



# **2018 Credit Outlook for the Global Paper Industry**

**Dagong Global Credit Rating Co., Ltd**

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## 2018 Credit Outlook for the Global Paper Industry

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### Main Opinions

- Under the uncertainty of economic recovery and the impact of Internet media, there is still a contradiction between supply and demand in the paper industry, which will remain in the period of structural adjustment.
- Rising environmental costs will exacerbate the pressure of competition in the industry, and will further urge companies to upgrade their products, and the industry concentration rate will increase further.
- The profitability of global paper industry will be improved and the main impetus comes from the Asian region; Europe and the United States has strong cost control ability to continue to stabilize their profitability, but the product line diversification puts some traditional paper business under pressure due to profitability differentiation.
- In 2018, the profitability of leading paper companies in China is expected to increase continuously, but these companies may face the possibility of debt risk expansion. The overall credit risk of European and American paper companies has little change.

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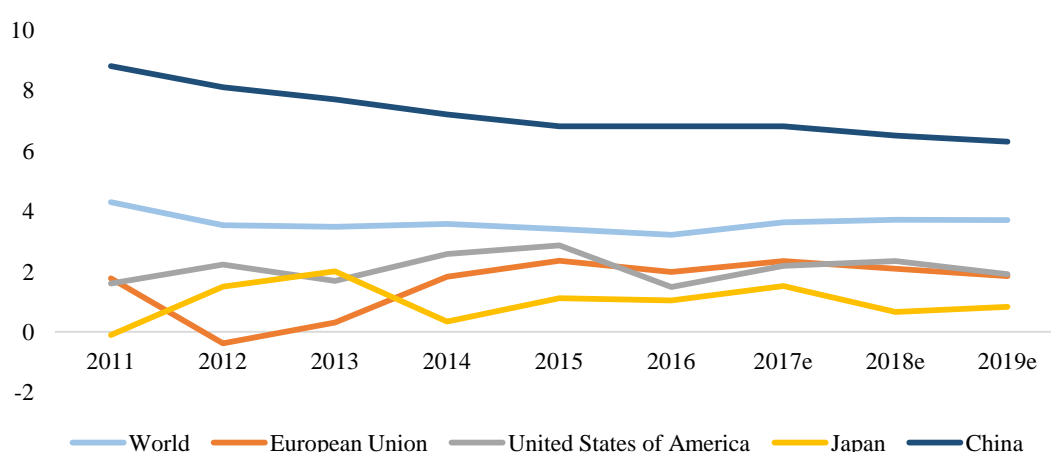
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In 2018, the global paper industry will still be recovering and profitability will improve. Under the context of the consumption structure transformation, the demand for newsprint and printing & writing paper will continue to shrink, while the packaging paper industry will rise and the household paper industry will maintain a stable development. Affected by this, the global paper industry will face the dual pressure from both structural adjustment of products and rising environmental costs. Most companies will maintain their profitability through diversification of products, while a small number of companies will not be able to adjust product structure in a timely manner, and thus it could bring a prominent credit risk in 2018. In the meantime, with environmental protection and overcapacity cut, leading Chinese paper companies have notable advantages in profitability and large numbers of small and medium sized-enterprises (SMEs) may gradually exit the market. The competitive landscape of the Europe and the United States paper industry is relatively stable and the industry credit risk will continue to remain stable.

**I. Under the uncertainty of economic recovery and the impact of Internet media, there is still a contradiction between supply and demand in the paper industry, which will continue in the period of structural adjustment.**

**Figure 1-1: economic growth of the World and several regions (%)**

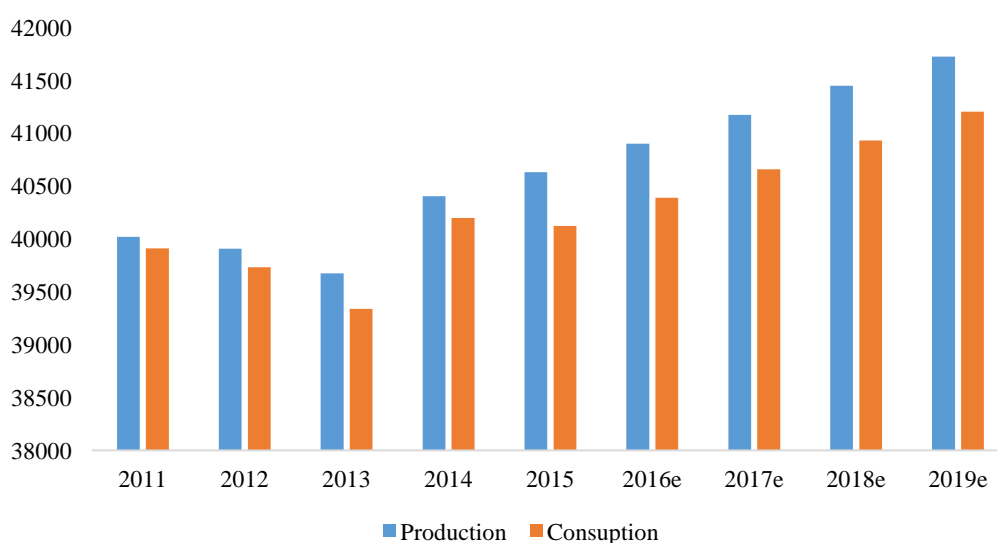


Source: IMF、Dagong

Uncertainties in the global economic recovery will continue to curb market demand in the paper industry. As a midstream industry, the upstream of the paper

industry is closely linked with raw materials and energy supply related industries such as forestry, wood, agriculture, water and coal, and the downstream is linked with packaging and printing industries. The development of those industries is closely related to macroeconomic fluctuations. In 2017, the global economic growth has picked up, and it is estimated that the economy in China will be relatively stable in 2018 and the economy in the United States and Europe will continue to rebound (Figure 1-1). However, considering the uncertainties in global macroeconomic development and the economic growth slowdown in developing countries, the expected market demand of paper industry is still weak, and there is a downward pressure on the whole industry. Affected by this, oversupply continues (Figure 1-2), even though an upward trend of the global paper production and consumption has become noticeable.

**Figure 1-2: World paper and paperboard production and consumption(10,000 tons)**

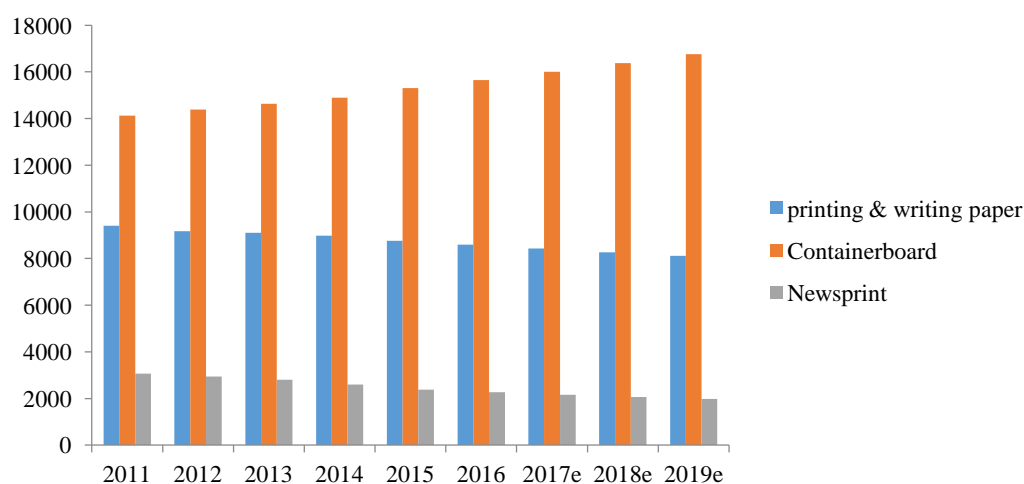


Source: Food and Agriculture Organization of the United Nations, Dagong

Under the impact of the booming Internet and new media, the product structure of paper industry will confront the pressure of profound adjustment. The main products of the paper industry include packaging paper, household paper and cultural paper, etc. The widespread adoption of new media and paperless reading has led to a shrinking demand for printing & writing paper as well as newsprint. The demand for

printing & writing and newsprint is estimated to decrease by 1.88% and 4.48% respectively over 2017, as compared with the demand over previous year; in contrast, the rapid development of the internet and e-commerce business model has driven the rapid expansion of the express delivery business, while the demand for packaging paper is expected to increase steadily by 2.29% in 2017 (Figure 1-3). In the context of the internet economy age, with the rapid transformation of the traditional media industry into new media and the rapid growth of online consumption, the product structure of the paper industry will also face tremendous pressure for adjustment: the product type will continue to tilt toward the packaging paper, and for certain types of paper with sluggish demand, its overcapacity problem will be more prominent. During the period of time, some SMEs with weaker comprehensive strengths are most likely to be forced to withdraw from the market as a result of consumption trend change, while large companies will mitigate the risk of reducing demand by accelerating the adjustment of product structure.

**Figure 1-3: The demand quantity for three kinds of paper over the world (10,000 tons)**



Source: Bloomberg, Dagong

**II. Rising environmental costs will exacerbate the pressure of competition in the industry, and will further urge companies to upgrade their products, and the industry concentration rate will increase further.**

As the green economy and ecological protection ideas won support among people, various countries and regions in the world tried to improve the weak balance situation between supply and demand in the industry by strengthening environmental protection and eliminating obsolete capacity. Under the tightening of environmental protection policy, large-scale paper companies share the risk of increased environmental costs by virtue of their own scale advantages, and meet the policy needs through improving or optimizing their production processes with abundant financial strength. However, financing is much more difficult for those SMEs due to their weak comprehensive strength, and the lack of capital for technological innovation and upgrade will lead to higher environmental protection expenditure, which further raise the production costs. As the result, its meager profit margins are compressed and the small and medium-sized production capacity will be forced to pull out. At present, due to the differences in the degree of industrial development among different countries and the different degrees of environmental protection promotion, European and American paper companies have started to solve the pressure of high environmental protection expenditures through technological breakthroughs, and the environmental protection threshold of China is also being gradually established.

The European paper industry is in a period of deepening its sustainable development, and its environmental protection production mechanism is relatively perfect. As part of capital expenditures for companies, environmental expenditures have been normalized, and the optimization and upgrade of the sustainable development model will help to enhance the long-term profitability of companies. In 2011, following the European Commission's target of reducing carbon dioxide emissions by 80% and achieving industry value-added by 50% by 2050, European paper manufacturers continue to explore areas such as innovative product manufacturing processes and environmental pollution reduction. In 2013, the Confederation of European Paper Industries published eight breakthrough technology concepts, which committed to promoting enterprises to improve production

technology, and to reduce production costs and pollutant emission. It also provided solutions of the future development for European paper products industry. In the meantime, Europe put forward "Paper Industry 4.0" concept, which means it will use big data resources to promote the integration of intelligent production and value chain, and it is expected to fundamentally change the operation mode of enterprise. Therefore, even though environmental investment will affect the profitability of paper companies in the short term, the long-term transformation of the industry-wide production mode will help companies, especially large-scale paper manufacturers, improve cost control and logistics efficiency, and optimize customer service system.

Non-compliant pollution activities in the United States under the regulatory regime will directly affect a company's follow-up operations. The United States started to implement national pollutant discharge elimination system (NPDES) at an earlier time. Since then, it has continuously improved the environmental protection policy and introduced the sewage and atmospheric discharge permit. At present, any enterprise needs to acquire pollution permits to discharge any pollutant, and the control of toxic pollutants increased from 65 at the first to 126. The government conducts a rigorous examination of the pollutant discharges declared by the companies: once the business operation processes and declaration materials violate laws, the government will withdraw the permit, which will immensely affect the follow-up operations of the enterprise. As a result, this "default cost" has long and lasting effects on the profitability of U.S. paper companies.

The mandatory large-scale promotion of China's environmental protection will enable the status of industry leading companies to be further consolidated. In recent years, the Chinese market has begun to address the environmental hazards posed by the obsolete capacity. The imposition of environmental protection taxes directly replaced sewage charges and are incorporated into local government taxation systems, which means the non-compliance companies will face more stringent supervision. However, the large-scale paper manufacturers with the advantages in terms of pollutant emission per ton will be more profitable through tax reduction. From 2010

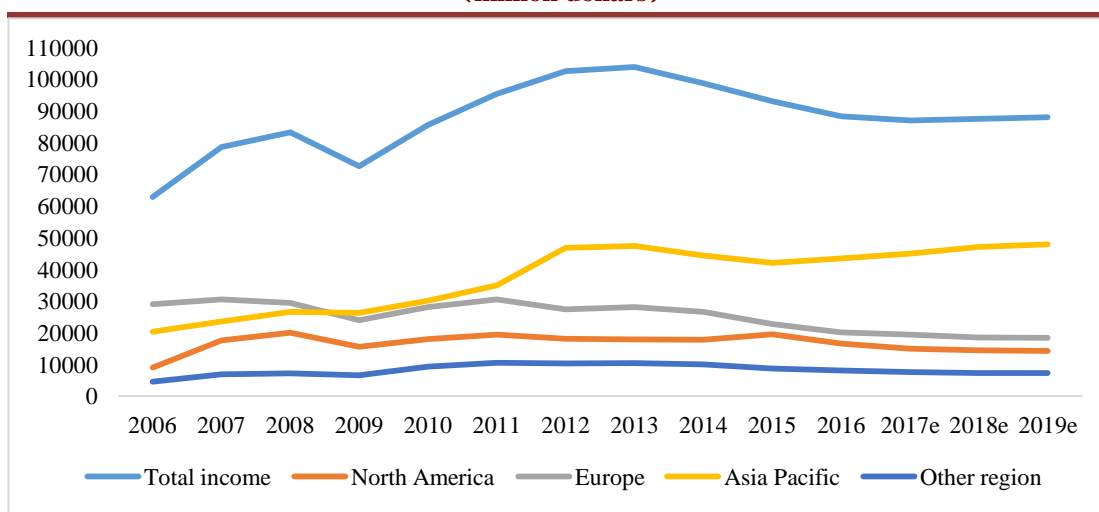
to 2015, the Chinese government has eliminated a total of 39,722,300 tons of obsolete capacity and a large number of outdated small and medium-sized production capacity has been cleared out of the market, by mandatory banning outdated production lines and production processes and by strictly controlling the number and scale of new projects.

Under the influence of multiple factors, concentration ratio of paper industry will be further enhanced. In 2016, the top 6 leading US paper manufacturers accounted for 65% of the total output of the United States, with a total number of about 160 companies. The top 7 European paper manufacturers were over 51% and the number of enterprises dropped from 831 in 2005 to 623; the concentration ratio of the top 10 companies in Chinese paper industry rose from 18.1% in 2006 to 39.3% in 2016, and the number of paper companies above designated size decreased from 3,388 to 2,757. Overall, with the adjustment of product structure and the rising cost of environmental protection, the concentration ratio of paper industry will further increase: both competition pattern and concentration ratio of paper industry in Europe and the United States are basically stable; developing countries such as China are still at the industrial structure adjustment period and will have much room for improvement in terms of the industry concentration ratio in the future.

**III. The profitability of global paper industry will be improved and the main impetus comes from the Asian region; Europe and the United States has strong cost control ability to continue to stabilize its profitability, but the product line diversification puts some traditional paper business under pressure due to profitability differentiation.**



**Figure 3-1: World total income and regional income changes of paper industry  
(million dollars)**

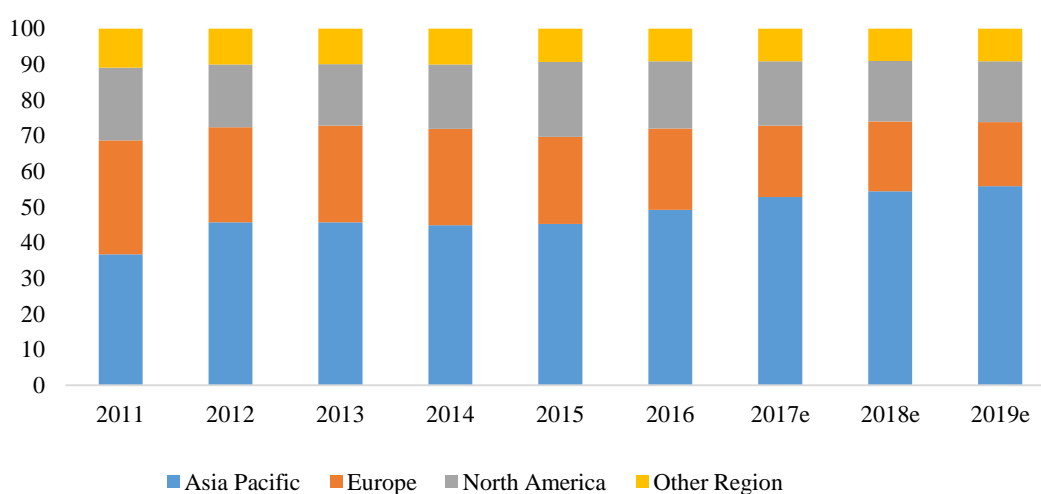


Source: Bloomberg, Dagong

In the short term, China-led Asian market will continue to be the main driving force for the steady growth of the global paper industry, in which packaging paper and household paper companies have a better development prospect. Under the influence of economic downturn and downstream demand, the global market for paper products has shown a downward trend since 2013 (figure 3-1). In 2017, with the cyclical recovery of the global economy, the paper market shows the sign of upturn, and the main impetus is from the Asia-Pacific market, which is estimated that its revenue contribution to global market is about 50% in 2017. Dagong uses 48 sample companies for comparative study: there are 31 Chinese companies under the research, 10 of which gained revenue above 10 billion yuan. Due to capacity reduction and continuous environment protection, paper price has increased, the average operating income of sample companies presents upward trend, which has increased by about 27% in the first half of 2017 compared to the year earlier. Due to macroeconomic slowdown and downstream demand decline, from 2011 to 2016, the average income of 17 European and American sample companies has been through some fluctuations and shown downward trend. In the first half of 2017, driven by economic recovery, there has been an averaged 1.1% income growth over the year earlier. International

Paper and WestRock have benefited from revenue increase from the packaging paper sector, which grew by 8% and 10% respectively; in contrast, the income of European market leader UPM has decreased 1.9%. In 2018, China-led Asia will lead the development of the global paper market, and the region’s income contribution is expected to be more than 50% to the total income in 2018 (Figure 3-2). In terms of North America, Europe and other regions, the income contribution rate will be slowly decreased but overall income will maintain a stable growth.

**Figure 3-2: Several Regions Income Contribution (%)**

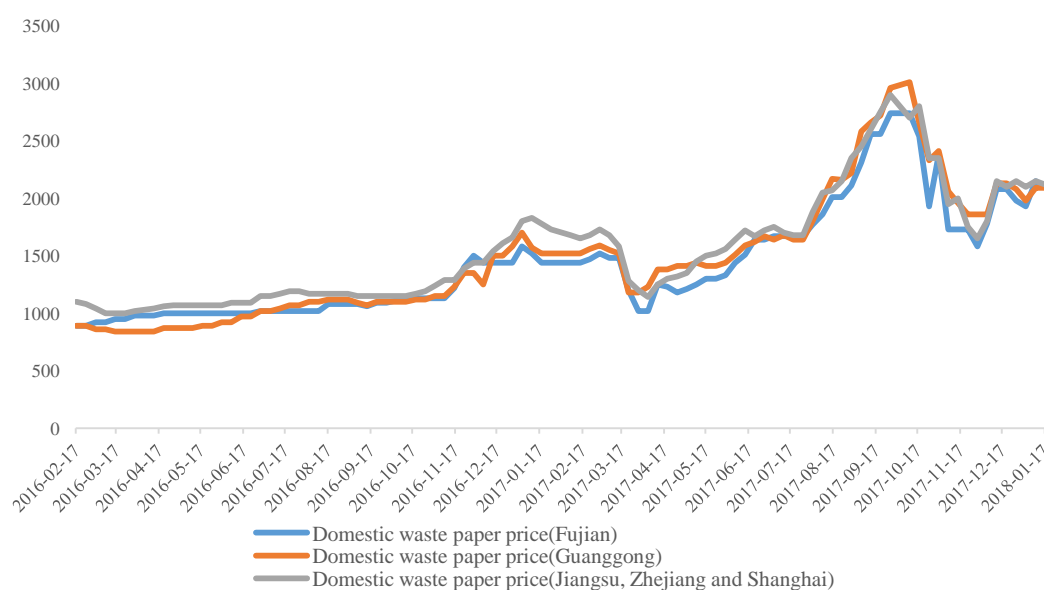


Source: Bloomberg, Dagong

Since major paper manufacturers in Europe and US have a strong ability to control the cost of raw materials, the profitability differs not so much across different regions; leading paper companies in China have stronger cost control ability, while the living space of SMEs is squeezed. The major paper manufacturers in Europe and the United States have early established vertical integration in pulp and paper sector, and the raw materials is supplied by their own woodland or other established pulp supply channel, therefore raw material price fluctuations have little impact on their profits. Only a small number of leading companies in China are equipped with this vertical integration production mode, while the supply of raw materials relies on the market procurement for most Chinese companies. Hence, to a large extent, raw material supply still has a direct impact on the income of Chinese paper manufactures.

Due to the cost control needs and the limited domestic forest resources, the waste paper utilization rate of Chinese paper companies is up to 60%, and the whole market relies heavily on waste paper import. China has become the world's largest waste paper importer. Since 2017, Chinese government released higher requirements for imports of waste paper, and the first batch of waste paper imports in 2018 have reduced by 91.3% to 23.8628 million tons. Also, the number of enterprises permitted to import waste paper has reduced by 115, while foreign waste import quotas are mainly obtained by leading enterprises. The tightening of waste paper imports drives up waste paper price (Figure 3-3), profit margins of companies are continuously compressed, and a large number of SMEs have been withdrawn from the market. Leading companies can resolve the raw material price fluctuation risk through its scale advantages. Overall, with in-depth regulation of paper supply and the recent rebound in product prices, in the first half of 2017, the gross profit margin of 31 Chinese sample companies is basically between 20% and 33%, and profitability of the industry is expected to enhance in 2018. European and American paper industry already entered the mature phase, in the first half of 2017, gross profit margin of European and American sample companies is basically around 20% to 30% with limited fluctuation, which is expected to maintain this status in 2018.

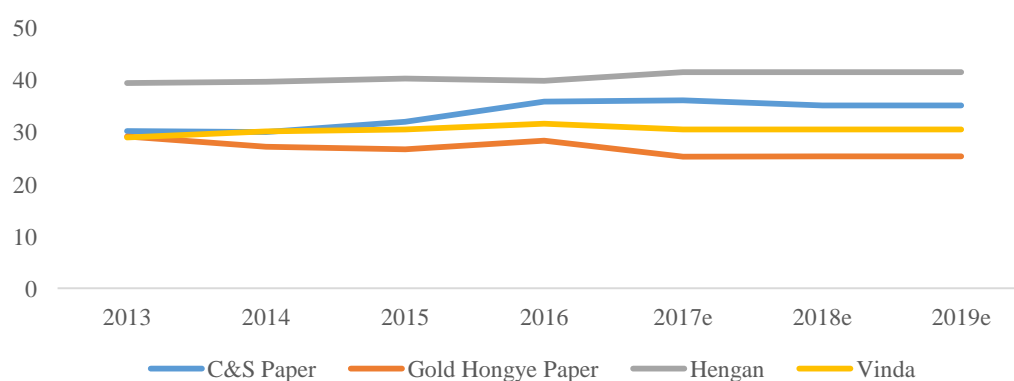
**Figure 3-3: The price changes of domestic waste paper in China ( Yuan/ton )**



Source: Wind, Dagong

In 2018, due to the restructuring of product structure, profitability of paper companies still presents significant differences given differentiated main products. Chinese household paper market has been monopolized by 4 paper companies, along with the rigid demand from downstream, gross profit margin of which has been maintained at a relatively high level (figure 3-4). Given the driving force of strong demand, in the first half of 2017, the gross profit margin of sample packaging paper companies has increased averaged about 28%, which is expected to keep fast growth in 2018. In the first half of 2017, as traditional leading newsprint paper enterprise, gross margin of Guangzhou Paper Group is only 4.4%, which will be under pressure in 2018. Among the main paper enterprises in Europe and the United States, the representative large-scale packaging paper companies such as International Paper, develops the upstream and downstream industry extension, downstream paper packaging business and other diversified operations to ease negative impact of paper demand fluctuation. These companies present limited profit volatility and strong profitability. Verso is a US leading printing & writing paper company, which has shut down several production line and paper mills due to long-term decline of downstream demand and gone bankruptcy reorganization caused by profit losses and excessive debt burden. In the second quarter of 2017, Verso's gross margin is only 2.39%. Overall, in 2018, packaging paper and household paper enterprises are expected to maintain a high gross margin, but the gross margin for printing & writing paper companies may see a large fluctuation as a result of market demand uncertainty.

**图 3-4: The gross margin changes of Chinese household paper companies (%)**



Source: Wind, Dagong

**IV. In 2018, the profitability of leading paper companies in China is expected to increase continuously, but these companies may face the possibility of debt risk expansion. The overall credit risk of European and American paper companies has little change.**

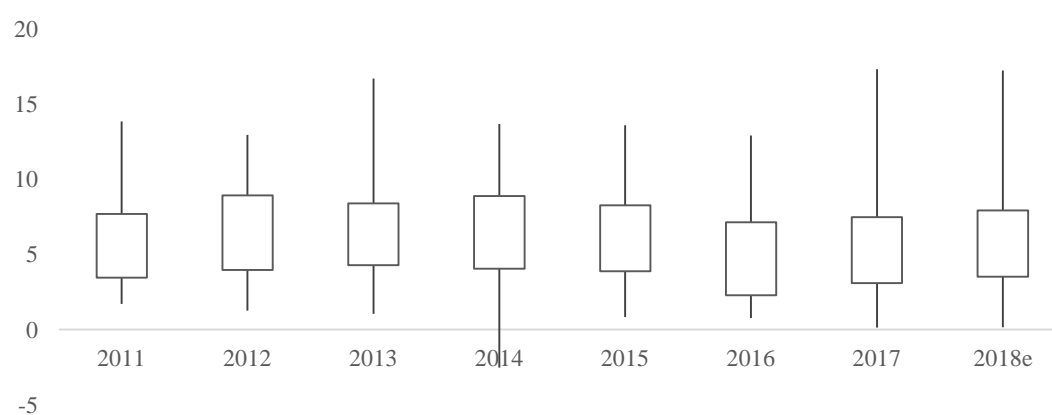
Under the supply-side reform, production capacity control and product mix adjustment will make the differentiation of corporate solvency even more pronounced. Dagong focuses on the analysis of 31 major sample companies in China. In 2017, after a long period of capacity cut and environmental protection, the paper market in China has seen an improvement in oversupply condition. Meanwhile, the dual effects of rising raw materials cost as well as environmental protection costs have pushed up the price of final paper products. As a result, the profitability of paper companies has been improved, and outdated production capacity of the market has been cleared. The scale advantage and production capacity of the leading enterprises have been highlighted: in the first half of 2017, the EBITDA<sup>1</sup> growth of the Chinese leading enterprises was over 20%, and it is estimated that the profitability of Chinese leading enterprises will remain at a relatively high level in 2018. In the first half of 2017, the total debt of 59% of paper manufacturers increased by a certain amount over the previous year. However, the debt-to-assets ratio of companies fluctuated slightly, which had a slight decrease of about 2% from the previous year. For those leading enterprises with an annual production capacity of over 1 million tons, it maintained a high financial leverage at about 60%. In terms of the support degree of source of repayment to debt, in the first half of 2017, the growth rate of total debt was higher than that of the EBITDA, and the ratio of debt over EBITDA increased slightly over the previous year (Figure 4-1). However, in the first half of 2017, benefiting from the improvement in EBITDA, the ability to repay interest payment was enhanced. In 2018, under the bullish environment of the industry, the guarantee degree of corporate profitability to debt is expected to further increase. In the first half of 2017, the debt-to-capital ratio of Chinese paper companies increased slightly, while the

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<sup>1</sup> EBITDA: earnings before tax, depreciation and amortization

debt-to-capital ratio of leading paper companies was relatively high year by year, and these companies are more dependent on debt financing. In addition, in the first half of 2017, operating cash flow of companies has decreased as a result of the increase of purchase price of raw materials; the debt scale due within one year has been expanded. Ratio of cash to maturing debt<sup>2</sup> for about 90% sample companies presented a decline trend in the first half of 2017, and the short-term debt repayment pressure rose as the ability of operating cash flow to cover the maturing debt weakened.

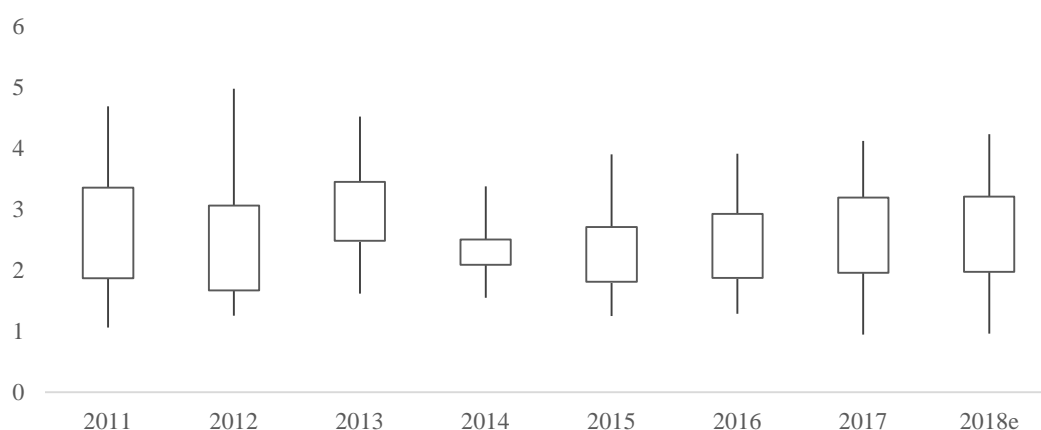
**Figure 4-1: Chinese sample companies debt/EBITDA**



Source: Wind, Dagong

Overall, in 2018, raw material prices will remain high, product structure will undergo some adjustment, and capital investment will increase, especially in environmental technologies, which will result in higher debt financing and debt repayment pressure for the Chinese paper industry. SMEs credit risk will continue to rise due to weak profitability and financing capacity; in the short term, the debt of leading companies will maintain at a relatively high level, and profit will maintain a rapid growth. However, in the medium term, as product structure adjusted in place, the layout of the clean production line finished as well as the industry competition pattern stabled, the debt repayment burden of leading companies will be relieved.

<sup>2</sup> Ratio of cash to maturing debt= CFO/(Shot term Borrowings+ Long-term liabilities due within 1 years + notes payable)

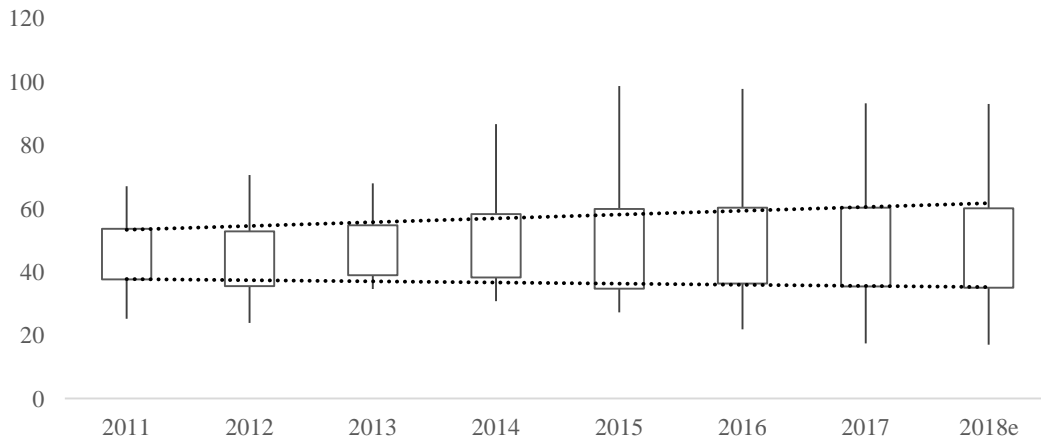
**Figure 4-2: European and American sample companies debt/EBITDA**

Source: Bloomberg, Dagong

The relative stable profitability of the European and American companies will continue to guarantee their solvency. Strong cost control capability makes most of the paper manufactures in Europe and the United States to maintain a stable profit. As debt grows faster than profitability, the ratio of debt over EBITDA in 2017 was showing upward trend, with the coverage degree of EBITDA on debt showing a small decline (figure 4-2). However, in recent years, EBITDA interest coverage degree of sample enterprises appears slowly upward trend, thus these companies have strong ability to repay loan interest. In 2018, it is expected that the profitability of European and American paper manufacturers will have little fluctuation, and the coverage degree of profitability over debt will have little change. As of the third quarter of 2017, the debt-to-capital ratio of Kimberly-Clark has increased due to its debt expansion. Verso bore heavy long-term debt burdens due to lower downstream demand for printing & writing paper, and other sample companies showed a less volatile debt-to-capital ratio (figure 4-3). It is estimated that the support degree of capital over debt for European and American paper manufacturers will change little in 2018. In addition, the volatility of quick assets to current liabilities for European and American paper manufacturers is small. As of the third quarter of 2017, the average quick ratio of sample companies has declined slightly by about 0.9% over the previous year. The liquidity risk of these enterprises is expected to be controllable in 2018. Overall, in 2018, the credit risk of European and American paper industry does not change much,

strong cost control ability will continue to stabilize its profitability and provide a fundamental guarantee for debt repayment, and the major risks will be concentrated on a few companies which take printing & writing paper as the main product and bear too much debt burden.

**Figure 4-3: The debt capital ratio of European and American sample companies (%)**



Source: Bloomberg, Dagong