Bin Yuan Capital – November 2017

Performance Snapshot and Market Update

Chinese stocks fell after hitting the YTD highest point in November. Shanghai Composite Index lost 2.24% and Hang Seng China Enterprise Index dropped slightly by 0.28% in November.

China's economy maintained stable in November. The producer price index (PPI) rose 5.8% year on year (YoY) in November, down from 6.9% in October. The consumer price index (CPI) dropped 0.2 percentage point, rising 1.7% YoY. The official manufacturing Purchasing Managers' Index (PMI) picked up to 51.8 in November from 51.6 in October and the official non-manufacturing PMI in November was also up to 54.8 in November from 54.3 in the previous month. Both manufacturing and non-manufacturing PMI was well above the expansion/contraction threshold of 50. Rail cargo volume grew 4.9% YoY in October to reach about 322.0million tons, marking the fifteenth consecutive YoY monthly rise.

KPMG and H2 Ventures has released 2017's top 100 Leading Global Fintech Innovators recently. Chinese companies took all the top 3 positions in the list. With its widely used mobile payment application Alipay, Ant Financial (an affiliate of Alibaba) remains the most successful global fintech company. Chinese online insurance company ZhongAn claimed the second position this year. And the third position still belonged to a Chinese company named Qufenqi, an online lending company which offers consumer electronics devices to students and professionals on installment. The list showed that China continued to dominate the Fintech landscape in the world.

With the government's deleverage effort, China's wealth management products' leverage problem has already improved. In order to continue to curb financial risks, China's top financial regulators issued guidance that unified rules covering asset management products issued by all types of financial institutions. We believe the new regulation aims to solve the issues of high leveraging, supervisory arbitrage and implicit guarantee of potential returns on asset management products. The main sources of shadow banking risks will be mitigated with the new regulation to be effective.

Performance Attribution

In November, Industrials and Financials were the top two contributors while Consumer Discretionary lagged. Compared to the benchmark, Materials and Utilities outperformed while Consumer Discretionary underperformed. Large cap names outperformed in November while mid cap names with great potential did not perform temporarily.

At the stock level, an insurance company outperformed in November primarily due to it good Q3 financial result. The company's net profit rose 46% YoY in Q3 2017. In recent years, trend of consumer upgrades increases the demand for insurance services. The company benefited from the rising industry cycle and was expected to further enhance the profitability by improving the efficiency of customer acquisition and the brand value under the synergies across different business units. The company has a good performance track record and we believe it can achieve a sustainable growth through its unique business model.

A company focusing on renewable energy business underperformed in November primarily due to the profit taking effect after its surge in October. The company is a leader of the photovoltaic tracking system market. The product can improve generation efficiency by 20%, which is attracting increasing operators to procure amid the pressure of cost hike. Tracking system is nearly 0% penetration in China compared with 20% in overseas markets. The company has a strong market position and almost dominant in this area with technology patent.

Local Insights and Portfolio Positioning

During the past 300 years, mankind experienced three industry revolutions driven by steam power, electricity, and electronics & IT. And now we are embracing the fourth one, usually called Industry 4.0, which refers to a collection of new digital industry technologies such as Physical Cyber System (PCS).

As the manufacturing center of the world, China is also paying much attention to this new trend and launched the national strategy of smart manufacture in 2015, which is equivalent to Industry 4.0. We think Industry 4.0 will bring three major changes to the manufacturing space in China in the long term:

(1) Digitization: The pre-condition of an Industry 4.0 factory lies in digitization of the whole value chain. By using PCS to simulate the production process, people can mirror the physical world. Then real-time data could be leveraged to test and optimize all the settings before the physical deployment. Cost and time can be saved and efficiency increases;

(2) Vertical and horizontal integration: In a traditional factory, there are lots of isolated optimized cells: different departments / functions. While in an Industry 4.0 factory, all parts of the organization are networked and optimized so that they can react rapidly to changes in orders, stock level, faults, etc. This considerably improves the efficiency and productivity. In addition, suppliers and customers are rarely closely linked in the past. Under the vision of Industry 4.0, all the business partners are also networked and the whole value chain become increasingly transparent and flexible.

(3) Cloud: As all the machines need to be linked and all the information needs to be shared and analyzed across sites, functionalities and company boundaries, cloud-based software will be a must in Industry 4.0.

(4) From mass production to mass customization: As Industry 4.0 significantly increases the flexibility of manufacturing, mass customization will be possible to meet personalized demand.

Stock Implication

We identified the following sectors or technologies that are emerging and promising in the wave of Industry 4.0.

i.   *Advanced Manufacturing Technologies*

Robots have long been used to tackle routine jobs and to save costs by using less people. However, in an Industry 4.0 factory, robots will undertake more complex or dangerous jobs and will be more versatile, autonomous and cooperative. Eventually, they will be inter-connected and work more safely and efficiently with people. What's more, automated machines may replace people not only for those routine jobs, but also for those jobs that people totally cannot do. Thus advanced manufacturing technologies such as laser machines are very important and will significantly improve the manufacturing efficiency.

Midea, China's top electrical appliance manufacturer, acquired Kuka, the world's leading industrial robots manufacturer, in 2016. On the one hand, Midea can directly benefit from Kuka's Industry 4.0 expertise to build up its own smart factory. On the other hand, Midea can also assist Kuka to sell its robots into China which is now the biggest robot market in the world driven by its rising labor costs and manufacturing upgrade. We expect both companies will benefit from the synergy created.

Inovance Technology, focused on servo drive and inverters, is the domestic leader in motion control. Inovance Technology is now substituting imported goods with its own innovative products.

Han's Laser is the largest laser processing equipment manufacturer in Asia. The company specializes in R&D and manufacturing high power laser cutter and welder. It is one of the few vertical integrators in developing computer numerical control system, precise machine tools and high-power laser generators.

ii.   *Sensor and testing*

Sensor and testing have the most varieties of products among all sectors of Industry 4.0, including various kinds of sensors, transducers and testing devices. They are the eyes and nerve endings of industrial systems.

Hikvision, a high-tech company based in Hangzhou, Zhejiang Province, is the world's leading provider of video surveillance products and solutions. Due to its advantages in cost, technology and research & development, Hikvision accounted for a market share of 29% in China and 8.5% overseas in 2016. The company is now extending its business into industrial vision solutions through intensive R&D in industrial camera and artificial intelligence ("AI"). At ImageNet 2016 challenge, Hikvision ranked first in scene classification category and second in object detection category which demonstrated its strong R&D capability. The development of AI application will also benefit Hikvision and lead to the company's market share expansion in industrial vision.

Sunny Optical is a leading company in integrated optical device manufacturers and an optical imaging system solution provider. The company is one of the few enterprises in China that have the first-class design capability and mass production capacity for integrated products combining optics, mechanics electronics and software technology. The company is also entering the industrial vision solution market by leveraging its know-how in optics and electronics.

iii.   *The Cloud Computing, Big Data Analytics and Cyber Security*

As mentioned above, in a smart factory, all the machines need to be linked and all the information needs to be shared and analyzed, cloud computing and big data analytics will be a necessity. As a result, machine data and software will increasingly be deployed to the cloud, enabling more data-driven services for production systems. Even systems that monitor and control processes may become cloud based.

With the increased connectivity and use of standard communication protocols, the need to protect critical industrial systems from cybersecurity threats also increases dramatically.

Apart from the E-commerce business, Alibaba is also China's largest provider of public cloud services in 2016 by revenue. The technologies that power Alibaba Cloud grew out of its own need to operate the massive scale and complexity of the core E-commerce business. Alibaba Cloud offers a complete suite of cloud services, including elastic computing, database, storage and large-scale computing, security, big data analytics and a machine learning platform. As of 30 June, 2017, Alibaba Cloud had approximately 1.01 million paying customers. We believe Alibaba Cloud will replicate the success of AWS and become the dominant player in China's cloud computing and big data analytics industry.

iv.   *Artificial Intelligence*

AI's revolutionary impact on the Industry 4.0 is uncontroversial. It is the real brain of an Industry 4.0 factory, where machines can perceive the environment and consequently, can take actions towards increasing the chances of success.

Baidu has been investing in AI for many years and has been recognized as one of the leading AI innovators globally. Baidu operates four research labs under the umbrella of Baidu Research, the Augmented Reality (AR) Lab, the Silicon Valley Artificial Intelligence (AI) Lab, the Beijing Deep Learning Lab and the Beijing Big Data Lab. Currently, Baidu's AI mainly comprises three types of technologies, namely, parameter & sample & feature learning, computing capabilities (servers and GPU clusters) and big data (search data, image and video data and locating data). Integrating these three types of AI technologies, Baidu is able to apply AI into areas such as natural language processing, speech recognition, image recognition processing, user portrait and other capabilities. Its Conversational Interfaces has been recognized by MIT Technology Review as one of the ten breakthrough technologies in 2016. Its AI has now been applied to Baidu Search, Duer, Autonomous Driving Car and will be applied to Industry 4.0 in future.

Apart from those discussed above, other technologies such as additive manufacturing, augmented reality are also quite promising.

v.   *Semi-conductor Manufacturer*

Requirements for AI at cloud and close to terminal create demand for semi-conductors, which drives the volume of CPU, GPU, MCU, storage, etc. And on the other side, Industry 4.0 can also help semi-conductor manufacturer to achieve higher levels of operational excellence.

Semiconductor Manufacturing International Corporation (SMIC) is one of the leading semiconductor foundries in the world and the largest and most advanced foundry in mainland China. With China's national strategy to support its semi-conductor industry and China's increasing demand for integrated circuit, SMIC has a bright future.

vi.   *Vertical Opportunities*

Apart from those Industry 4.0 technologies suitable for general demands across all manufacturing industries, there are also some specialized technologies for a specific industry such as smart grid technology for the power industry or the AI for autonomous driving cars.

NARI is the leader in the global smart grid industry. The company has the right incentive and training system for the R&D team, which helps NARI to become the

domestic first mover and build a technology barrier. Besides, experience from State Grid's project help NARI accumulate know-hows about the most advanced technologies such as UHVDC and flexible DC transmission. Cross-major R&D platform strengthens the capability of delivery and service, which also differentiates NARI from its competitors.

As mentioned above, Baidu has been recognized as the leader in the autonomous driving industry. With the goal of achieving Level 4 Autonomy, i.e., fully autonomous driving, Baidu leveraged its technical accumulation in AI and deep learning, and developed some industry-leading technologies in the autonomous driving car field, including environment sensing, behavior prediction, planning control, operation system, high precision localization, high precision map and system safety. In 2016, Baidu's autonomous driving cars completed multiple urban public road testings in a number of locations in China and California.

All in all, we tried to identify those companies that can provide solutions for flexible manufacturing at competitive prices for Industry 4.0. They should have data analysis capability with accumulated industry know-how.

China is now encouraging companies to strive for greater productivity and promote faster adoption of new technologies, targeting to seize the Industry 4.0 opportunity to become the leader in the manufacturing space in both quantity and quality. We believe Industry 4.0 will present tremendous opportunities for innovative producers, infrastructure providers and technology suppliers in China. More and more Chinese companies will come to the global stage for their outstanding performances and we will try to identify them and seize the opportunity to growth with them.

Sincerely,

Bin Yuan Capital