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China's cold chain logistics is at the initial stage of development, and there isn't a large-scale, systematic cold chain logistics system, and the service capacity is relatively low.

From the perspective of cold chain circulation, China's cold chain circulation proportion is very low, and most of raw and fresh agricultural products are circulated at room temperature; although some products are slaughtered or stored at low temperature, they are not treated so during transportation and sale, and the full-range cold chain rate is very low.

From the perspective of cold chain equipment, the overall size of China's cold chain facilities is inadequate. The refrigerator capacity per capita was only 0.046 cubic meters in 2009, and the proportion of refrigerated and insulated trucks to freight trucks was only 0.3%; existing refrigeration facilities are obsolete and aging in general.

In short, cold chain development in China is relatively backward compared with developed countries.

Comparison between Domestic and Overseas Cold Chain Development

	Foreign Developed Countries	China	Causation
Pre-cooling preservation rate	Developed Europe and USA: 80-100%	Less than 30%	China does not have effective cold chain technology and management support.
Refrigerated storage capacity	USA: 70.74 million cubic meters Global total: 247.7 million cubic meters	61.3739 million cubic meters	China attaches importance to the construction of meat, operational and medium and large-sized cold storages, but ignores fruits and vegetables, processing, wholesale and retail cold storages.
Refrigerated transport rate	Europe and USA: 80-90% Russia, Thailand, Chile: 50%	15%	China's investment in transport infrastructure is inadequate
Loss rate	Europe and USA: less than 5%	20-30%	A lot of perishable products, especially fruits and vegetables are not refrigerated in the circulation process.

Source: ResearchInChina



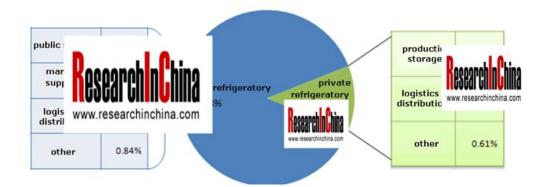
3. Development of Refrigeratory in China

3.2 Capacity

In the public refrigeratories, the capacity of public storage type, market support type, logistics distribution type, and other corollary types took **%, **%, and 0.84%, respectively;

In the private refrigeratories, the capacity of production storage type, logistics distribution type and other supporting types held **%, **%, and 0.61%, respectively.

Capacity of Refrigeratory in China (by Function), 2009

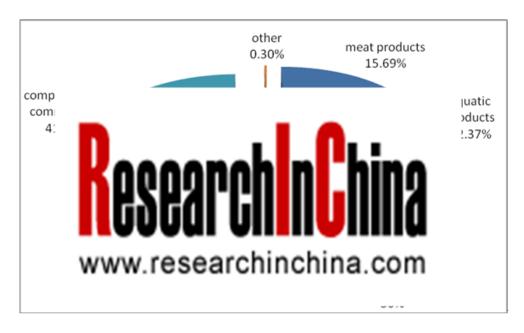


Source: China Association of Warehouses and Logistics

In regard to the major storage products, 15.69% refrigeratory capacity in China in 2009 was for the storage of meat products, **% for aquatic products, **% for fruits & vegetables, **% for dairy products, and **% for comprehensive commodities.



Capacity of Refrigeratory in China (by Goods), 2009



Source: China Association of Warehouses and Logistics

3.3 Distribution

The demand for low-temperature cold storage products takes on regional characteristics just like the economic development in China; therefore, refrigeratory also possesses the evident regional characteristics with the major clusters of eastern region and central region.

In 2009, the refrigeratory capacity in eastern region, central region, and western region of China turned out to be ** million m³, ** million m³, and ** million m³, respectively, with the proportion of 6**%, **%, and 15.02%.

Capacity of Refrigeratory in Eastern, Central and Western Regions of China, 2009

	Capacity (10K m³)	Proportion	
Eastern Region	**	**	
Central Region	**	**	
Western Region	**	15.02%	

Source: China Association of Warehouses and Logistics



As for economic region, China's refrigeratory is presently distributed in Yangtze River Delta, Pearl River Delta, and Circum-Bohai-Sea Region, with the major provinces and cities of Shanghai, Beijing, **, **, Guangdong, **, etc.

Capacity of Refrigeratory in Some Provinces of China, 2008

Province/ Municipality Directly under the Central Government	Capacity (Unit: 10Kt)
Shanghai	**
Beijing	**
**	**
**	**
**	**
**	**
**	**
**	**

Source: ResearchInChina



4. Development of Refrigerated Trucks in China

4.1 Highway Refrigerated Trucks

4.1.2 Current Situation

At present, China has more than 50,000 refrigerated and insulation trucks, of which only a small number are equipped with refrigeration equipment to reach a certain scale and tonnage. In China, refrigerated and insulation vehicles only account for 0.3% of freight vehicles, while the proportion in the United States is 0.8% -1 % and 2% -3% in Germany.

Proportion of Refrigerated Vehicles in Freight Vehicles

Country	Proportion
China	0.3%
USA	0.8%-1%
UK	2.5%-2.8%
Germany	2%-3%

Source: ResearchInChina

By June 2010, China's output of refrigerated and insulation trucks had reached **, up 109% from 2009. In 2010, the output of refrigerated trucks was **, up 117% from 2009. In H1 2010, the output of insulation trucks was **, up 41% from 2009.

By June 2010, there had been ** refrigerated truck enterprises in China, **% year on year; there had been ** insulation truck enterprises, **% year on year.

Output of Refrigerated Trucks and Insulation Trucks in China, 2008-2010

	2008	2009	H1 2010
Output of Refrigerated Trucks	**	**	**
Output of Insulation Trucks	**	**	**
Total	**	**	**

Source: China Automotive Technology & Research Center, Institute of Automobile Industry Development



It is expected that the output of refrigerated trucks and insulation trucks will be 6,000-7,000 in 2010.

Major production companies include BeiQi Foton, Zhenjiang Feichi, **, **, **, **, **, **, ** and other manufacturers. Top ten refrigerated truck vendors will hold **% market shares.

Output of Major Refrigerated Truck Manufacturers in China, 2010

Manufacturer	Cumulative Output, Jan-Jun of 2010	
BeiQi Foton Motor Co., Ltd.	**	
**	**	
**	377	
**	**	
**	**	
**	**	
**	**	
**	**	
**	**	
**	**	

Source: China Automotive Technology & Research Center, Institute of Automobile Industry Development

Overall, there are not many refrigerated truck manufacturers in China, but the competition among them is intense. In 2009, the profit of Chinese refrigerated trucks dropped to 10-15%, because of increasing number of Chinese refrigerated truck manufacturers and the fierce price competition. In addition, with the development of China logistics industry, private logistics enterprises have become the main consumers of refrigerated trucks, they value the price, so that the profit of refrigerated trucks is reduced.

In 2009, after the introduction of Food Safety Law, cold chain logistics was put on the agenda. For some perishable food, Shanghai, Beijing and other regions have issued the mandatory provisions for the application of refrigerated trucks, and granted subsidies to related cold chain enterprises. As residents and the government pay more and more attention to food safety, the demand for refrigerated trucks will grow at a rate of 25% in China in the next few years.



7. Chinese Cold Chain Logistics Companies

7.2 Jinjiang International Industrial Investment Co., Ltd

7.2.1 Profile

Company Name	Shanghai Jin Jiang International Industrial Investment Co., Ltd	
Registered Address	No.1 Pudong Avenue, Shanghai	
Registered Capital	RMB551.610107 million	
Postal Code	200002	
TEL	021-63218800	
FAX	021-63213119	
Website	www.jjtcn.com	
Listed Time	1993-06-07	

Jinjiang International is a listed company which commits itself to the investments into urban passenger transport, logistics and other sectors. Total assets and net assets of the company arrive at RMB1.97 billion and RMB1.55 billion, respectively, with a registered capital of RMB550 million.

7.2.2 Operation

From January to September of 2010, the operating income of the company reached RMB1.363 billion, up 14.55 from the same period of last year; and net income hit RMB211 million with a 5.5% YoY rise.

Assets, Revenue and Net Income of Jinjiang International Industrial Investment, 2007-2010

	Operating Income (RMB100M)	Net Income (RMB100M)	Total Assets (RMB100M)
2007	16.19	3.13	26.67
2008	16.74	3.23	26.63
2009	15.98	2.69	27.08
2010.1-9	13.63	2.11	29.82



Source: Annals of Jinjiang International, ResearchInChina

Revenue and Profit of Jinjiang International Industrial Investment by Sector, 2009-2010

Date	Items	Operating Income (RMB10,000)	Operating Cost (RMB10,000)	Operating Profit (RMB10,000)	Gross Margin (%)
	Vehicle operations and related business	99055.02	65641	33414.02	33.73
2009	Automotive sales business	48710.6	45419.01	3291.59	6.76
	Low-temperature logistics and related business	6377.52	3328.43	3049.09	47.81
	Vehicle operations	53580.13	34881.78	18698.35	34.9
2010H1	Automotive Sales Business	28067.9	26186.43	1881.47	6.7
	Low-temperature logistics	3881.84	2046.1	1835.74	47.29

Source: Annals of Jinjiang International, ResearchInChina

7.2.3 Cold Chain Development

During 2007-2009, the revenue of Jinjiang International from its invested low-temperature logistics business declined incessantly, and the figure in 2010 is expected to surpass that in 2009. Yet, the company's gross margin of low-temperature logistics business kept continuous growth from 2007 to 2009, and it fell slightly in the first half of 2010. Since 2007, the low-temperature logistics gross margin of Jinjiang International has long remained above 30%, the highest among the invested businesses by the company.

Revenue and Profit of Low Temperature Logistics Business of Jinjiang International Industrial

Investment, 2007-2010

	Operating Income (RMB10,000)	Operating Cost (RMB10,000)	Operating Profit (RMB10,000)	Gross Margin (%)
2007	13062.12	8697.2	4364.92	33.42
2008	10101	6315.09	3785.9	37.48



2009	6377.52	3328.43	3049.09	47.81
2010H1	3881.84	2046.1	1835.74	47.29

Source: Annals of Jinjiang International, ResearchInChina

Jinjiang International invested the companies such as Shanghai Jinjiang International Low-temperature Logistics Development Co., Ltd.

The measures taken by Jinjiang International to develop cold chain logistics during 2009-2010 are presented as follows:

1. To construct ultra-low-temperature warehouse logistics project in Wusong

The building structure of the project was roofed at the end of 2009, with cold storage warehouses (51,000 cubic meters and 11,200 tons) mainly led by cold storage and ultra-low-temperature cold storage as well as assisted by processing, separate packing, cargo tally, distribution, etc.

In 2010, the company further advances the relevant engineering after the roofing of ultra-low-temperature warehouse, which consummates the food safety cold chain logistics of Jinjiang International.

2. To advance the international strategic cooperation in low-temperature logistics

In line with the market demand, the company makes out the plans concerning the development of low-temperature logistics industry and actively implements them. The company plans to introduce strategic investment partners to speed up the development of low-temperature logistics business.

In May, 2010, Shanghai Jinjiang International Low-temperature Logistics Development Co., Ltd and MITSUI signed an agreement and made the joint investment of RMB250 million to set up a low-temperature logistics project.

3. To cut non-cold-chain operations



In 2009, Jinjiang International transferred 50% equities of Shanghai Nichirei Foods Co., Ltd held by Shanghai Wujing Cold Storage Company and steadily retreated from food processing so as to give priority to the development of low-temperature logistics business.



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