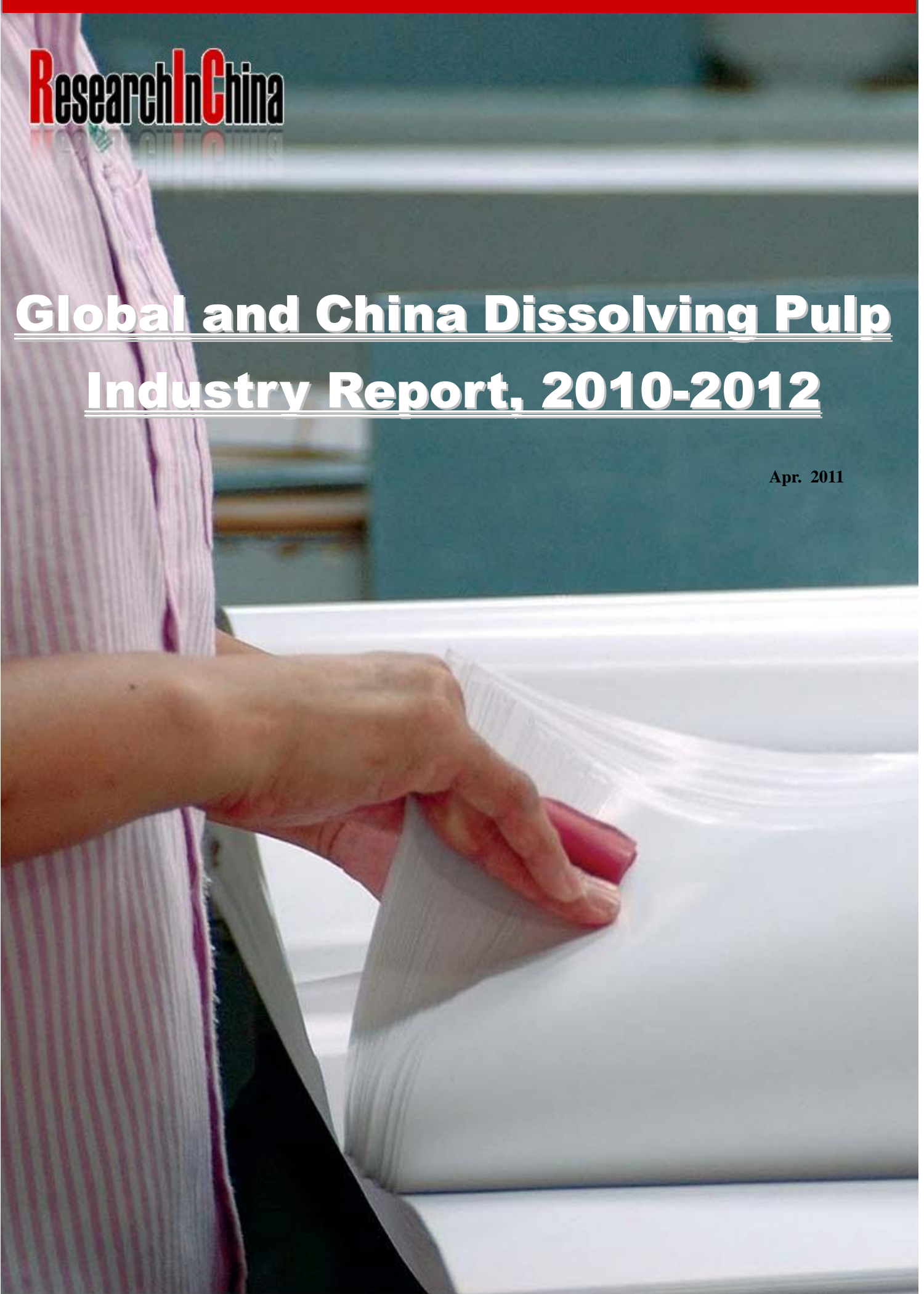


ResearchInChina

Global and China Dissolving Pulp Industry Report, 2010-2012

Apr. 2011



3. Development of China's Dissolving Pulp Industry

3.1 Status Quo

With the capacity of dissolving pulp totaling *** tons in 2010, China's dissolving pulp producers consist of large-and medium-sized papermaking enterprises and some chemical fiber enterprises with dissolving pulp as the raw material. In 2010, China's import volume of dissolving pulp reached *** tons, with the import dependence rate of ***. Dissolving pulp industry will see a bright future alongside with the domestic robust demand for viscose.

As for papermaking industry, the multiple influences such as capacity upgrade, raw material price hike and yuan appreciation have given rise to overall output slump, robust demand and increased price. Against the backdrop, the gross margin of large-and medium-sized enterprises grew by around *** in 2010. Granted, featuring huge cost pressure, the papermaking industry has limited room for profit during the development. Therefore, papermaking enterprises were energized to put into mass production of dissolving pulp when attracted by its high returns during 2011-2012.

As for chemical fiber industry, homegrown chemical fiber enterprises lag far behind their foreign counterparts in terms of the capacity of dissolving pulp which serves as a raw material of viscose. Thus they are heavily reliant on import dissolving pulp to meet their needs. In 2010, JILIN

3.2 Market Supply and Demand

3.2.1 Supply

In late 2010, the dissolving pulp capacity of China realized *** tons, and the main contributors came to three papermaking enterprises and one chemical fiber enterprise. The three papermaking enterprises including ***, Jilin Shixian and *** have three dissolving pulp production lines altogether, providing products for domestic chemical fiber enterprises. For ***, the capacity of bamboo pulp, which is the raw material of bamboo fiber, approximates *** tons. And the rest are small-and medium-sized enterprises, the combined capacity of which reaches roughly ** tons.

Capacity of Dissolving Pulp Producers in China, 2010 (kt)

Enterprises	Products	Capacities
Fujian Nanping Papermaking	wood pulp	***
Jilin Shixian		***
Shandong Chenming Paper Holding		40
JILIN Chemical Fiber	bamboo pulp	***
Others	wood pulp	90
Total		***

Source: ResearchInChina

Capacity Planned and under Construction of Dissolving Pulp Enterprises in China, 2011-2012 (kt)

Enterprises	Existing Capacity	New-Increased Capacity	Total
Shandong Sun Paper Industry	0	***	***
Yueyang Paper	0	***	***
JILIN Chemical Fiber	***	***	240
Fujian Nanping Papermaking	50	***	***
Chi Tian Hua Group	0	***	***
Fujian Qingshan Paper Industry	0	***	***
Shandong Chenming Paper Holding	***	40	***
Others	130	0	***
Total	***	1,376	***

Source: ResearchInChina

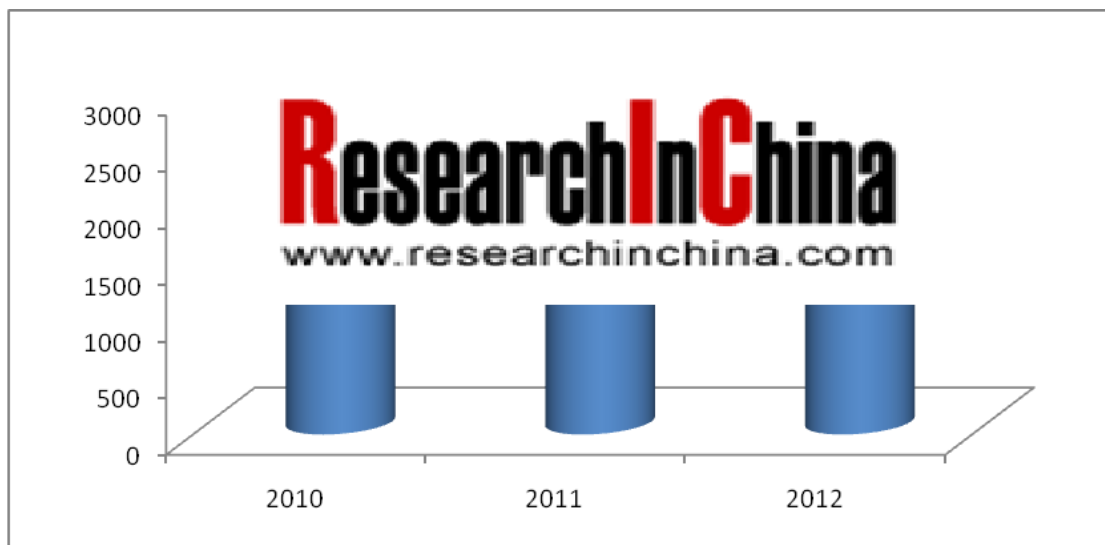
During 2011-2012, Shandong Sun Paper Industry is projected to convert its existing 200,000-ton chemical pulp production line into dissolving wood pulp production line and build a new 300,000-ton dissolving wood pulp production line, in an attempt to realize its total capacity to *** tons;

For the chemical fiber and chemical enterprises, JILIN Chemical Fiber set up bamboo pulp raw material manufacturing bases in Yibing of Sichuan and Yiyang of Hunan in 2011, in an attempt to realize pulp capacity of *** tons per year in late 2012.....

3.2.2 Demand

The real output and import volume of dissolving pulp of China amounted to *** million tons in 2010. The demand for dissolving pulp is soaring alongside with the increase in viscose output of China. …… As of 2012, the demand volume of viscose dissolving pulp will increase *** tons to *** million tons, accounting for 86% in the total increase worldwide.

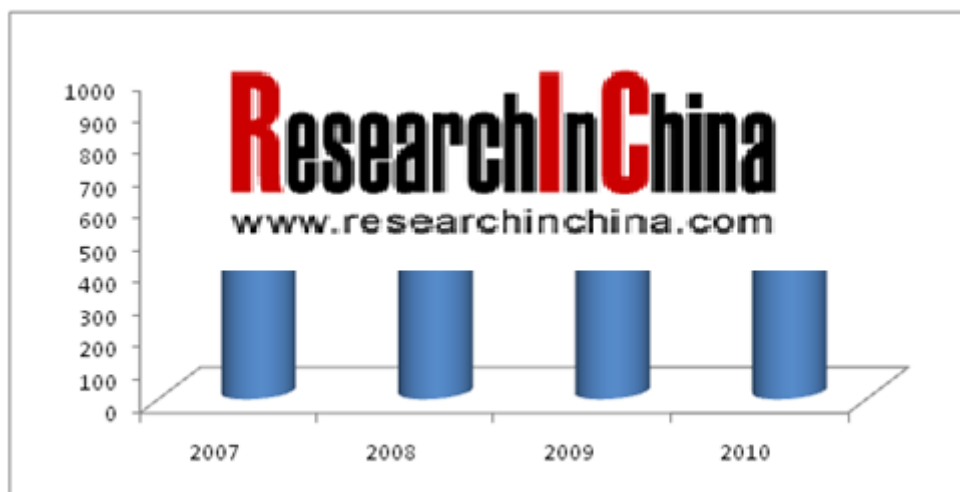
Growth in the Demand for Dissolving Pulp in China, 2010-2012 (k t)



Source: ResearchInChina

3.3 Import

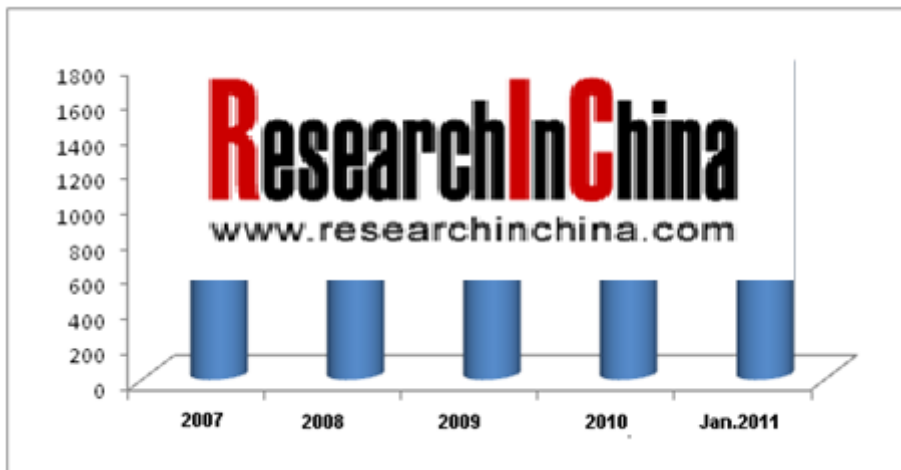
China's Import Volume of Dissolving Pulp, 2007-2010 (kt)



Source: General Administration of Customs of the PRC; ResearchInChina

.....

China's Import Prices of Dissolving Pulp, 2007-Jan. 2011 (USD/ton)



Source: ResearchInChina

China's Import of Dissolving Pulp by Country of Origin, 2010

Omitted

Source: General Administration of Customs of the PRC; ResearchInChina

China's Import of Dissolving Pulp by Domestic Destination, 2010

Omitted

Source: General Administration of Customs of the PRC; ResearchInChina

3.4 Competition

3.4.1 Cost Competition

In 2010, there is no overt cost edge between domestic dissolving pulp enterprises whose production costs were controlled below USD***/ton compared to their foreign counterparts of USD624/ton. However, foreign enterprises expanded their dissolving pulp capacity of 710,000 tons in 2011, a figure failed to meet the huge demand in the global market. Under the backdrop, the global dissolving pulp was priced at USD1, 361/ton in 2010 and the figure is expected to soar in 2011. This will benefit a lot for Chinese dissolving pulp enterprises.

China's Cost of Dissolving Wood Pulp Production, 2010 (RMB)

Omitted

Source: ResearchInChina

3.4.2 Capacity Competition

Major Dissolving Pulp Enterprises in China, 2012



Source: ResearchInChina

4. Key Enterprises in the World

4.1 Sateri

4.1.1 Profile

Sateri International is the Brazil-based global leading manufacturer of dissolving wood pulp and viscose fiber. It possesses two economic entities, i.e. Bahia Specialty Cellulose (BSC) in Brazil and the chemical fiber company in China (including Sateri (Jiangxi) Chemical Fiber Co., Ltd. and Sateri (Fujian) Fiber Co., Ltd.). In November 2010, Sateri Holdings, the parent company of Sateri International, went public in Hong Kong.

.....

4.1.2 Operation

During 2007-2010, the business performance of Sateri Holdings climbed year by year (excluding 2008 when the gross profit declined due to the financial crisis). In 2009, the sales turned out to be US\$** million, up 44.4%YoY, and the gross profit US\$** million with the YoY growth margin of 168%. In H1 2010, the sales hit US\$** million, up **%YoY; the gross profit was US\$** million, and it was less than US\$** million against the same period of 2009.

Revenue and Gross Profit of Sateri, 2007-2010 (Unit: US\$ mln)



Source: prospectus; ResearchInChina

Sales Volume and Revenue by Product of Sateri, 2007-2010

	2007		2008		2009		2010.1-6	
	Sales Volume (Kt)	Revenue (US\$ mln)	Sales Volume (Kt)	Revenue (US\$ mln)	Sales Volume (Kt)	Revenue (US\$ mln)	Sales Volume (Kt)	Revenue (US\$ mln)
Cellulose	88	**	**	**	**	**	**	**
Viscose Fiber	73		**	**	**	**	**	**
Total		272	**	**	**	**	**	**

Source: prospectus; ResearchInChina

4.1.3 Dissolving Pulp Business Development

In 2010, Sateri, the largest supplier (approximately 40% share in Chinese market) of dissolving wood pulp in China, possessed the capacity of **-kiloton dissolving wood pulp in Brazil. In H2 2010, Sateri further expanded the output capacity of its dissolving wood pulp plant in Brazil in order to cope with the rising market demand. As for the facilities in Brazil, Sateri initiated the bottleneck elimination project in 2010, and the project was accomplished in Q1 2011, which raised the capacity to ** kilotons from 465 kilotons.

In regard to industry chain, the business mode of Sateri has integrated the upstream dissolving wood pulp business and the downstream viscose fiber business, and involved the participation in each stage of production, from R&D to planting sapling and to the production of dissolving wood pulp and viscose fiber. The competitive edge of vertical integration is conducive to the leading position within the industry.

Sateri plant in Brazil produces two kinds of dissolving wood pulp, i.e. viscose pulp and special pulp. The products are famous for the high purity, few inorganic pollutants, white chromaticity, and good viscosity, which guarantee the wide applications. As the ideal materials for textiles and nonwoven products, the products of Sateri find applications in areas like household, hygiene, absorbent products for medication and industry, Cellophane, viscose sponge, sponge cloth, and viscose filament yarns. Furthermore, other applications cover reinforcement of high-performance tire materials; viscosity improvement of coating thickener, toothpaste, detergent, and medicine; filtration enhancement of cigarette filter and abnormal odor reduction.

Types and Applications of Dissolving Wood Pulp of Sateri, 2010

Type	Product	Application
Viscose Pulp	Viscose Staple Fiber (VSF)	textile, nonwoven products including baby wet tissue and cosmetic facial pack
	Lyocell fiber and viscose filament	textile and nonwoven products
	Cellophane, sponge	
Special Pulp	cellulose acetate	cigarette filter, resin
	microcrystalline cellulose (MCC)	pharmacy
	industrial filament	tire cord
	other special applications	sausage casing, cosmetics, etc.

Source: ResearchInChina

In 2010, the profit of dissolving wood pulp business of Sateri expanded **% to US\$** million from US\$** million in 2009, owing to the rise of both sales price and sales volume. The sales volume of dissolving wood pulp advanced **% from 354,368 tons in 2009 to ** tons with inclusion of **-ton viscose pulp and **-ton special pulp. The average sales price of dissolving wood pulp rose **% to US\$**/ton, and the profitable regions highlighted China with the proportion of **%.

Dissolving Wood Pulp Revenue of Sateri by Region, 2010

Omitted

Source: Sateri Annual Report; ResearchInChina

.....

5. Key Enterprises in China

5.1 Sun Paper

5.1.1 Profile

Shandong Sun Paper Industry Joint Stock Co., Ltd. is a global leading multinational paper making group and an integrating forest, pulp and paper enterprise. Committed to the forging of an integrated industry chain, it's a world-class top grade paper maker, a global top 100 paper maker, China's largest top grade coated packaging board manufacturer, and the world's most advanced uncoated high-grade fine paper production base. The group is listed on the Shenzhen Stock Exchange, and is involved in paper making, chemicals, foreign trade, power supply, scientific research, forest and paper, investment and other fields, with total assets of RMB15 billion and annual pulp and paper capacity of 3 million tons. Headquartered in Yanzhou, Shandong, it has 15 branches, has subsidiaries mainly in China, Southeast Asia and the United States, and its products are mainly shipped to countries and regions including Chinese Mainland, the United States, Africa, Southeast Asia and Hong Kong.

5.1.2 Operation

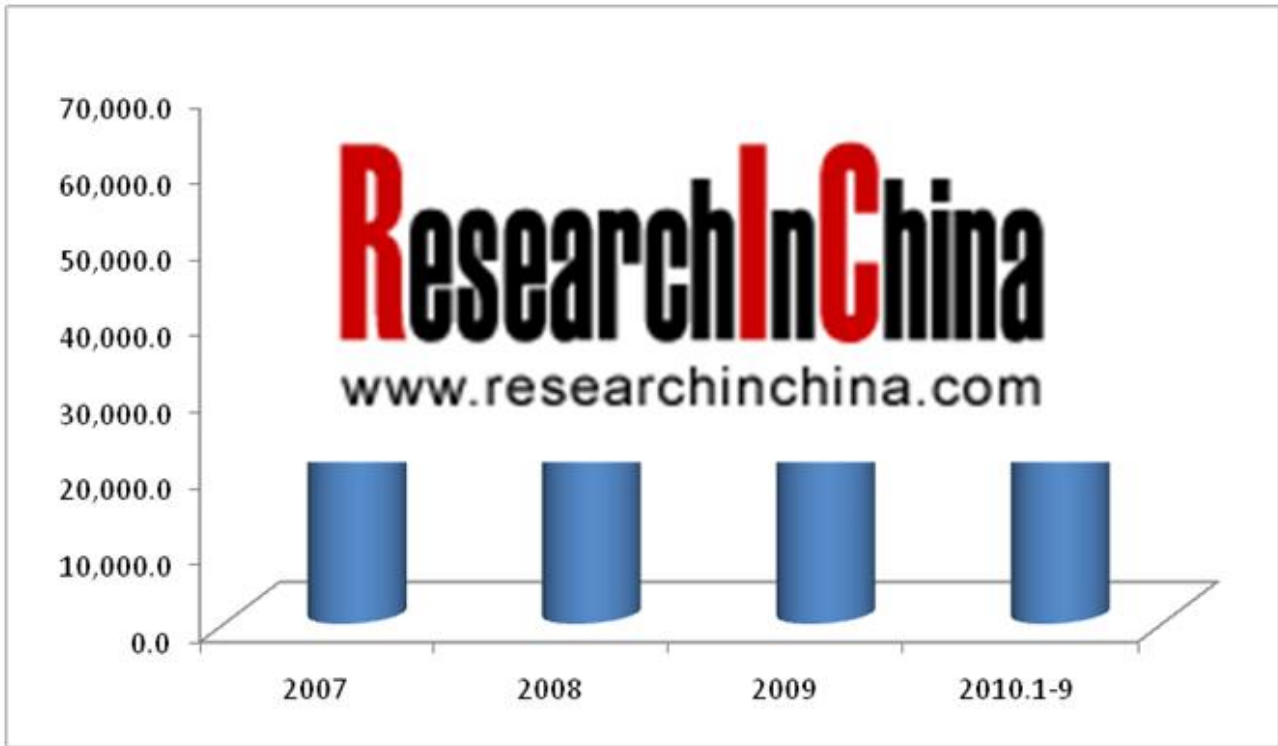
In 2010, the company's top grade coated packaging board, high-end art coated paper, and high-end uncoated fine paper series achieved operating income of nearly RMB** million, accounting for **% of the total operating income.

Operating Income and Gross Margin by Product of Sun Paper, 2010

Product	Operating Income (RMB10,000)	Gross Margin
Uncoated fine paper	**	**
Coated packaging board	**	**
Coated paper	**	**
Electricity and steam	**	**
Chemi-mechanical pulp	**	**

Source: Annual Report of Sun Paper; ResearchInChina

Total Profit of Sun Paper, 2007-2010 Q1-Q3 (Unit: RMB10,000)



Source: Annual Report of Sun Paper; ResearchInChina

5.1.3 Dissolving Pulp Business Development

As of the end of 2010, Sun Paper hasn't carried out the dissolving pulp production. In 2011, as the domestic demand for viscose fiber is increasing, the gross margin of dissolving pulp is high, so the company plans to build the industry chain. In March 2011, the company plans to invest RMB*** million to build Guangxi Sun Fiber Co., Ltd. for the R & D, production and sales of dissolving pulp and viscose fiber. It plans to transform the existing ***-ton chemical pulp production line into a dissolving wood pulp production line, which is expected to start production in October. In addition, the company plans to invest RMB*** billion in 2012 to build an integrated dissolving pulp and viscose fiber production project, and put the new ***-ton new dissolving wood pulp production line into production to further increase the economies of scale. It's expected that by the end of 2012, the company will become the *** largest dissolving wood pulp producer in China with total capacity of *** tons.

→ Related Reports

- **Global and China Refractory Material Industry Report, 2009-2010**
<http://www.researchinchina.com/Htmls/Report/2010/5877.html>
- **China Organic Silicon Industry Report, 2009-2010**
<http://www.researchinchina.com/Htmls/Report/2010/5873.html>
- **China Rare Earth Permanent Magnet Industry Report, 2009-2010**
<http://www.researchinchina.com/Htmls/Report/2010/5875.html>
- **China Medium Density Fiberboard Industry Report, 2009**
<http://www.researchinchina.com/Htmls/Report/2010/5840.html>
- **Company Study of Ningxia Meili Paper**
<http://www.researchinchina.com/Htmls/Report/2008/5031.html>
- **For more, please visit www.researchinchina.com**

About ResearchInChina

ResearchInChina (www.researchinchina.com) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

ResearchInChina also offers subscription products for clients, including Market Weekly, Market Monthly and Market Quarterly on various industries. Market Weekly (Monthly and Quarterly) is the important step to understand the investment potential in China market.

We have over 600 clients worldwide, including the largest commercial and investment banks; insurance companies; research institutions; financial services firms; mutual funds; manufacturers; utilities; and industrial and technology clients.

*Address: Room 1008, A2, Tower A, Changyuan
Tiandi Building, No. 18, Suzhou Street, Haidian
District, Beijing, China 100080*

Tel: 0086-10-82600828, 82600893

Fax: 00-86-10-82601570

Mail: report@researchinchina.com