞巴迪环球 5000	丽新国际
	庄绍绥 **	湾流 G650	庄士集团
	向华强 **	庞巴迪挑战者 605	中国星集团
	纪晓波 **	巴航工业世袭 1000、湾流 G200、巴航工业莱格赛 650	Imperial Pacific

	姓名	飞机型号	公司
深圳 10 架	马化腾	庞巴迪环球 6000	腾讯
	陈红天、姚丽妮夫妇	庞巴迪挑战者 850	祥祺
	李华家族	庞巴迪挑战者 850	卓越
	陈华	庞巴迪挑战者 605	京基
	黄楚标 **	庞巴迪挑战者 300 庞巴迪挑战者 605	东海
	梁国兴 **	达索猎鹰 7X	银基
	姚其沥 **	湾流 G450	宏兆
	郑康豪 **	庞巴迪挑战者 605 庞巴迪环球 5000	皇庭
上海 9 架	史玉柱家族	湾流 G650	巨人
	郭广昌	达索猎鹰 7X	复星
	姜照柏	湾流 G550	鹏欣
	周成建家族	湾流 G550	美特斯邦威
	陈荣家族	赛斯纳奖状	上海中路
	葛卫东	庞巴迪环球 6000	混沌投资
	郑永刚	达索猎鹰 7X	杉杉
	张幼才	湾流 G450	鹿鸣谷
	周忻	庞巴迪挑战者 604	易居
哈尔滨 9 架	戴永革家族	湾流 G200、庞巴迪挑战者 604、庞巴迪环球 5000、湾流 G550	人和商业
	朱吉满、白莉惠夫妇	巴航工业世袭 1000、湾流 G550（2 架）、湾流 G650、巴航工业莱格赛 650	誉衡药业
广州 9 架	许家印	空客 A318、湾流 G550、湾流 G650	恒大
	朱孟依家族	达索猎鹰 7X	合生创展
	徐宇、李珊瑚夫妇	庞巴迪环球 6000	赫基国际
	周泽荣	空客 A318	侨鑫
	张力、张量父子	湾流 G550、湾流 G650	富力地产
	张量 **	波音 BBJ	黑洞投资
南京 7 架	张近东	湾流 G550（2 架）	苏宁
	袁亚非	湾流 G200、湾流 G650、达索猎鹰 7X	三胞
	祝义财、吴学琴夫妇	湾流 G550、湾流 G200	雨润
烟台 6 架	宋作文家族	庞巴迪挑战者 605、湾流 G450、湾流 G550、湾流 G650、波音 BBJ、达索猎鹰 7X	南山
苏州 5 架	陈建华	湾流 G550	恒力
	缪汉根	达索猎鹰 7X	盛虹
	朱兴良家族	湾流 G550	金螳螂
	高德康、梅冬夫妇	达索猎鹰 7X	波司登
	高建荣、冯飞飞夫妇	湾流 G550	中茵
台北 5 架	张荣发 **	波音 737-BBJ	长荣集团
	郭台铭	湾流 G550、湾流 G650	鸿海
	蔡衍明家族	湾流 G200、空客 A318	旺旺
佛山 4 架	何享健、何剑锋父子	湾流 G450、波音 737	美的
	杨惠妍	庞巴迪环球 6000	碧桂园
	杨国强	庞巴迪环球快车 XRS	碧桂园

杭州 4 架	马云家族	湾流 G550	阿里巴巴、蚂蚁金服
	鲁冠球家族	达索猎鹰 7X	万向
	陆兆禧	湾流 G650	阿里巴巴、蚂蚁金服
	柴慧京	庞巴迪挑战者 605	国都地产
曼谷 4 架	谢国民	湾流 G650（2 架）、庞巴迪环球 5000、达索猎鹰 2000	正大集团
重庆 3 架	蔡奎家族	达索猎鹰 7X	龙湖
	罗韶宇、赵洁红夫妇	湾流 G450	东银
	尹明善	湾流 G450	力帆
天津 3 架	闫希军家族	庞巴迪挑战者 605	天士力
	魏应州	湾流 G450（2 架）	顶新
绍兴 3 架	俞发祥	达索猎鹰 7X	祥源控股
	陈爱莲	庞巴迪挑战者 605 巴航工业飞鸿 100	万丰奥特集团
大连 3 架	孙喜双	湾流 G550	一方
	张振新	庞巴迪挑战者 300 庞巴迪挑战者 605	先锋
福州 2 架	陈发树	空客 A319	新华都
	梁衍锋 **	庞巴迪挑战者 850	福建中庚

长沙 2 架	梁稳根	空客 A320	三一
	张跃、赖玉静夫妇	赛斯纳奖状	远大空调
陇南 2 架	阙文彬	湾流 G450、湾流 G550	独一味
乌鲁木齐 2 架	孙广信	巴航工业世袭 1000 空客 A320	广汇
东莞 1 架	张茵	湾流 G550	玖龙纸业
东营 1 架	王军	达索猎鹰 900	万通石油化工
金华 1 架	徐文荣 **	庞巴迪挑战者 300	横店集团
廊坊 1 架	王玉锁、赵宝菊夫妇	达索猎鹰 7X	新奥
泉州 1 架	许世辉家族	湾流 G550	达利食品
三亚 1 架	曾宪云 **	庞巴迪挑战者 605	凤凰岛
厦门 1 架	黄焕明	湾流 G550	明发
汕头 1 架	刘绍喜家族	湾流 G450	宜华
沈阳 1 架	赵本山 **	庞巴迪挑战者 850	本山传媒
太原 1 架	张亚平 **	巴航工业莱格赛 650	山西东辉
澳门 1 架	何鸿燊 **	庞巴迪环球 6000	澳博娱乐
地区不详 1 架	王文学	湾流 G550	华夏幸福

Appendix B. ACFIC - China Top 500 Private (1-200)

三、榜单发布

2017 中国民营企业 500 强名单

500 强序号	企业名称	省市区	所属行业	营业收入(万元)
1	华为投资控股有限公司	广东省	计算机、通信和其他电子设备制造业	52,157,400
2	苏宁控股集团	江苏省	零售业	41,295,073
3	山东魏桥创业集团有限公司	山东省	有色金属冶炼和压延加工业	37,318,332
4	海航集团有限公司	海南省	综合	35,233,153
5	正威国际集团有限公司	广东省	有色金属冶炼和压延加工业	33,001,920
6	联想控股股份有限公司	北京市	计算机、通信和其他电子设备制造业	30,695,285
7	中国华信能源有限公司	上海市	批发业	29,094,988
8	京东集团	北京市	互联网和相关服务	26,012,165
9	大连万达集团股份有限公司	辽宁省	综合	25,498,000
10	恒力集团有限公司	江苏省	化学原料和化学制品制造业	25,164,763
11	万科企业股份有限公司	广东省	房地产业	24,047,724
12	恒大集团有限公司	广东省	房地产业	21,144,400
13	浙江吉利控股集团有限公司	浙江省	汽车制造业	20,879,870
14	江苏沙钢集团有限公司	江苏省	黑色金属冶炼和压延加工业	19,833,975
15	美的集团股份有限公司	广东省	电气机械和器材制造业	15,984,170
16	雪松控股集团有限公司	广东省	商务服务业	15,701,937
17	碧桂园控股有限公司	广东省	房地产业	15,308,698
18	海亮集团有限公司	浙江省	有色金属冶炼和压延加工业	15,169,013
19	新疆广汇实业投资（集团）有限责任公司	新疆维吾尔自治区	零售业	14,561,731
20	苏宁环球集团有限公司	江苏省	房地产业	13,356,839
21	三胞集团有限公司	江苏省	零售业	13,008,768
22	泰康保险集团股份有限公司	北京市	保险业	12,510,400
23	TCL 集团股份有限公司	广东省	计算机、通信和其他电子设备制造业	10,647,350
24	新奥集团股份有限公司	河北省	燃气生产和供应业	10,478,564
25	比亚迪股份有限公司	广东省	汽车制造业	10,347,000
26	青山控股集团有限公司	浙江省	有色金属冶炼和压延加工业	10,286,156
27	中天钢铁集团有限公司	江苏省	黑色金属冶炼和压延加工业	10,133,575
28	东岭集团股份有限公司	陕西省	批发业	9,640,568
29	天能集团	浙江省	电气机械和器材制造业	9,616,325
30	超威集团	浙江省	电气机械和器材制造业	9,565,364
31	海澜集团有限公司	江苏省	纺织服装、服饰业	9,330,468

500 强序号	企业名称	省市区	所属行业	营业收入(万元)
32	山东东明石化集团有限公司	山东省	石油加工、炼焦和核燃料加工业	8,868,932
33	盛虹控股集团有限公司	江苏省	纺织业	8,804,037
34	浙江荣盛控股集团有限公司	浙江省	化学纤维制造业	8,687,537
35	上海均和集团有限公司	上海市	综合	8,616,677
36	阳光保险集团股份有限公司	广东省	保险业	8,312,187
37	广厦控股集团有限公司	浙江省	房屋建筑业	8,053,913
38	腾邦集团有限公司	广东省	软件和信息技术服务业	7,969,120
39	西安迈科金属国际集团有限公司	陕西省	批发业	7,917,063
40	南通三建控股有限公司	江苏省	房地产业	7,792,830
41	远大物产集团有限公司	浙江省	其他服务业	7,574,966
42	浙江恒逸集团有限公司	浙江省	化学纤维制造业	7,520,307
43	河北津西钢铁集团股份有限公司	河北省	黑色金属冶炼和压延加工业	7,282,800
44	新华联集团有限公司	湖南省	综合	7,189,858
45	百度公司	北京市	互联网和相关服务	7,054,936
46	河北新华联合冶金控股集团有限公司	河北省	黑色金属冶炼和压延加工业	7,007,209
47	新希望集团有限公司	四川省	农、林、牧、渔服务业	6,855,884
48	中天控股集团有限公司	浙江省	房屋建筑业	6,754,313
49	华泰集团有限公司	山东省	造纸和纸制品业	6,670,596
50	新城控股集团股份有限公司	江苏省	房地产业	6,598,063
51	山东大海集团有限公司	山东省	综合	6,526,700
52	银亿集团有限公司	浙江省	批发业	6,525,061
53	中融新大集团有限公司	山东省	批发业	6,511,717
54	万达控股集团有限公司	山东省	石油加工、炼焦和核燃料加工业	6,423,524
55	三一集团有限公司	湖南省	专用设备制造业	6,375,794
56	科创控股集团有限公司	四川省	医药制造业	6,367,282
57	修正药业集团	吉林省	医药制造业	6,360,145
58	中南控股集团有限公司	江苏省	房地产业	6,325,180
59	深圳市大生农业集团有限公司	广东省	农业	6,252,486
60	正邦集团有限公司	江西省	农业	6,201,286
61	九州通医药集团股份有限公司	湖北省	批发业	6,155,684
62	北京建龙重工集团有限公司	北京市	黑色金属冶炼和压延加工业	6,133,018
63	奥克斯集团有限公司	浙江省	其他制造业	6,123,523
64	利华益集团股份有限公司	山东省	石油加工、炼焦和核燃料加工业	6,111,605
65	内蒙古伊利实业集团股份有限公司	内蒙古自治区	食品制造业	6,060,922
66	宁夏天元锰业有限公司	宁夏回族	有色金属冶炼和压延加工业	6,001,122

500 强序号	企业名称	省市区	所属行业	营业收入(万元)
		自治区		
67	扬子江药业集团	江苏省	医药制造业	5,976,948
68	杭州锦江集团有限公司	浙江省	有色金属冶炼和压延加工业	5,938,616
69	广东温氏食品集团股份有限公司	广东省	畜牧业	5,935,523
70	亨通集团有限公司	江苏省	计算机、通信和其他电子设备制造业	5,863,268
71	深圳市怡亚通供应链股份有限公司	广东省	仓储业	5,829,050
72	江阴澄星实业集团有限公司	江苏省	化学原料和化学制品制造业	5,814,481
73	天津荣程联合钢铁集团有限公司	天津市	黑色金属冶炼和压延加工业	5,800,017
74	雅戈尔集团股份有限公司	浙江省	综合	5,633,399
75	通威集团有限公司	四川省	农副食品加工业	5,617,826
76	河南省漯河市双汇实业集团有限责任公司	河南省	农副食品加工业	5,390,431
77	华夏幸福基业股份有限公司	河北省	房地产业	5,382,059
78	广州富力地产股份有限公司	广东省	房地产业	5,373,033
79	唯品会（中国）有限公司	广东省	零售业	5,371,226
80	山东京博控股股份有限公司	山东省	石油加工、炼焦和核燃料加工业	5,310,336
81	盾安控股集团有限公司	浙江省	专用设备制造业	5,256,893
82	红豆集团有限公司	江苏省	纺织服装，服饰业	5,252,176
83	稻花香集团	湖北省	酒、饮料和精制茶制造业	5,232,844
84	济宁如意投资有限公司	山东省	纺织业	5,192,988
85	正泰集团股份有限公司	浙江省	电气机械和器材制造业	5,104,068
86	卓尔控股有限公司	湖北省	综合	5,086,427
87	山东海科化工集团	山东省	石油加工、炼焦和核燃料加工业	5,083,216
88	江苏南通二建集团有限公司	江苏省	房屋建筑业	5,073,126
89	青建集团股份公司	山东省	房屋建筑业	5,072,174
90	福中集团有限公司	江苏省	综合	5,064,785
91	正荣集团有限公司	福建省	房地产业	5,040,359
92	特变电工股份有限公司	新疆维吾尔自治区	专用设备制造业	4,901,487
93	江苏三房巷集团有限公司	江苏省	纺织业	4,887,241
94	玖龙纸业（控股）有限公司	广东省	造纸和纸制品业	4,873,991
95	深圳市爱施德股份有限公司	广东省	综合	4,833,327
96	亚邦投资控股集团有限公司	江苏省	化学原料和化学制品制造业	4,736,603
97	江苏省苏中建设集团股份有限公司	江苏省	房屋建筑业	4,698,991
98	宝塔石化集团有限公司	宁夏回族	石油加工、炼焦和核燃料加工业	4,697,635

500强序号	企业名称	省市区	所属行业	营业收入(万元)
		自治区		
99	广州晶东贸易有限公司	广东省	批发业	4,675,145
100	德力西集团有限公司	浙江省	电气机械和器材制造业	4,661,352
101	重庆市金科投资控股（集团）有限责任公司	重庆市	其他金融业	4,658,845
102	山东科达集团有限公司	山东省	土木工程建筑业	4,602,958
103	山东创新金属科技有限公司	山东省	有色金属冶炼和压延加工业	4,567,623
104	杭州娃哈哈集团有限公司	浙江省	酒、饮料和精制茶制造业	4,559,165
105	宁波金田投资控股有限公司	浙江省	有色金属冶炼和压延加工业	4,503,056
106	重庆龙湖企业拓展有限公司	重庆市	房地产业	4,477,704
107	长城汽车股份有限公司天津哈弗分公司	天津市	汽车制造业	4,444,336
108	山东太阳控股集团有限公司	山东省	造纸和纸制品业	4,417,759
109	东方希望集团有限公司	上海市	有色金属冶炼和压延加工业	4,312,798
110	山东晨曦集团有限公司	山东省	石油加工、炼焦和核燃料加工业	4,295,858
111	内蒙古鄂尔多斯投资控股集团有限公司	内蒙古自治区	综合	4,172,362
112	郑州中瑞实业集团有限公司	河南省	商务服务业	4,154,999
113	和润集团有限公司	浙江省	食品制造业	4,129,341
114	双胞胎（集团）股份有限公司	江西省	农副食品加工业	4,122,745
115	四川科伦实业集团有限公司	四川省	医药制造业	4,117,468
116	内蒙古伊泰集团有限公司	内蒙古自治区	煤炭开采和洗选业	4,115,263
117	蓝光投资控股集团有限公司	四川省	房地产业	4,081,515
118	临沂新程金锣肉制品集团有限公司	山东省	食品制造业	4,029,150
119	四川宏达（集团）有限公司	四川省	有色金属矿采选业	4,022,311
120	浙江中成控股集团有限公司	浙江省	房屋建筑业	3,989,194
121	江苏永钢集团有限公司	江苏省	黑色金属冶炼和压延加工业	3,958,787
122	山东新希望六和集团有限公司	山东省	畜牧业	3,946,000
123	日照钢铁控股集团有限公司	山东省	黑色金属冶炼和压延加工业	3,933,027
124	浙江桐昆控股集团有限公司	浙江省	化学纤维制造业	3,913,421
125	隆鑫控股有限公司	重庆市	通用设备制造业	3,912,830
126	华勤橡胶工业集团有限公司	山东省	橡胶和塑料制品业	3,892,165
127	天安人寿保险股份有限公司	北京市	保险业	3,885,902
128	四川蓝润实业集团有限公司	四川省	房地产业	3,868,581
129	江苏南通六建建设集团有限公司	江苏省	房屋建筑业	3,821,692
130	人民电器集团有限公司	浙江省	电气机械和器材制造业	3,796,752

500强序号	企业名称	省市区	所属行业	营业收入(万元)
131	重庆力帆控股有限公司	重庆市	汽车制造业	3,788,098
132	物美控股集团有限公司	北京市	零售业	3,773,922
133	郑州宇通集团有限公司	河南省	汽车制造业	3,768,502
134	广东圣丰集团有限公司	广东省	橡胶和塑料制品业	3,730,653
135	山东金诚石化集团有限公司	山东省	石油加工、炼焦和核燃料加工业	3,713,878
136	东营鲁方金属材料有限公司	山东省	有色金属冶炼和压延加工业	3,711,216
137	创维集团有限公司	广东省	计算机、通信和其他电子设备制造业	3,702,372
138	融侨集团股份有限公司	福建省	房地产业	3,700,000
139	蓝思科技股份有限公司	湖南省	计算机、通信和其他电子设备制造业	3,691,772
140	山东金岭集团有限公司	山东省	化学原料和化学制品制造业	3,689,740
141	杭州滨江房产集团股份有限公司	浙江省	房地产业	3,668,000
142	江苏阳光集团有限公司	江苏省	纺织服装、服饰业	3,650,623
143	弘阳集团有限公司	江苏省	批发业	3,594,460
144	山东玉皇化工有限公司	山东省	化学原料和化学制品制造业	3,572,264
145	三河汇福粮油集团有限公司	河北省	农副食品加工业	3,569,280
146	深圳海王集团股份有限公司	广东省	批发业	3,547,024
147	环嘉集团有限公司	辽宁省	批发业	3,536,431
148	河北普阳钢铁有限公司	河北省	黑色金属冶炼和压延加工业	3,535,037
149	冀南钢铁集团有限公司	河北省	黑色金属冶炼和压延加工业	3,521,535
150	天瑞集团股份有限公司	河南省	其他制造业	3,500,265
151	均和（厦门）控股有限公司	福建省	综合	3,455,839
152	中天科技集团有限公司	江苏省	电气机械和器材制造业	3,450,691
153	西王集团有限公司	山东省	农副食品加工业	3,402,859
154	威高集团有限公司	山东省	医药制造业	3,361,631
155	四川德胜集团钒钛有限公司	四川省	黑色金属冶炼和压延加工业	3,356,070
156	天狮集团有限公司	天津市	食品制造业	3,354,195
157	荣盛控股股份有限公司	河北省	房地产业	3,350,280
158	盘锦北方沥青燃料有限公司	辽宁省	石油加工、炼焦和核燃料加工业	3,309,665
159	传化集团有限公司	浙江省	化学原料和化学制品制造业	3,304,487
160	晶龙实业集团有限公司	河北省	计算机、通信和其他电子设备制造业	3,302,668
161	湖南博长控股集团有限公司	湖南省	黑色金属冶炼和压延加工业	3,293,320
162	江西方大钢铁集团有限公司	江西省	黑色金属冶炼和压延加工业	3,290,675
163	远东控股集团有限公司	江苏省	综合	3,272,223
164	江苏新长江实业集团有限公司	江苏省	黑色金属冶炼和压延加工业	3,272,177
165	富海集团有限公司	山东省	石油加工、炼焦和核燃料加工业	3,254,717
166	维维集团股份有限公司	江苏省	食品制造业	3,250,593

500 强序号	企业名称	省市区	所属行业	营业收入(万元)
167	浙江昆仑控股集团有限公司	浙江省	综合	3,237,182
168	东营方圆有色金属有限公司	山东省	有色金属冶炼和压延加工业	3,222,246
169	研祥高科技控股集团有限公司	广东省	计算机、通信和其他电子设备制造业	3,220,692
170	浙江宝业建设集团有限公司	浙江省	房屋建筑业	3,216,547
171	步步高集团	湖南省	零售业	3,214,532
172	山河建设集团有限公司	湖北省	房屋建筑业	3,210,730
173	福晟集团有限公司	福建省	土木工程建筑业	3,209,341
174	上海绿地城市建设发展（集团）有限公司	上海市	房屋建筑业	3,202,709
175	大汉控股集团有限公司	湖南省	商务服务业	3,152,077
176	精功集团有限公司	浙江省	金属制品业	3,151,099
177	法尔胜泓昇集团有限公司	江苏省	金属制品业	3,127,327
178	宁波富邦控股集团有限公司	浙江省	综合	3,126,715
179	上海复星高科技（集团）有限公司	上海市	商务服务业	3,126,276
180	华芳集团有限公司	江苏省	纺织业	3,118,321
181	金浦投资控股集团有限公司	江苏省	化学原料和化学制品制造业	3,108,087
182	天津友发钢管集团股份有限公司	天津市	金属制品业	3,101,112
183	中基宁波集团股份有限公司	浙江省	商务服务业	3,100,911
184	武安市裕华钢铁有限公司	河北省	黑色金属冶炼和压延加工业	3,096,007
185	金澳科技（湖北）化工有限公司	湖北省	石油加工、炼焦和核燃料加工业	3,094,425
186	河南森源集团有限公司	河南省	电气机械和器材制造业	3,078,635
187	通鼎集团有限公司	江苏省	计算机、通信和其他电子设备制造业	3,063,395
188	波司登股份有限公司	江苏省	纺织服装、服饰业	3,057,110
189	双良集团有限公司	江苏省	通用设备制造业	3,034,234
190	华仪集团有限公司	浙江省	电气机械和器材制造业	3,028,480
191	卧龙控股集团有限公司	浙江省	电气机械和器材制造业	3,024,640
192	龙元建设集团股份有限公司	浙江省	房屋建筑业	2,998,118
193	万通海欣控股股份有限公司	山东省	石油加工、炼焦和核燃料加工业	2,936,855
194	北京链家房地产经纪有限公司	北京市	房地产业	2,929,225
195	江苏集群信息产业集团	江苏省	软件和信息技术服务业	2,912,295
196	龙信建设集团有限公司	江苏省	房屋建筑业	2,865,984
197	广西盛隆冶金有限公司	广西壮族自治区	黑色金属冶炼和压延加工业	2,859,460
198	通州建总集团有限公司	江苏省	房屋建筑业	2,831,049
199	富通集团有限公司	浙江省	计算机、通信和其他电子设备制造	2,806,687
200	澳洋集团有限公司	江苏省	纺织业	2,791,541