

IN THIS ISSUE :

I. Dairy consumption	1
II. Dairy production	6
III. Price of dairy products	7
IV. Distribution channels	8
V. Regulatory highlights	9
VI. Competitive landscape of the dairy market	10
VII. Performance of the two largest sub-sectors— liquid milk and milk powder	14

China's burgeoning dairy market

Fuelled by robust economic growth, retail modernisation and better consumer education, China's dairy market has grown dramatically in recent years. Yet, growth of dairy consumption in cities has shown signs of slowdown recently; marketers are eyeing the less affluent areas and the vast rural markets as the next growth engines.

This paper presents a general overview of China's dairy market, addressing the following aspects: dairy consumption, production, price of dairy products, distribution channels, regulatory highlights, and the competitive landscape. Last but not least, a brief overview of the two largest sub-sectors, liquid milk and milk powder will be presented.

I. Dairy consumption**1. Impressive growth of the dairy market over the years but consumption is still far below the world average**

China has one of the lowest levels of per capita dairy consumption in the world. According to the National Bureau of Statistics (NBS), the per capita annual dairy consumption was 24.8 kg for urban households and 2 kg for rural households in 2005. Today, per capita annual dairy consumption in China is far below the world average, which stands at 100 kg. There is still ample room for growth.

There are two reasons for the under-consumption. Firstly, milk is not a part of the nation's traditional diet. Dairy products have a fairly short history in China. In the 1950s, milk consumption was confined to a few groups of people. Only milk powder was rationed to pregnant women and patients. During the Cultural Revolution from the late 1960s to the early 1970s, milk consumption was considered as capitalistic and was widely discouraged. It was not until the mid-1980s that milk started to become more popular. Secondly,

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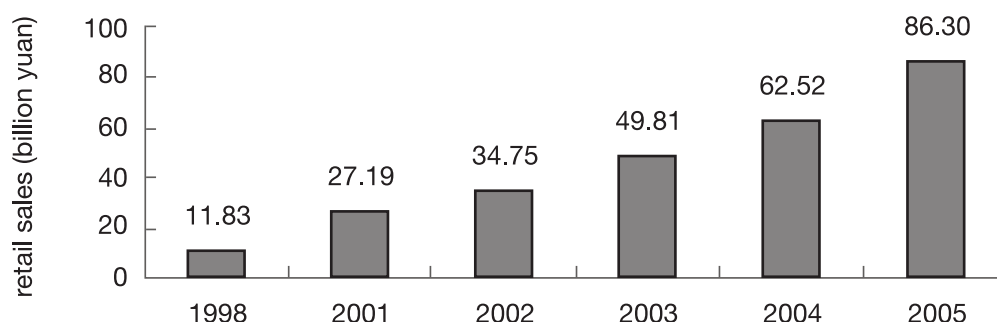
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inadequate transportation and storage facilities in the country have hampered the market development. As dairy products generally have a short shelf life, an efficient logistics and cold storage system is necessary for ensuring the freshness of the products.

However, with impressive economic growth in recent decades, improvement in logistics and retail infrastructure and the Central government’s initiatives to promote dairy consumption such as the State School Milk Program¹ in 1999, the dairy market has been booming these years. Dairy retail sales of enterprises above designated size grew from 11.83 billion yuan in 1998 to 86.30 billion yuan in 2005, a significant increase of 629.5% (see Exhibit 1).

Exhibit 1: Dairy retail sales of enterprises above designated size, 1998-2005

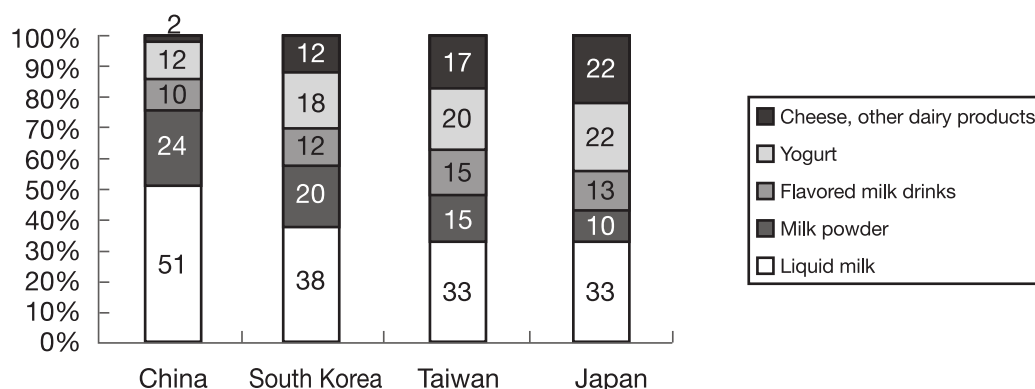


Source: National Bureau of Statistics of PRC

2. Liquid milk and milk powder are the largest sub-sectors

Liquid milk and milk powder are the largest sub-sectors in China’s dairy market. According to the report released by the Mckinsey & Company, higher-value-added dairy products such as flavored milk drinks, cheese and yogurt accounted for only a quarter of the country’s dairy consumption in 2005, lower than its wealthier Asian counterparts (Exhibit 2).

Exhibit 2: Distribution of dairy products, 2005, %



Source: The Mckinsey Quarterly

¹ The Ministry of Agriculture and the Ministry of Education initiated the State School Milk Program in 1999 to promote milk consumption in primary schools. The program aims to provide fresh milk to primary school students at affordable prices. The program was put into trial in 1999 in 5 large cities (Beijing, Tianjin, Shanghai, Guangzhou and Shenyang), and since 15 November 2000 it has been implemented nationwide.

But as the Chinese economy continues to grow, it is expected that consumers will embrace more higher-value-added products. The Mckinsey & Company anticipated the revenues from sales of flavored milk drinks, cheese and desserts, and yogurt in China to grow by 22%, 38%, and 31 % annually over the next five years. This is good news to most dairy enterprises as the profits margins of these products are two to three times more than that of plain milk.

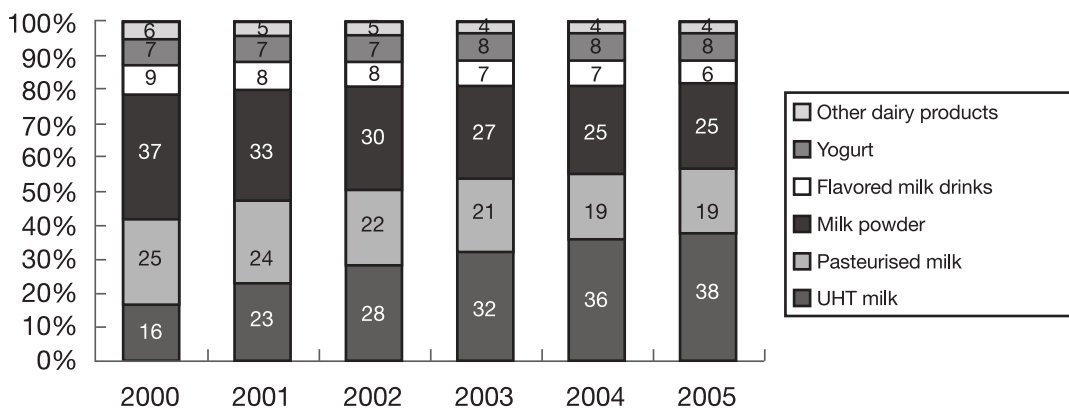
3. UHT milk gains dominance quickly

There are two types of liquid milk: UHT milk and pasteurized milk. UHT milk has higher nutritional value but a shorter refrigerated shelf life. Pasteurized milk, on the other hand, can be stored at room temperature for a longer period but the nutritional value is lower.

According to Euromonitor, UHT milk has become the most dominant dairy products in China. Exhibit 3 demonstrates the market share of different dairy products from 2000 to 2005. Market share of UHT milk has increased significantly from 16% to 38% at the expense of pasteurized and milk powder over the years.

Introduced to the Chinese market in 1999, the quick success of UHT milk can be attributed to its longer shelf life and less stringent storage and transportation requirement. As UHT milk can be stored at room temperature, thus allowing a wider distribution radius and lower transportation costs, the pricing of UHT milk is more competitive—the average retail price of UHT milk is 20% lower than that of pasteurized milk. Given the wide geographical coverage and immature logistics infrastructure in China, UHT milk should continue to lead the market for some time.

Exhibit 3: Market share of different dairy products from 2000 to 2005



Source: Euromonitor

4. The urban/rural divide in dairy consumption

(1) The urban market

(i) Dairy consumption is concentrated in urban market

Like many other food sectors, dairy consumption is extremely unbalanced with most milk products consumed in major cities and economically developed regions due to higher household incomes, better distribution infrastructure and higher penetration of modern retail channels—per capita annual dairy consumption of urban households was 24.8 kg in 2005, more than twelve times that of their rural counterparts in China.

(ii) Consumption structure upgrade together with a slowdown in dairy consumption growth

Nevertheless, after years of tremendous growth, dairy consumption in urban households registered a 1.6% dip in 2005. According to the estimated figures by NBS, per capita annual dairy consumption dropped from 25.3 kg in 2004 to 24.8 kg in 2005. The fresh milk sector witnessed the biggest decline with its consumption dropped by 4.6% year on year (yoy). Meanwhile, the yogurt sector grew impressively by 13.5% (Exhibit 4), suggesting urban households are trading up to higher-value-added dairy products.

Exhibit 4: Per capita annual dairy consumption in urban households, 2004- 2005

	2005 estimates, kg	2004, kg	yoy % change
Dairy consumption	24.89	25.30	-1.62
Fresh milk	17.93	18.79	-4.58
Milk powder	0.52	0.51	1.96
Yogurt	3.29	2.90	13.45

Source: National Bureau of Statistics of PRC

(iii) Less-affluent areas to demonstrate huge growth potentials

Exhibit 5 demonstrates the urban consumption of dairy products by different income segments in 2000 and 2004. Consumption of dairy products is positively correlated with income. With the general rise in household income, dairy consumption across different income segments has increased over the years.

In the coming years, industry experts believe that the less-affluent areas will register faster growth in dairy consumption. Indeed, the McKinsey & Company estimates that share of the total dairy revenue from 1st tier cities (Beijing, Shanghai and Guangzhou) will shrink from 14% in 2004 to 11% in 2010. Meanwhile, 2nd and 3rd tier cities will account for 70% of the growth in net revenue from now to the end of this decade.

Exhibit 5: Urban consumption of dairy products by income groups, 2000 and 2004

	Urban household income level							
	Average	Lowest	Low	Lower-middle	Middle	Upper-middle	High	Highest
2000								
Spending on milk and dairy products (yuan)	68.6	32.4	43.2	55.7	69.3	82.1	95.5	117.3
Dairy expenditure to food expenditure (%)	3.5	2.6	2.8	3.2	3.5	3.7	3.9	4.1
Consumption of:								
Liquid milk (kg)	9.9	4.6	6.0	8.3	9.8	12.0	14.1	17.5
Milk powder (kg)	0.5	0.3	0.4	0.4	0.5	0.6	0.7	0.7
Yogurt (kg)	1.1	0.5	0.6	0.9	1.1	1.4	1.5	2.1
2004								
Spending on milk and dairy products (yuan)	132.4	46.3	78.1	106.8	131.6	162.9	194.7	237.3
Dairy expenditure to food expenditure (%)	4.9	3.3	4.3	4.9	5.1	5.2	5.2	4.8
Consumption of:								
Liquid milk (kg)	18.8	7.8	12.7	16.5	18.9	23.2	26.2	28.3
Milk powder (kg)	0.5	0.3	0.4	0.5	0.6	0.6	0.6	0.6
Yogurt (kg)	2.9	1.1	1.6	2.4	3.0	3.6	4.0	4.8

Source: National Bureau of Statistics, PRC.

(2) The rural market

The underdeveloped rural market offers much room for growth

The rural market, on the other hand, is largely untapped due to the low affordability of the population. According to the NBS, annual disposable income of rural households was 3,255 yuan in 2005. The level was just around one-third of their urban counterparts. Besides, poor logistics and retail infrastructure in the rural areas increase the transportation costs. It also creates loopholes for fake and sub-standard dairy products. The fake milk powder scandal two years ago has dampened consumer confidence and drew huge public attention to the widespread problem of inferior-quality food products in rural China.

Yet, it is widely believed that the demand from the vast interior will grow gradually in the future. The boost will be driven by the continued improvement in rural incomes, the increase in ownership of refrigerators and the higher penetration of modern format retailers. The *Universal Rural Retailing Network Project* (萬村千鄉工程) launched by the Ministry of Commerce in 2005 encourages the development of modern logistics in vast rural areas. It is hoped that by 2008, a national rural retail network covering 70% of all villages will be built. Rural consumers can have wider access of reliable products at a more affordable price. Meanwhile, the abolishment of the agricultural tax starting from January 2006 and the National People's Congress (NPC) approval to increase the minimum taxable income threshold from RMB 800/month to RMB 1600/month should also boost the disposable income of the rural population and thus encourage dairy consumption.

II. Dairy production

1. Dairy production in China concentrates in the Northern provinces

Dairy production in China is regionally unbalanced and concentrates in the Northern provinces as the natural resources and climate of the Northern provinces are most suitable for herd rearing. In 2004, Inner Mongolia ranked first in terms of total output of dairy products which amounted to 5.02 million tons and accounted for one-fifth of the national total; it was then followed by Heilongjiang and Hebei, with total output of dairy products stood at 3.78 million tons and 2.77 million tons and accounted for 16% and 12% of the national total respectively (Exhibit 6).

Exhibit 6: The Top 10 output of dairy products by province, 2004 (1,000 tons, %)

	Output	Share of the national total (%)
Inner Mongolia	5021	21
Heilongjiang	3781	16
Hebei	2769	12
Shandong	1887	8
Xinjiang	1397	6
Shannxi	1255	5
Henan	789	3
Beijing	701	3
Shanxi	637	3
Liaoning	623	3

Source: Dairy Statistics

2. Production capability of large-scale enterprises expanding fast

The production capability of large-scale enterprises cannot be ignored. In 1995, the aggregate production volume of the top 10 manufacturers was 56, 000 tons, representing 10.6% of the national total. In 2004, the aggregate production volume of the top 10 large manufacturers surged to 4.7 million tons, accounting for half of the national total.

Exhibit 7 ranks the dairy enterprises by production volume of liquid milk. Mengniu Dairy and Yili Dairy topped the production volume in 2004 and 2005.

Exhibit 7: Production volume of liquid milk of top 10 manufacturers in 2004 and 2005

	2005		2004		yoy % change in production volume	yoy % change in share
	Production (tons)	%	Production (tons)	%		
China Mengniu Dairy Company Limited 內蒙古蒙牛乳業(集團)股份有限公司	2,641,476	25.23	1,620,029	20.08	63.05	5.15
Inner Mongolia Yili Industrial Group Co., Ltd. 內蒙古伊利實業集團股份有限公司	2,253,929	21.53	1,466,800	18.18	53.66	3.35
Sanlu Group Co., Ltd 石家庄三鹿集團股份有限公司	603,291	5.76	600,608	7.44	0.45	-1.68
Bright Dairy and Food Co., Ltd. 光明乳業股份有限公司	594,052	5.67	625,101	7.75	-4.97	-2.08
Beijing Sanyuan Foods Co., Ltd. 北京三元食品股份有限公司	174,980	1.67	177,220	2.20	-1.26	-0.53
Shenyang Dairy Co., Ltd 瀋陽乳業有限公司	173,342	1.66	113,950	1.41	52.12	0.25
Heilongjiang Wondersun Dairy Co., Ltd 黑龍江省完達山乳業股份有限公司	156,946	1.50	154,166	1.91	1.81	-0.41
Xi'an Yinqiao Biological Science and Technology Co., Ltd 西安銀橋股份有限公司	155,870	1.49	73,204	0.91	112.93	0.58
Xuzhou Weiwei Milk Co., Ltd 維維乳業有限公司	148,452	1.42	132,287	1.64	12.22	-0.22
Fujian Changfu Dairy Group Co. Ltd 福建長富乳業集團股份有限公司	142,698	1.36	94,012	1.17	51.79	0.19

Source: National Bureau of Statistics

III. Price of dairy products

Price pressure is mounting for many dairy enterprises in China. Prices of materials such as raw milk, packaging materials, sugar and fuel have all increased.

Of which the rising cost of raw milk and packaging materials are the most alarming. From 2004 to 2005, the prices of corn and cereal, the main feeds for milk cow, increased from 1,200 yuan per ton to 1,600 yuan per ton, and from 1,000 yuan to 1,400 yuan respectively. Coupled with active expansion of production capabilities by big players, competition for raw milk escalated and resulted in an 8% increase in the price of raw milk in 2005. Meanwhile, the price of packaging materials jumped by 55% to reach 17,200 yuan per ton.

International sugar price has also risen dramatically from 2,800 yuan per ton in early 2005 to 5,800 yuan at the start of 2006. Not to mention the high oil price in affecting the transportation cost, all are squeezing the profit margins of dairy enterprises.

Though, market players are divided on whether to raise retail prices. The reasons behind the reluctance are two-fold. On the one hand, competition for market share is fierce and undercutting price is still the most common strategy adopted by many dairy enterprises. Price of liquid milk has fallen below cost in some regions. On the other hand, most Chinese consumers have yet developed habitual dairy consumption, let alone strong preference towards particular brands; hence, price remains a major concern for consumers.

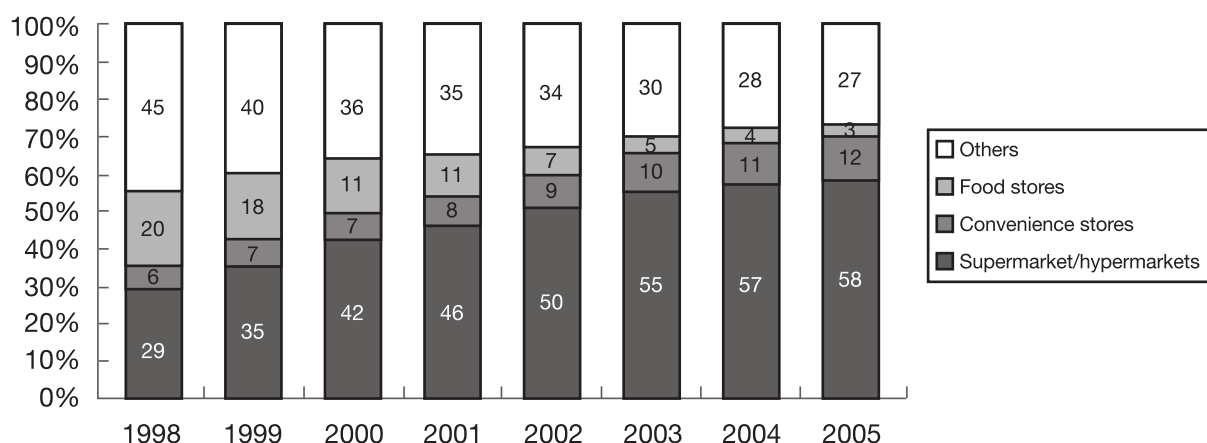
Therefore, market enterprises are bearing the brunt of cost pressures. It is reported that nearly 40% of the country's dairy enterprises suffered losses, while only 30% managed to break even. The impact is particularly heavy for small and medium-sized dairy enterprises as they often lack the technological know-how to moving to produce higher value-added products and improving production efficiency and have less say in price negotiations with relevant parties such as packaging suppliers.

IV. Distribution channels

1. Sales of dairy products through supermarkets and hypermarkets has grown over the years

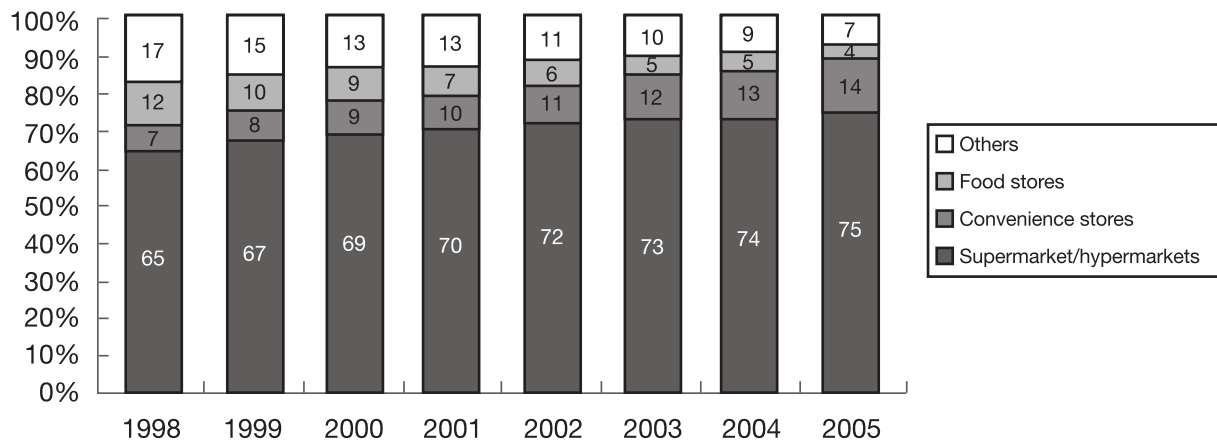
Most dairy products have a short shelf life and require refrigeration; poor retail infrastructure will constrain the penetration of the products. Retail modernization has encouraged dairy consumption in China. With more efficient retail infrastructure, modern retail channels offer consumers a wider range of dairy products with lower prices. They also provide advanced storage facilities such as refrigerators necessary for many dairy products. Indeed, more and more Chinese consumers buy the dairy products in modern retail channels nowadays. According to the Euromonitor estimates, supermarkets and hypermarkets accounted for 58% of milk sales and 75% of yogurt sales in 2005 (Exhibit 8 and 9). Proportion of milk and yogurt sales in modern retail channels has increased over the years and the trend is set to continue in the coming years.

Exhibit 8: Milk sales in different retail channels, 1998-2005



Source: Euromonitor

Exhibit 9: Yogurt sales in different retail channels, 1998-2005



Source: Euromonitor

2. Leading dairy player experimenting new sales channel

However, the often-hefty entry and promotion fees levied by modern format retailers have undermined the profit margins of many dairy enterprises. Thus, some are experimenting new sales channels to boost sales. For instance, the leading China Mengniu Dairy Company Limited has planned to open more than 1,000 specialty stores through franchising in 30 cities by the end of 2006. It hopes that these specialty stores can help reduce the distribution costs and collect consumers' feedback more effectively.

V. Regulatory highlights

1. New policy on pasteurized and UHT milk labeling

A new policy on pasteurized and UHT milk labeling will become effective on January 1, 2007. According to the new requirement, dairy plants should no longer use the words "fresh milk" in labeling for pasteurized or UHT milk. Only "pasteurized milk" or "pure milk" can be used.

Pasteurizing milk enterprises has long boasted "freshness" as their core value. This new requirement has triggered strong opposition from pasteurizing milk enterprises because the term "pasteurized", if translated to Chinese, cannot convey the image of freshness to consumers. In fact, the launch of this regulation has been postponed for the third time since the order was announced two years ago under tremendous pressures from pasteurizing milk enterprises.

2. Notice of Strengthening Management on Liquid Milk Production and Marketing

Some dairy producers in China use reconstituted milk powder, which have lower nutritional value, in liquid milk production. However, a number of them do not specify clearly the use of reconstituted milk powder on their product labels. This practice has harmed the interests of consumers.

In September 2005, the State Council issued an industry test standard, “*Notice of Strengthening Management on Liquid Milk Production and Marketing*”, banning the use of reconstituted milk powder for the production of dairy products with short shelf life such as pasteurised milk. Besides, liquid milk products containing reconstituted milk must be clearly and properly labelled.

The Notice specified that starting from October 15, 2005, producers should state clearly on labels the percentage of “reconstituted milk powder” being used. Plants intending to use reconstituted milk powder for liquid milk products should register with local quality supervision agency and provide the following information 1) quality and quantity of imported or domestically procured milk powder, their production origin and name of milk powder plant; 2) production date and length of production; 3) quantity of liquid products with reconstituted milk and 4) proposed sales areas of liquid products with reconstituted milk. Without registration, the Administration of Industry and Commerce will not issue production license.

VI. Competitive landscape of the dairy market

The Chinese dairy market offers plenty room for growth. Nonetheless, competition is keen as established players strive to grab market share. It is expected that competition will continue for some time as more foreign players re-join the battlefield through mergers and acquisitions. There are also many small- and medium-sized domestic enterprises active in respective localities.

According to market statistics, the China dairy market is increasingly concentrated. The top 3 players—Mengniu Dairy, Yili Dairy and Bright Dairy seized 61.3% of the overall market share in 2005, up from 55.5% in 2004.

1. Domestic players

(1) Mengniu Dairy and Yili Dairy have a strong foothold

The burgeoning dairy market offers exciting opportunities but excellent market understanding and management capability are needed to get the cream on the cake. According to industry estimates in 2005, Inner-Mongolia-based Mengniu Dairy and Yili Dairy are the distinct leaders in the market and they accounted for over 50% of the market share. Bright Dairy was the distant third with less than 10% of the market share.

The revenue of Mengniu Dairy amounted to 7.5 billion yuan in the first half of 2006, surging by 58.7% yoy. Its profit yielded in the first half of this year also jumped 39% compared with the same period of 2005 to 343.4 million yuan. On the other hand, Yili Dairy reported a 30% rise in revenue to 5.7 billion yuan and net profits up by 11.5% over the first six months of the previous year to 171 million yuan.

Mengniu Dairy and Yili Dairy have attributed their success to reliable milk sources, huge cost advantages, improving product mix, strong brand image and extensive sales network. Indeed, their management and marketing strategies provide us valuable insights on how to succeed in the market.

UHT milk is the primary sales contributor; but both seek to diversify their product portfolio

According to Euromonitor, UHT milk accounts for nearly 40% of dairy sales in China. UHT milk made up the largest share of sales of Mengniu Dairy (61%) and Yili Dairy (45%) in 2005, way higher than that of Bright Dairy (20%) (See Exhibit 10).

Exhibit 10: Sales contribution by products of top 3 dairy players in 2005

	Mengniu Dairy	Yili Dairy	Bright Dairy
UHT milk	61%	45%	20%
Pasteurised milk	–	1%	18%
Yogurt	6%	3%	27%
Flavored milk drinks	20%	25%	7%
Others dairy products (e.g., milk tablets)	2%	11%	6%
Ice-cream	12%	12%	–
Other non-dairy business	–	3%	21%

Source: Company data, Gao Hua Securities Research Estimates

To cater to the increasingly discerning consumers, both Mengniu and Yili have also actively worked on product differentiation. Mengniu has introduced a series of new functional milk products namely breakfast milk (早餐奶) and good night milk(晚上好奶) with added nutrients such as malt essence and vitamins. Yili has also launched milk powder products targeting different age segments, which aims at getting a foothold in the high-end milk powder market dominated by foreign brands such as Nestlè, Wyeth and MeadJohnson.

Moreover, both enterprises have also launched higher-margin products to offset the increasing production cost pressure. Mengniu, for instance, is the market leader in the higher-margin ice-cream sector with its sales up impressively by 61% in 2005. It has also launched premium dairy products Milk Supreme(奶爵六特乳) and Milk Deluxe(特倫蘇OMP牛奶). Compared with other Mengniu products, the retail prices of these new products are 2.5 times higher and with gross margins 1-2 times higher, too. Yili Dairy, on the other hand, has launched high-end Lactobacillus rhamnosus GG (LGG) yoghurt and Olympic-themed Milk Classic (伊利金典純牛奶).

Huge efforts on brand building

Both enterprises have paid huge efforts on branding to help sustain profits in the long run. Mengniu has strengthened its position in the flavored milk drinks market and successfully attracted more young consumers through the sponsorship of Super Girl Singing Contest (超級女聲), a nationwide singing competition organized by Hunan TV (湖南衛視) with 400 million TV viewers last year. Hiring celebrities as spokesperson is also a common strategy. For instance, Mengniu has asked famous Taiwanese baseball player Ding-JunHui to become its spokesperson and Yili has invited Olympic gold-medalled diving player Guo-JinJin to promote its new LGG yoghurt.

The two giants are also striving to increase their exposure in the overseas market. Yili beat Mengniu and won the sponsorship of the 2008 Beijing Olympic Games. It hopes that the sponsorship can help it consolidate its presence in the international market and be among the top 10 dairy companies in the world by 2015. In an attempt to boost brand awareness internationally, Mengniu has signed a deal with Hong Kong Disneyland and will be the sole dairy supplier in the park.

Effective logistics and distribution strategy

Inventory control is essential for dairy enterprises as milk products usually have a short shelf life. Yili and Mengniu are fast to adopt information technology to manage their capital, product and information flow. Both have employed ASP, a supply chain management software, allowing their staff to monitor sales and inventories via the online database. Information technology solutions have minimized human errors and enabled efficient distribution. The adoption of the ASP system has reduced the order processing time of Yili by more than 3 weeks.

Besides, milk production is concentrated in northern China whereas the more well off consumers mostly reside in the eastern and southern cities. Rapid national expansion of the two players implies heavy logistics cost given the vast geographical span and relatively less developed transportation system. To control the logistics cost, both are building production bases and warehouses across the country to increase proximity to local markets and thus reduce transportation needs. Yili has added 4 warehouses to around 60 warehouses in China in 2005. Mengniu, on the other hand, has over 20 production bases in 15 provinces.

Securing raw milk sources and expanding production capacity across the country

To gain a strong foothold in the national market, securing milk sources and production capacity is of utmost importance. The national development strategy of Mengniu is a case in point. Firstly, it secured its milk sources in 6 northern provinces such as Tibet and Inner Mongolia where milk production is concentrated. It continued to move down and developed capacity in central China such as Hebei, Shanxi, Beijing and Shangdong; and then further south to cities such as Chengdu and Wuhan. More recently, it has invested in Maanshan in Anhui to secure the best milk source in eastern China and a production base is also built in southern Guangzhou. Mengniu hopes that its national strategy will help it tapping new markets, such as the pasteurised milk market in eastern China. Yili has also embarked on a similar national strategy.

Joint venture, acquisition and mergers: quick alternative to expand

Instead of expanding capacity from scratch, Mengniu and Yili have been actively seeking merger and acquisition (M&A) and joint venture opportunities for quick and cost-effective market penetration and consolidation. Exhibit 11 demonstrates some of the recent examples.

Exhibit 11: Recent joint venture and M&A activities by Mengniu and Yili

Enterprise	M&A/ joint venture target	Time	Note
Yili Dairy	Niumama Dairy Co., Ltd 內蒙古牛媽媽乳業有限公司	Feb.2005	Jointly invest 250 million yuan in building a 300,000-ton liquid milk production base in Inner Mongolia
Yili Dairy	Fujian Changfu Dairy Group Co. Ltd 福建長富乳業集團股份有限公司	Oct. 2005	2-year exclusive OEM arrangement
Mengniu Dairy	Wuhan Freath Dairy Co. Ltd 武漢友芝友保健乳品有限公司	Jan. 2006	Mengniu owns a 52% stake in the JV
Yili Dairy	Xinjiang BinDiTianYuan Dairy Co. Ltd 新疆兵地天元乳業有限公司	Apr. 2006	Yili plans to take a 50%-plus stake
Mengniu Dairy	Denmark's Arla Foods Ingredients 丹麥阿拉福滋公司	May.2006	Mengniu owns a 51% stake in the JV

Source: Newspaper and magazines articles

In fact, vigorous price competition over the recent years has weakened many small- and medium-sized enterprises—as mentioned, nearly 40% of the country's dairy enterprises suffer losses, while only 30% manage to break even. Rather than developing independently, co-operating with big-name players may be the best solution. Through joint ventures or M&A, Mengniu and Yili can draw on the market knowledge, experience, connection and distribution network of the smaller players, and diversify their product mix as well. The joint venture with Wuhan Freath Dairy, for instance, is of strategic importance to Mengniu for it to set foot in the southern markets and enter the cheese market.

(2) Difficult time for small- and medium-sized players

Despite the relatively high market concentration, there are numerous small- and medium-sized dairy players in China. According to industry estimates, China has more than 1,500 dairy product enterprises in 2004, and 90-95% of them are small- and medium-sized. Most of these enterprises have limited capital and technological know-how.

Some of these local players have a strong presence in the less developed regions. A number of them avoid direct competition in the UHT milk sector and produce and sell mainly pasteurized milk to local markets for its high level of freshness, rich nutrients and short shelf life.

In the face of aggressive expansion of the large dairy giants, some small-and-medium-sized enterprises have worked hard to establish a stronger position in respective localities. For instance, doorstep delivery is adopted to win appeal from the local residents. Indeed, the more established local players target to gain a foothold over regional markets. By doing so, they can also enhance their bargaining power for mergers and reorganizations.

Nonetheless, the operating environment will continue to be harsh for most small local players as big-name players strive to increase their national market share. Without sufficient capital and technological know-how, their chance of survival amid price competition and consumption structure upgrade will be slim. The McKinsey & Company estimated that by 2010 more than half of China's domestic dairy manufacturers will fail to survive.

2. Foreign players

(1) Previous failures to gain a firm foothold

A number of foreign players such as Nestlé, Kraft, Danone and Parmalat have entered the market since 1995. Though with sufficient capital and technological know-how, they found the domestic market a hard nut to crack.

Foreign players fell short of initial targets and some could not but retreat from the market. Danone, for instance, withdrew its line of dairy products from the market after a decade of efforts and sold its facilities to the domestic Bright Dairy. Parmalat transferred control of its joint venture to its Nanjing partner and leased its outlet to Yili Dairy for five years. Kraft also shifted its investment to non-dairy products in 2002.

There were several reasons behind the setbacks. First to be mentioned was the failure in competing with domestic enterprises to secure milk resources. By that time foreign players started to set foot in the market, local dairy enterprises had already established strong connection with local milk farms. As pointed out before, securing milk resources locally means huge cost advantages to dairy enterprises. Besides, consumers also perceive milk produced by domestic companies, which raise cattle on large farms, to be fresher than imported dairy products.

Developing distribution networks posed another difficulty for foreign players. Domestic enterprises, with their local connection and strong market knowledge, can develop a distribution network extending to every street and community. Foreign players found this costly and difficult.

Lack of market knowledge was another major issue. As Parmalat entered the Chinese market, it misread the Chinese consumers and focused solely on marketing its high-end products. However, at that time, the dairy market was largely underdeveloped. With retail price of Parmalat product doubled that of similar local brands, market response was lukewarm. Besides, Parmalat had seldom advertised on television or newspaper, which retail analysts considered as an efficient method to generate brand awareness among Chinese consumers.

All these, coupled with the constant price wars, squeezed the profit margins of foreign players.

(2) Foreign brands vie for re-entry

Despite previous failures, foreign players have not given up hopes in China's dairy market. Understanding the importance of local knowledge, many foreign players have modified their strategy in China. Instead of getting exclusive controlling rights and company operation rights, foreign enterprises are seeking cooperation with domestic brands as the most cost effective way to take advantage of the latter's existing distribution channels and market presence.

For example, Danone now has a 20.01% share in Bright Dairy, making it the third-largest shareholder. New Zealand's Fonterra has also acquired a 43%-share of Sanlu Group, the prominent domestic player in milk powder. Meanwhile, Mengniu have signed a joint venture deal with Arla Foods in an attempt to enter the baby milk powder market.

VII. Performance of the two largest sub-sectors—liquid milk and milk powder

China National Commercial Information Center (CNCIC) conducts monthly survey to over 260 major department stores and supermarkets across China to study the performance of brands of different consumer products. The brand analysis in this section is largely based on the data collected and compiled by CNCIC.

1. Liquid milk

(1) High market concentration with domestic brands taking the lion's share

Exhibit 12 demonstrates the brands share in the liquid milk sector in 2004 and 2005. Market concentration was high with the top 10 brands accounting for nearly 80% of the market share.

Domestic brands took the lion share. Switzerland-based Nestlé was the only foreign brand among the top 10 players with a meagre market share of less than 1% in 2005.

Exhibit 12: Brand performance of liquid milk: share of total sales and market coverage ratio, 2004 and 2005

Brand	2005		Brand	2004	
	* Share of total sales (%)	# National market coverage ratio (%)		* Share of total sales (%)	# National market coverage ratio (%)
Mengniu 蒙牛	33.25	13.85	Mengniu 蒙牛	23.99	12.05
Yili 伊利	26.71	14.48	Yili 伊利	23.34	14.96
Bright 光明	8.88	10.96	Tianyou 天友	9.97	0.11
Sanlu 三鹿	3.73	4.28	Bright 光明	9.70	11.05
Xiajin 夏進	1.58	2.90	Sanlu 三鹿	2.64	4.69
Sanyuan 三元	1.35	1.76	Xiajin 夏進	2.48	3.57
Wondersun 完達山	1.19	2.39	Wondersun 完達山	1.71	3.91
Wahaha 娃哈哈	0.47	4.03	Wahaha 娃哈哈	0.23	4.46
Robust 樂百氏	0.18	3.02	Robust 樂百氏	0.21	3.91
Nestlé 雀巢	0.08	4.16	Nestlé 雀巢	0.10	3.35
Others	22.57	38.17	Others	25.63	37.94

Source: China National Commercial Information Center (CNCIC)

* Share of total sales (%): Sales volume of the brand/ total sales volume

(sales volume refers to the total quantity sold of the product category by the surveyed retailers)

Market coverage ratio (%): Taking into the consideration that China is not a single market but a highly fragmented market composing of many localized market, CNCIC has compiled this ratio to measure the market coverage of a particular brand in the national market. For example, a brand with a low market coverage ratio tends to be a regional brand instead of a national one.

(2) Mengniu and Yili, the UHT milk leaders, grab over half of the market share

As mentioned before, UHT milk is most suitable for Chinese consumers given its longer shelf life and less stringent storage and transportation requirement. The sales of UHT milk has outstripped pasteurised milk over the years. Mengniu and Yili, with UHT milk as the major sales contributor (61% and 45% respectively in 2005), accounted for over 60% of the market share in the liquid milk sector.

Bright, meanwhile, was a distant third with less than 10% of market share in 2005. UHT milk contributed only one-fifth of its sales share.

(3) Sales of pasteurized milk may go down with the introduction of new regulations

A series of dairy products scandals, from fake baby milk powder to the discovery of expired milk in Bright's Zhengzhou subsidiary to Nestlé being accused of using excess iodine in formula milk, have aroused public concerns over the safety of milk products. In light of this, the Chinese authority has strengthened their regulatory control.

The new policy on pasteurized and UHT milk labeling bans the use of “fresh milk” in labeling for pasteurized or UHT milk and will be effective in January 2007. Since pasteurizing milk enterprises have long labelled “fresh milk” in their dairy products, the new regulation is expected to affect these enterprises most. Bright and Sanyu, the prominent players in the pasteurised sector, are likely to have their sales performance affected.

(4) More varieties of liquid milk products

As consumers in China are becoming more sophisticated, liquid milk manufacturers are beginning to offer more product varieties, such as enriched milk with added ingredients (e.g. Aloe Vera or minerals). However, consumers are still accustomed to drinking the traditional whole-fat milk. According to the 2004-05 IMI Yearbook, whole-fat milk was the most popular type of packaged milk among the cities surveyed. Low-fat milk and milk with added minerals were the second most popular. The consumption of skimmed milk was still low in the majority of cities. (Exhibit 13)

Exhibit 13: Varieties of packaged milk of selected cities, 2004

(% of respondents)

City	Sample size (‘000)	Whole-fat (%)	Low-fat (%)	Skimmed (%)	Flavored	Fortified milk (%)	Added	Others (%)
					(e.g. chocolate) (%)		(e.g., calcium) minerals (%)	
Beijing	4,632	42.2	15.1	8.6	6.0	0.9	25.9	1.3
Shanghai	5,715	59.6	14.2	6.7	2.7	1.2	14.9	0.7
Guangzhou	2,028	43.6	25.6	16.6	4.4	0.9	8.4	0.4
Shenzhen	2,442	29.0	26.4	12.4	7.9	2.1	20.8	1.4
Chengdu	1,562	56.8	16.1	5.0	6.8	0.3	14.0	1.1
Chongqing	1,160	48.4	21.3	11.3	8.0	0.3	10.3	0.3
Wuhan	1,731	46.8	26.7	4.9	10.1	2.1	9.5	0.0
Xi’an	1,422	31.9	27.7	4.5	12.0	10.4	13.4	0.2
Shenyang	2,010	45.7	12.1	6.6	12.2	2.9	20.3	0.1
Nanjing	1,328	37.4	28.0	8.7	9.9	3.6	11.1	1.2

Source: IMI Consumer Behaviors & Life Styles Yearbook 2004-2005

(5) Breakfast as the most popular occasion of consumption

The occasions of liquid milk consumption were fairly consistent among all cities studied, according to the 2004-05 IMI Yearbook. Most people consumed milk during breakfast. As the pace of living becomes faster, more and more consumers in China choose to consume convenience food such as bottled milk during breakfast. Dairy companies have promoted the concept of “drink milk every day” and “milk plus eggs” breakfast campaigns, trying to develop milk-drinking habit among Chinese consumers.

Quite a number of respondents also indicated that they drink milk before sleep and as a way to quench thirst. (Exhibit 14)

Exhibit 14: Occasions of consuming packaged milk in selected cities, 2004

(% of respondents)

City	Sample size ('000)	Breakfast (%)	Lunch/ Dinner (%)	Thirsty (%)	Late-night snack (%)	Before sleep (%)	Work Break (%)	Travelling (%)	Others (%)
Beijing	4,630	78.8	3.7	11.2	3.6	32.1	4.1	2.1	0.3
Shanghai	5,716	69.5	2.9	19.6	7.7	45.2	8.5	1.9	0.5
Guangzhou	2,028	75.8	2.2	24.1	13.0	20.0	6.0	3.5	1.0
Shenzhen	2,443	67.9	6.4	23.2	8.4	20.0	15.0	5.6	0.2
Chengdu	1,560	83.0	1.2	15.8	3.2	14.1	2.8	4.9	0.2
Chongqing	1,159	75.1	2.0	13.0	5.8	30.1	2.7	3.8	0.0
Wuhan	1,733	60.4	6.6	13.1	6.5	32.7	13.7	3.9	0.4
Xi'an	1,423	81.1	4.4	10.8	4.1	31.8	2.8	4.6	0.3
Shenyang	2,009	64.6	6.1	19.9	5.2	37.1	6.2	3.2	0.5
Nanjing	1,330	51.9	8.2	13.9	3.3	31.4	12.0	5.6	0.7

Source: IMI Consumer Behaviors & Life Styles Yearbook 2004-2005

2. Milk powder

There are several kinds of milk powder in the market: baby milk powder, general milk powder and formula milk powder (cater to specific segments such as pregnant women and the elderly). Baby milk powder was the largest sub-sector (30%) in 2004.

(1) High market concentration with no distinct leader

Exhibit 15 demonstrates the brands share in the milk powder sector in 2004 and 2005. Market concentration was high with the top 10 brands accounted for over 80% of the market share.

Unlike the liquid milk sector which was dominated by domestic brands, several foreign brands such as Nestlè, Mead Johnson and Wyeth entered the top ten list in the milk powder sector.

Nestlè was the number one player in the milk powder sector but was facing increasing pressure from domestic brands such as Yili and Dumex.

Exhibit 15: Brand performance of milk powder: share of total sales and market coverage ratio, 2004 and 2005

Brand	2005		Brand	2004	
	* Share of total sales (%)	# National market coverage ratio (%)		* Share of total sales (%)	# National market coverage ratio (%)
Nestlé 雀巢	19.17	12.31	Nestlé 雀巢	24.83	11.80
Yili 伊利	14.13	9.97	Yili 伊利	11.92	9.62
Dumex 多美茲	12.29	8.75	Mead Johnson 美贊臣	9.99	4.36
Mead Johnson 美贊臣	11.93	5.29	Sanlu 三鹿	8.83	9.26
Sanlu 三鹿	9.96	7.93	Dumex 多美茲	8.24	6.99
Wondersun 完達山	6.57	7.22	Wondersun 完達山	6.55	8.98
Wyeth 惠氏	3.15	3.46	Wyeth 惠氏	4.13	3.27
Yashili 雅士利	2.20	2.14	Abbott 雅培	2.36	2.90
Shengyuan 聖元	2.15	3.05	Nanshan 南山	2.12	3.45
Feihe 飛鶴	1.36	3.05	Shengyuan 聖元	2.06	2.99
Others	17.09	36.83	Others	18.97	36.38

Source: China National Commercial Information Center (CNCIC)

* Share of total sales (%): Sales volume of the brand/ total sales volume

(sales volume refers to the total quantity sold of the product category by the surveyed retailers)

Market coverage ratio (%): Taking into the consideration that China is not a single market but a highly fragmented market composing of many localized market, CNCIC has compiled this ratio to measure the market coverage of a particular brand in the national market. For example, a brand with a low market coverage ratio tends to be a regional brand instead of a national one.

(2) Huge opportunities in the rural market

Transportation and cold storage system in China's rural areas are immature. Milk powder, with lightweight and longer shelf life, should be more favorable than liquid milk in these areas.

Along with increasing rural income and higher health awareness, the rural market has drawn increasing attention from milk powder producers. Indeed, Yili, Sanlu and QinYong (秦俑) are aggressively exploring opportunities in the rural markets. The fake milk powder scandals should also favour big-name players.

(3) Rosy prospect for the baby milk powder sector; foreign players fare well in the high-end segment

According to the China Dairy Industry Association, each year there are around 17 million newborn babies in China and each consumes 27.2 kg of milk powder per year on average. Along with increasing purchasing power of Chinese parents and the one-child policy, demand for high-grade baby milk powder is increasing. AC Nielson estimated that China will replace Japan and become the second largest milk powder market in the world within next 5 years. Hence, the market potential is immense.

Compared with the liquid milk sector, performance of foreign brands is much better in the baby milk powder sector. In the high-end segment, foreign brands such as Nestlè and Wyeth are the priority choice. Foreign brands have developed their image as trusted brands and enjoy relatively high customer loyalty. According to a recent AC Nielson survey over Chinese healthcare professionals, less than 20% would recommend domestic brands.

Nonetheless, the gap between foreign and domestic brands in the high-end baby milk powder sector is gradually narrowing as domestic brands such as Wondersun, Sanlu and Yili actively launch products targeting at the segment and improve on the nutrient contents, formula and branding. For instance, Sanlu has launched its high-grade infant milk powder in some first-tier cities.

In that low-end segment, retail prices of baby milk powder are reportedly to be only one-fifth of the high-end products; and the segment received little attention from foreign players. Domestic brands are popular, especially in the poorer rural regions.

China National Commercial Information Centre (CNCIC)

中華全國商業信息中心簡介

China National Commercial Information Centre, formerly under the Ministry of Internal Trade of PRC, is a reputable national statistics centre in commercial area. Authorized by the State, CNCIC is responsible for collecting, compiling, analyzing and releasing market data; and producing magazines, reports and numerous publications. One of the important functions of CNCIC is to provide support for the government officials and bodies in formulating macro-control policies in the commercial area.

CNCIC possesses a powerful database and data tracking system. Over 260 large-scale retail enterprises report their sales data and other detailed information to CNCIC every month. Apart from that, CNCIC also has special access to more than 5,000 commercial enterprises' yearly statistical and financial data.

With a wealth of market data, comprehensive coverage and well-developed information system, CNCIC is known for excellence in providing information-based solutions for enterprises, such as formulating strategic expansion plan and conducting marketing research on the Mainland.

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