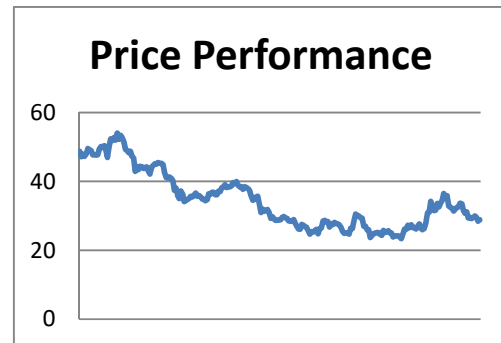


# Allwinner Technology Sail Again

Allwinner Technology (stock code: 300458), founded in 2007, is a leading fabless design company dedicated to smart application processor SoCs and smart analog ICs. Its product line includes multi-core application processors for smart devices and smart power management ICs used worldwide.

We initiate coverage on Allwinner Technology with a strong BUY rating, target price is derived by DCF at CNY 35.91, indicating 30.1% upside potential.

Sector	Fabless Design
Price:	CNY ¥ 27.60
Price Target:	CNY ¥ 35.91
Upside Potential	30.1%
Target Period	1 Year
52 week Low	CNY ¥ 23.4
52 week High	CNY ¥ 54.02
Average Volume	CNY ¥ 190.28 M
Market Cap	CNY ¥ 96.08 B
P/E	64



## We recommend based on:

- 1) Broad prospects of the AI.
- 2) Supporting of the industry policy.
- 3) Allwinner has finished its transition. The rise of the various new products will put the margins back in the black.
- 4) The current valuation, 64.x P/E, is lower than its competitor such as Ingenic which is trading at more than 100 and Nationz which is trading at 76.x P/E.

## Overview for Allwinner

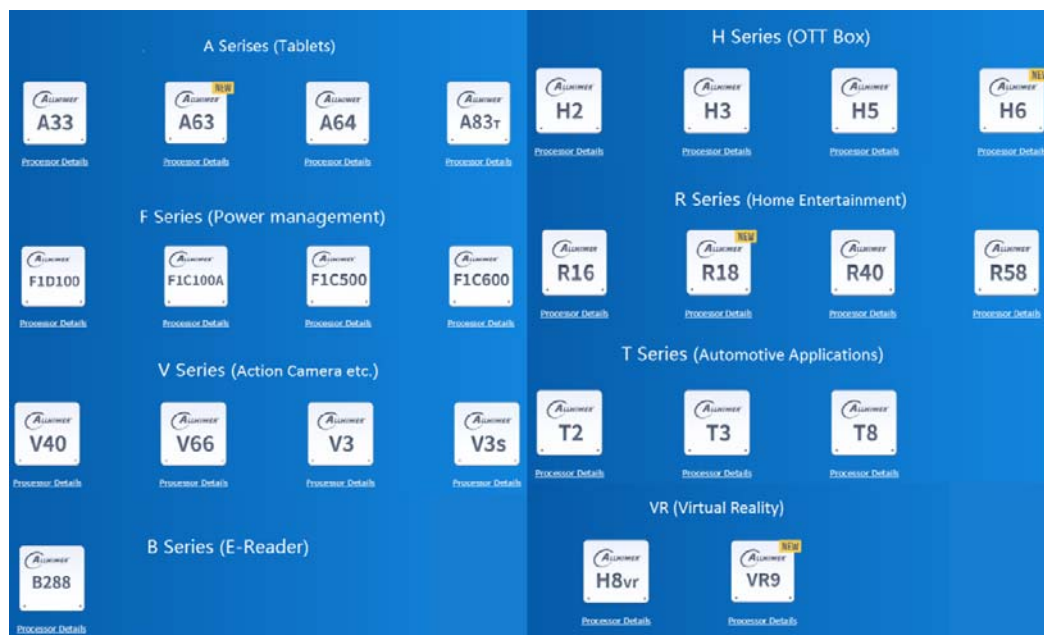
Allwinner is one of the few IC design company which have the IP cores in A-share market. With the development of the multiple lines of business such as Consumer electronics, home entertainment, connected automotive applications and other lines of business and increasing their spending on R&D as well as the widely used products with a high cost performance, Allwinner is willing to reverse the declining of tablet computer market before and go back to the high growth.

Allwinner Technology, founded in 2007, is a leading fabless design company dedicated to smart application processor SoCs and smart analog ICs. Its product line includes multi-core application processors for smart devices and smart power management ICs used worldwide. These two categories of products are applied to various types of intelligent terminals into 3 major business lines: consumer electronics, home entertainment and connected automotive applications. In the meantime, the company is actively exploring the VR (virtual reality) market :

Consumer Electronics: Robot, Smart Hardware Open Platform, Tablets, Video Theater Device, E-Reader, Video Story Machine, Action Camera, VR

Home Entertainment: OTT Box, Karaoke Machine, IPC monitoring

Connected Automotive Applications: Dash Cams, Smart Rear-view Mirror, In Car Entertainment



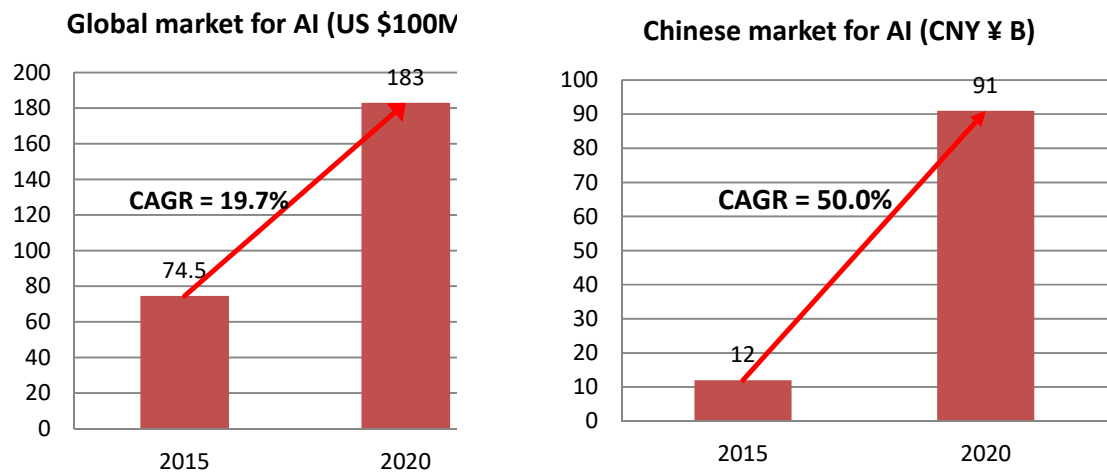
## THE PROSPECT OF AI

AI(Artificial Intelligence) is used for the development and research for the simulation and even expansion of human intelligence technology and application systems of a

new technology science. The goal of AI is a simulation of human consciousness and thinking process, let the machine do like people think, even more than human intelligence, so that the machine can do the complex work usually need to be completed by human intelligence.

In the course of the development of AI over 60 years, it has experienced a long historical evolution and technological change, and has fallen into the trough two times. In recent years, with the rapid progress of industrial 4.0, intelligent life and "Internet plus", and a breakthrough in the deep learning algorithm and visual speech recognition. Especially in recent years, with AlphaGo AI robot developed by DeepMind defeating Li Shishi, Ke Jie and other famous chess players, AI has a wider range of global concern and is entering its third golden period of development.

According to iResearch report, the global AI market in 2015 was \$7.45 billion, and by 2020, the market will be expanded to \$ 18.3 billion, the compound annual growth rate will reach 19.7%. At the same time, by 2020, China's AI market will grow from ¥ 1.2 billion in 2015 to ¥ 9.1 billion, with a CAGR of 50%.



## **POLICIES**

IC(Integrated Circuit) industry has been supported by the national strategic level, and the key link of the industry, IC Design, will be paid attention to:

- ✓ Proposed in 2014 "National integrated circuit industry development outline", the whole industry in 2015 sales revenue would be over ¥ 350 billion. With the gradually narrowing gap with the international advanced level, industry annual sales growth will be more than 20% in 2020. The main industry chain (IC design) will reach the international advanced level until 2030.
- ✓ In 2014, IC imports reached \$217.6 billion, which is the biggest amount of China's imports of product categories. The national integrated circuit as the major projects, and has established the national IC industry fund to promote

industrial integration and development.

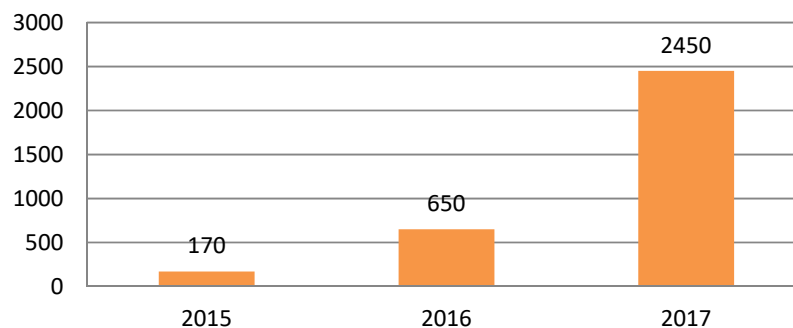
- ✓ The total amount of the national fund is about ¥125 billion. A number of investments have been completed since the establishment of fund.

## **INTERPRETAION - ALLWINNER TECHNOLOGY**

Based on the market and policies, we are looking for a dark horse of AI chip in the A-share market. In the domestic market, Baidu, Alibaba, Tencent, Jingdong and other giants have also focused on the AI marketing. Ding-Dong, a smart sound box, jointly developed by JingDong and iFLYTEK, not only provides a sound box function for users but also supports voice control, and is committed to become the control center of intelligent Home Furnishing in the future. The sound box is equipped with the R16 chip by Allwinner technology (quad core Cortex-A7, CPU, and built-in Mali400 GPU).

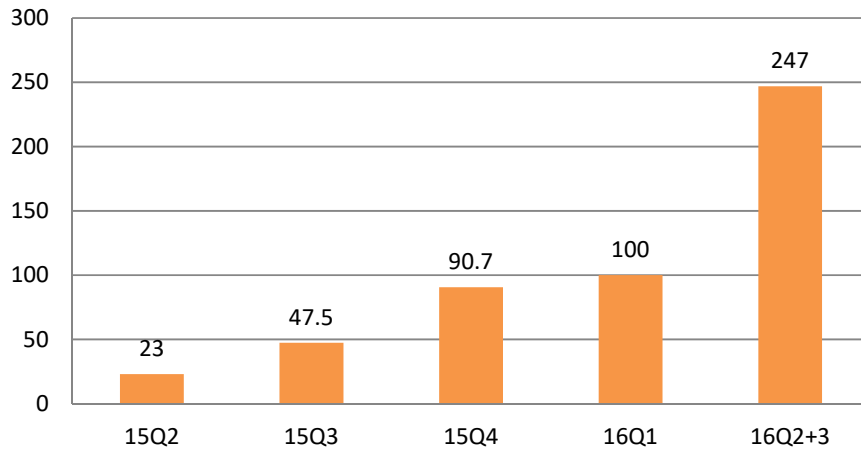
As a new type of intelligent hardware, intelligent speaker has a huge market. The data shows that the intelligent voice device has entered the stage of rapid growth, and the market size will be over \$20 billion. Reach reports suggest that 7% of the families in North America will have an intelligent speaker by the end of 2017, and that proportion will reach at 33% in 2022. At the same time, the owning rate of intelligent speaker in west Europe will be nearly 15% in 2022.

### **Voice priority devices have entered a period of rapid growth in recent years (Unit: 10000)**



The domestic market of intelligent speaker is in the beginning stage, there is no data for reference so far. But we still can reference the sales and the feedback of Echo from US-based Amazon. The situation of the star products means a lot to the whole industry. The population of the Echo shows demands of the intelligent speaker. Base on the statistics, 6 million Echo devices have been sold by Amazon in the end fo 2016; and the sales will reach 10 million in 2017. In the acceptance of the users, over 30 thousand people has given comments to the Echo, and rate for 4.5.

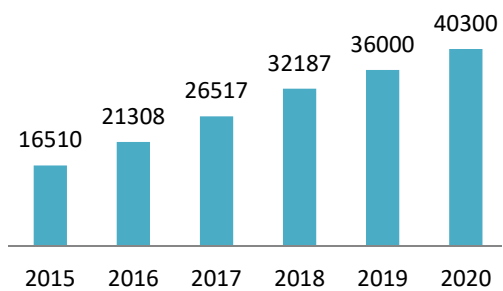
**Echo Sales volume (Unit: 10000)**



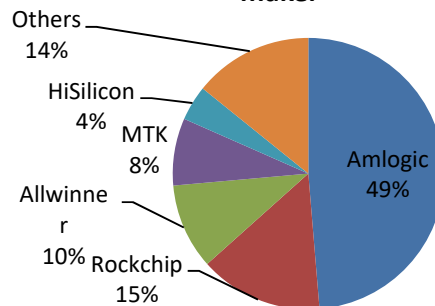
According to the user micro-data of the Echo, users' demands of Echo are mainly focus on the functionality, and the population of various users as well as the use intensity are increasing. According to the statistics, 35.6 million americans will use the intelligent speaker's voice assistant to activate the device at least once a month in 2017, an increase of 128.9 percent year on year. And the number of users is on the rise, with the biggest increase in millennials.

OTT box chips are expected to grow further. Allwinner is the main supplier of the OTT box chip in the domestic market, which has the independent intellectual property rights. In 2016, its products H3 and H8 chip are all in the top 10 of domestic chip. In the market of OTT box chip, its product market share is third, accounting for 10.2%. According to the Blue Book of the 2016 Big Screen Ecological Operation Big Data, the OTT terminals ownership will exceed 400 million by 2020, and over 70% Chinese households will use OTT to watch the program. As the leading enterprise in OTT box chip industry, the OTT box chip of Allwinner is expected to maintain steady growth in the future.

**OTT Box market holdings (Unit: 10000)**

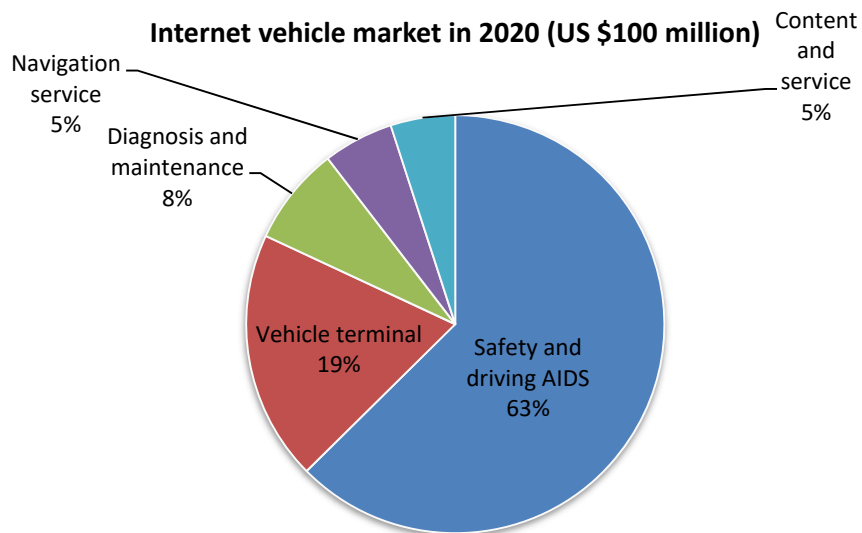
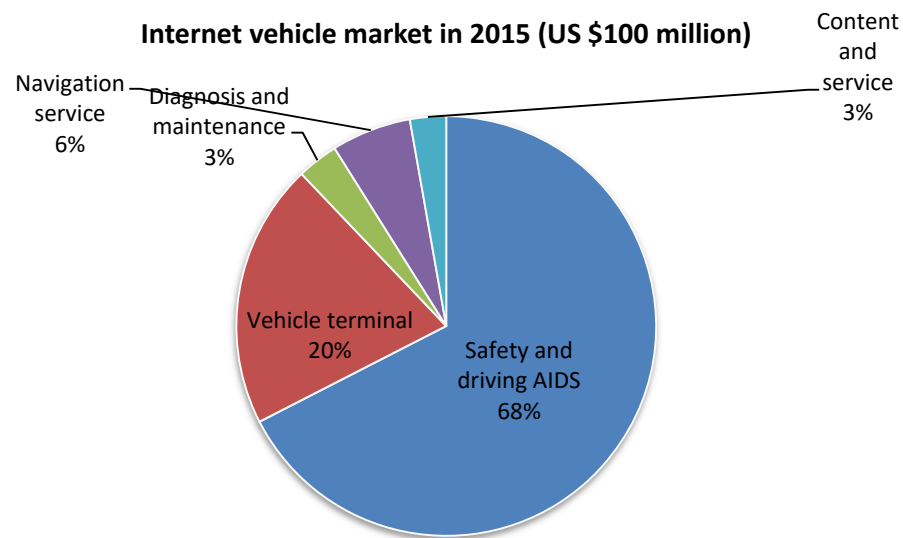


**Sales share of OTT box chip maker**



Actively laying out in the field of Internet of vehicles. As the industry's leading

intelligent chip manufacturers, Allwinner has achieved mass production of several chips used in vehicle traveling data recorder, intelligent rearview mirror, intelligent control and other markets. Their clients include domestic and foreign high-quality companies such as BMW, SAST, BlackView. In addition the company also actively enterprising, signing a strategic cooperation agreement with Jiangsu Protruly to enter the vehicle active safety market, increasing business scope to raise funds to expand car networking and acquiring Xincomm for LTE communication technology and talent. According to the cic consultancy, China's vehicle networking market will reach 25.09 billion CNY in 2017 and will continue to grow at a high speed in the coming years. In the future, the rapid development of the industry and the positive layout of the company will lead Allwinner to improve its performance.



Data shows the growth period: according to the gradient rule of IC design industry,

after the high costs of R&D's in the early stage, the inventories of the old product, and the merchantability of the new product as well as the rising of gross profit, the net profit will finally be higher than the revenue growth, and wait for the good performance. 2017 report confirmed that although the decline of the tablet computer products decreased its overall revenue slightly, but the old goods' eliminating and the improving of the product structure help to reduce the total cost. At the same time, with the increasing on the development, the overall gross margin is rebounding and the negative effects of tablets is offsetting by multiple products.

## WHY NOW?

The market's concern about the Allwinner is that the big fluctuations in performance and the sustainability of future earnings. In fact, these concern applies to those technology companies that are bound to consumer demand. There is a developing cycle: R&D first, then the market will be accepted. At present, Allwinner technology has been basically get rid of dependence on tablets. Investors should focus their expectations on the development of the new product line.

The tablet computer take the lead ship of the revenue in 2014, but the potential improvement of the product structure and the increased proportion of the revenue of several new product lines such as internet-connected set-top boxes, student computer and opera player, somehow made up for Allwinner from the downturn in the tablet computer market (the proportion of the revenue declined to 42.91%). The annual report of 2016 shows the rise of the multiple product lines of Allwinner more precisely.

Category	2014E		2013E		2012E	
	Revenue	Proportion	Revenue	Proportion	Revenue	Proportion
Tablets	43,716.43	42.91%	104,537.23	78.68%	102,221.37	88.47%
OTT Box	16,213.54	15.91%	10,114.98	7.61%	1,757.24	1.52%
VSM	16,738.44	16.43%	4,811.08	3.62%	5,236.04	4.53%
VTD	13,526.04	13.28%	8,844.24	6.66%	3,307.38	2.86%
DashCams	7,676.02	7.53%	2,670.43	2.01%	2,301.10	1.99%
Others	4,009.62	3.94%	1,885.84	1.42%	721.02	0.62%
Total	101,880.09	100%	132,863.80	100%	115,554.15	100%

	2016E	2015E	2014E
Balance Project	61,173,571.50		
Wireless	13,089,708.87		
Power Management	220,984,246.05	241,590,325.73	214,482,900.00
Application	955,650,464.11	965,934,303.12	1,018,800,900.00
Others	1,141,246.80	1,940,867.25	8,680,000.00

In June 2017, Allwinner technology released a variety of AI chips, including:

- H6: the best picture quality 4K STB SoC;
- V5: processor supports intelligent encoding;
- A63: high competitive processor for 2K display tablets;
- VR9: VR solution;
- XR871: MCU wireless chip.

These chips will be delivered gradually in Q3 this year. Most of the products take the 28 nanometer process, and are produced by UMC.

	2017 Q2	2017 Q1	2016 Q4	2016 Q3
Net profit	1.69 m	-7.40 m	149 m	138 m
Gross Revenue	449 m	180 m	1252 m	979 m
Asset liability ratio	10.06%	12.27%	14.48%	10.53%
Gross profit margin	42.11%	42.42%	41.10%	41.88%

According to the semi-annual report of 2017, the company has stepped out of the loss in the first quarter, and the performance will be improved with the delivery of the chips in the third quarter.

According to the characteristics of the IC design industry, after the volume production of the new chips in Q3, the company will get benefit from its huge shipment in Q4. Therefore, Allwinner is undervalued and should offer an upside of 54% from its current price. The end of 2017 is a particularly opportunistic time to invest in Allwinner.

## **VALUATION**

R&D dept. in Allwinner company of high-tech products for the future of the enterprise can display a strong profile of OCF, which can be reflect the development of the enterprise. And we believe the best way to evaluate the company is DCF based on the business is capital intensive, any cash flow will post significant impact on the valuation.

We derive the cost of equity using CAPM model. We used the 1 year China bond rate of 3.52% as risk free rate, beta of 1.22 and market risk premium of 16.02% to get the cost of equity of 18.7% with no financing liabilities. The beta was calculated by regressing the 2 year daily returns of Allwinner against the CSI 300 Index and then obtained a WACC of 18.7%. To be conservative, we assume the terminal growth to be 2%, and give 18.7% liquidity discount.

We derive the DCF results at CNY ¥35.91, indicating 30% upside compared with current stock price.



CNY mn	2017Q3
Risk-free tax rate	3.52%
Market risk premium	16.02%
Beta	1.22
Equity	9181.84
Cost of Equity	18.7%
Tax	25%
WACC=Cost of E	18.7%

CNY mn	2017E	2018E	2019E	2020E	2021E
EBT- Taxes + D&A	173.08	178.27	189.62	218.13	222.49
Working capital change & Capex	(100.00)	(84.60)	(40.93)	(45.88)	(38.12)
FCFF	73.08	93.67	148.69	172.25	184.37
PV of terminal value	1126.09				
PV of total FCFF	4104.82				
No. of shares outstanding	332.67				
Liquidity discount	18.7%				
Fair Value	35.91				
Pirce now	27.60				
Upside potential	30.1%				

## **Risks**

The slowly growth of the macroeconomic;

The further decline of the market share of tablet computer chipset;

The expending of vehicle networking, intelligent hardware and so on is not as expected.

## **Di'an Diagnostics**

DI'AN Diagnostics was established in 2001, which is a third-party independent medical laboratory company carrying the core business of providing testing service outsourcing. It is the first independent medical laboratory successfully listed in this industry and it is also the first Chinese independent medical lab that get publicly listed and has maintained a compound growth rate of 40% for 6 consecutive years. DI'AN Diagnostics committed itself to providing "Integrated Solution of Medical Diagnosis Service", actively propelling the multiple-field open up of a third-party independent medical diagnosis platform and integrated development strategy of the upstream and downstream industrial chains. DI'AN Diagnostics has a business scope covering medical testing services, diagnostic products and service marketing, forensics, health examination, cold-chain logistics, diagnostic technology research and development production, CRO, Biobanks and other fields, providing services to over 12,000 medical institutions across China. It has presently laid out more than 31 franchised laboratories around China and passed ISO15189 and CAP international Quality Certification.

At present, the company's share price corresponds to 45 times PE. Considering the company's business model in line with industry trends, the layout of the laboratory gradually entered the harvest period, the overall profitability continued to improve, and if the non-public offering is progressing smoothly, will lay the foundation for the funds for the development of the business of the company. The company announced the three quarter earnings forecast, the first three quarters of the parent net profit increased by 30-35%, the three quarter of the quarter net profit of the parent grew by 30-35%, mainly due to the continuous innovation of the company.

## **Jinghua Pharmaceutical**

Jinghua Pharmaceutical is a comprehensive modernization of GMP Pharmaceutical Co. Ltd., is a main business in pharmaceutical production, sales, research and development of raw materials, pharmaceutical intermediates, medicine and Traditional Chinese Medicine and has got involved in the field of biological medicine. According to the company's annual report released in 2016, the company achieved revenues of 881 million yuan, an increase of 12.96%; net profit attributable to equity holders of the parent company of 165 million yuan, an increase of 111.36%; net profit attributable to the parent company after deduction of 161 million yuan; EPS 0.39 yuan, in line with previous performance forecasts. In 2016, the contribution of Traditional Chinese Medicine preparation revenue was 260 million yuan, an increase of 29.47%, and it is expected to maintain a rapid growth of 20%-30% in the next 1-2 years. Jinghua Pharmaceutical has great advantages in Traditional Chinese Medicine preparations, which has key varieties of Chinese patent medicine and exclusive varieties in China. Non sulfur Chinese herbal medicine project is progressing well, which is expected to be put into use soon. In the future, the whole industry chain of

Traditional Chinese Medicine will help the company to further improve the competitiveness.

The varieties under research have a large market space, which is expected to help the company achieve explosive growth. Now, the 1.1 class of drug, the second generation of targeted anticancer drug, imatinib, has been approved into the clinic. VEGFR-2 human monoclonal antibody, PDL-1 monoclonal antibodies and recombinant human albumin interferon fusion protein have been laid out in biological medicine field. There is a huge market space in the research and development, if the R & D can get success, it will provide great impetus for the growth of the company.

## **Guangdong Hongtu**

Guangdong Hongtu Technology (holding) Co.,LTD has announced the financial report for third quarter of 2017. The company realized income of 35.16 billion yuan from January to September, an increase of 88.3% year on year. The net profit attributable to the parent company was 238 million yuan, an increase of 101.4% year on year. At the same time, the company forecast the operating performance, and the annual net profit attributable to the parent company for 2017 is expected to be 290-340 million yuan, an increase of 75-105% year on year.

With the trend of automobile lightening, the lightening of auto parts will become mainstream. And the high-precision Aluminum alloy die castings will be the most widely used material with the best performance. The company will benefit from the trend of automobile lightening. The new factory located at Nantong, Wuhan which could integrated and upgraded the clients, materials and the technology, and increased performance. In the meanwhile, the incorporated performance of affiliated enterprises is a good addition to the income, and progress for the reform of state-owned enterprise will inject fresh impetus to the company.

The company has acquired SWELL and expand the auto accessories business. Company has purchased 100% stake of Ningbo SWELL and raised matching funds by issuing shares and paying cash. Ningbo SWELL will become a wholly owned subsidiary of the company, which will be formally incorporated into the company's consolidated range in the second quarter, and the company's product line will extend to the field of automotive exteriors. Ningbo SWELL Industry Co., Ltd, mainly serves Ford, Volkswagen, Audi and other European manufacturers, whose downstream customers are stable, and the orders are steadily increasing. As the completion and the operation of the new project, the business of SWELL will be further expanded in the future. The acquisition of SWELL shares is a key measure for the company to perfect its diversified product system, improve the service level of the vehicle manufacturers, and achieve coordinated development to enhance the core competitiveness.

## Zhengzhou Coal Industry & Electric Power

The company issued mid-year report of 2017 and the mid-year operating income was 2.91 billion yuan, achieving the net profit of 410 million yuan and the corresponding EPS 0.40 yuan / share. Benefiting from China's capacity policy, the coal prices rebounded sharply. With business environment returned for better, the performance of the company during the reporting period achieved significant improvement.

Benefit from Chinese government's policies, the supply and demand of coal market is more stable and return to the rational prices, and the business environment continues to improve. In 2007, the coal supply and demand is in general balance. The company's comprehensive price rebounded sharply to 431 yuan / ton, up by 83%, which successfully helping the company make a profit instead of suffering a loss.

The controlling shareholder of ZZCE, Zheng Coal Group, is trying to build a coal-to-power integration strategy and add the assets into the ZZCE. The Group committed that it will gradually transfer its high-quality coal production assets to the company and give ZZCE the priority to sell the coal assets to the Zheng Coal Group.

According to valuations, Zhengzhou Coal Industry & Electric Power Co., Ltd. valuation is at 36% discount of peers in terms of P/E. It currently trades at a P/E of 8.23 in FY17, while the average of peer's trades at 12.94.

