

**REDFILE RESEARCH**  
 Premium research,  
 bridging world capital

# Fufeng Group

*Spicing up the portfolio*

Market Data	
52 Week High-Low	HK\$6.88/2.78
Shares Outstanding	1.7B
Market Capitalization	HK\$8.7B
Cash	RMB1.1B
Total Debt	RMB1.4B
Enterprise Value	RMB9.0B

Quick Notes	
Date: September 22, 2010	
Stock Ticker: 0546.HK – HKEx	

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Fufeng Group	
Recent price	1-year target
HK\$5.25	HK\$7.77

Consensus Recommendations	
Consensus Expected Return: 53.7%	
RedFile Recommendation	
<b>Buy</b>	
Expected Return: 48.0%	

## Executive Summary

Fufeng Group is a Chinese bio-chemical company that produces and sells monosodium glutamate (MSG) for the food industry and xanthan gum (XG) for the food, cosmetics, and oil exploration industry. Fufeng is China's largest producer of MSG with a 20% global market share, and one of the largest producers of XG with a 30% global market share.

Domestic MSG consumption is expected to grow 10% annually. The driver is the rapid growth of the food service sector, which has averaged over 20% in the last two decades. This impressive growth is the result of the rising middle class which finds itself with enough disposable income to eat out and frequent restaurants.

Management aims to double MSG production to one million tonnes by 2013 and capture 60% of the XG market, as Fufeng becomes the global leader in both industries. To meet its goals, the Company plans on building new plants in low-cost regions and using its high margins to stamp out competition.

Based on our forecast, we expect diluted EPS to grow by 7.1% and 11.2% in 2010 and 2011, respectively. Using a 4-year Discounted Cash flow (DCF) model with a 7.66% discount rate and 7x FCF terminal multiple, we value Fufeng Group at HK\$7.77, which reflects a 48% upside. Our valuation is supported by close regional comparables, as well as an intrinsic P/E value approach.

*"He who controls the spice, controls the universe!"*  
- Baron Vladimir Harkonnen, Dune

Business Overview

Fufeng Group (“Fufeng” HKEx: 0546) is a Chinese bio-chemical company that produces and sells monosodium glutamate (MSG), xanthan gum (XG), and various related byproducts. Fufeng is China’s largest producer of MSG with a 20% global market share, and one of the largest producers of XG with a global market share of 30%. Sales from the MSG segment contribute to over 90% of company revenue.

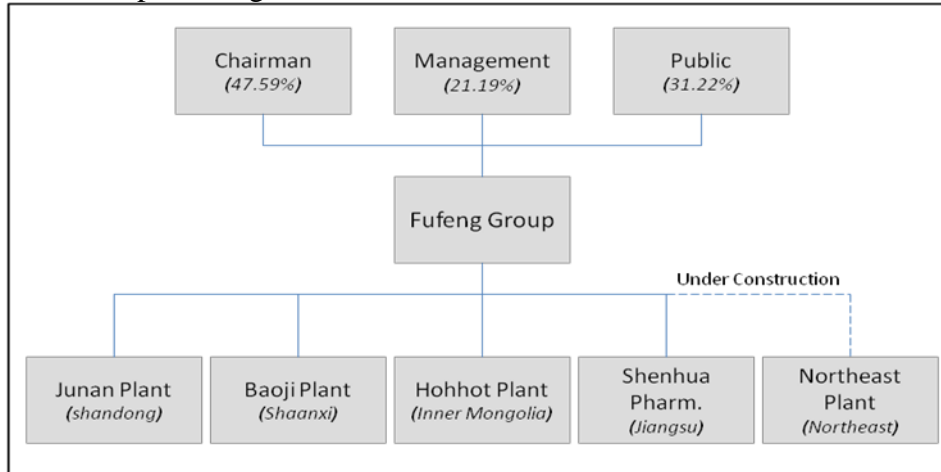
MSG is a food additive widely used in the food industry as a flavor enhancer. It is made from glutamic acid, which is usually derived from fermented sugar beet, sugar cane molasses, or corn syrup. The additive is used internationally in all types of foods, but is generally associated with Asian cuisine due to its origins. MSG is used in food including fast foods, processed foods, potato chips, snacks and bouillon cubes. Just as eating chocolate stimulates the sweet taste receptors on our tongue, eating foods seasoned with MSG stimulates the glutamate receptors, enhancing the savoury flavor of these foods. That bowl of instant noodles you survived on in college didn’t taste like cardboard because of the added MSG.

XG is produced by fermenting corn sugar. It is essentially a slimy, clear gel used in a wide range of industries whenever a gel-like quality is sought. In the food industry, XG is used in products such as yogurt, sour cream, and salad dressings to provide a consistent and thick quality. In cosmetic manufacturing, XG is used in cream-based products in order to keep the individual ingredients from separating. In the oil industry, water is often used as a lubricant for oil well pumps. Companies often add XG to the water to increase its thickness and keep drill parts lubricated.

Fufeng owns three production facilities located in Shandong, Inner Mongolia, and Shaanxi. A fourth plant is under construction in Northeast China, near Inner Mongolia and expected to be completed by the middle of 2011. In addition, Fufeng has taken preliminary steps into the drug and pharmaceutical field by acquiring a pharmaceutical company (Shenhua pharmaceuticals) which is currently only at the R&D stage and not expected to contribute to group earnings.

Figure 1 shows the ownership and organizational structure of Fufeng Group.

**Figure 1**  
Ownership and Organizational Structure



Source: Company

## The MSG Industry

Since 2006, China's MSG industry has undergone major consolidation as a result of both environmental concerns and competitive pressures. The Ministry of Environmental Protection forced smaller MSG producers to shut down because they didn't have the economies of scale to justify the amount of pollution and waste the factories produced. At the same time, these smaller producers didn't have the funds to invest in upgrading their facilities. Fufeng estimates that it costs between RMB50-100 million to upgrade a 100,000 tonne glutamic acid production facility to be in compliance with new environmental standards.

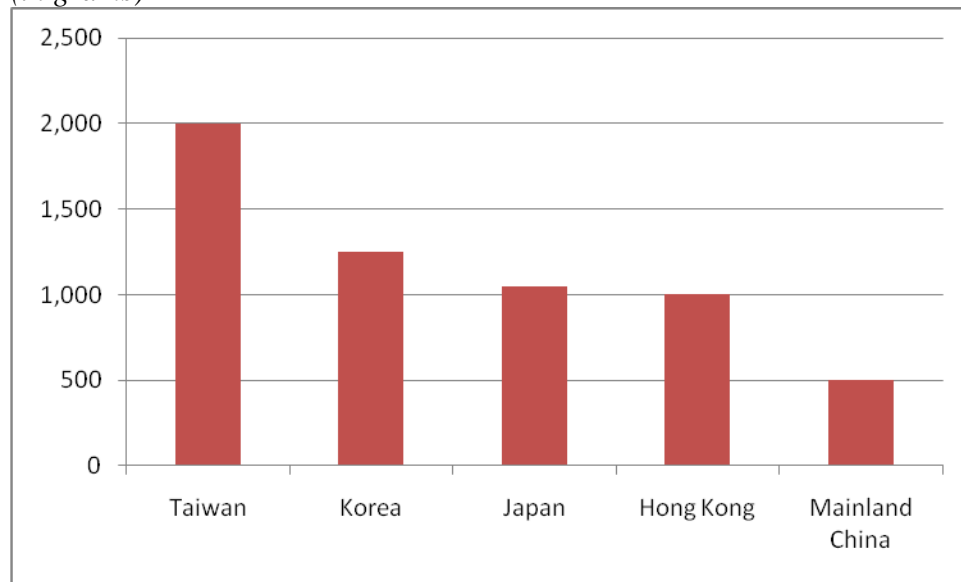
MSG companies that didn't produce glutamic acid weren't any better off. They were forced to either invest in their own production facilities or buy the key ingredient from larger producers such as Fufeng. On one hand, Fufeng estimates the costs to construct a 100,000 glutamic acid facility to be in the neighbourhood of RMB450 million, which wasn't an option for most small scale producers. On the other hand, buying glutamic acid from third parties cut into margins, making smaller companies uncompetitive and forcing them to close up shop.

By its own estimates, Fufeng believes there to be 20 MSG companies left in China, with the top two (Fufeng and Meihua Group) supplying 45% of the domestic market. Fufeng alone accounts for 25% of the domestic and 20% of the international market. The Company expects further consolidation in the coming years as the number of domestic players are reduced to five. This expectation is in line with the central government's recent announcement that polluting MSG producers with a combined capacity of 190,000 tonnes will be forced to shut down or upgrade by 2011.

## *Demand*

China is by far the largest producer and consumer of MSG, accounting 73% and 67% of global production and consumption in 2009, respectively. To put that number in perspective, China was responsible for 1.7 million of the 2.4 million tonnes of global consumption in 2009. Even by those statistics, there is still a lot of room to grow on a per capita basis. As Figure 2 shows, China consumes less MSG than any other country/territory in the region.

**Figure 2**  
Per Capita Consumption of MSG in Asia  
(in grams)



Source: China Fermentation Industry Association

Management expects domestic MSG consumption to grow 10% annually. The driver is the rapid growth of the food service sector, which according to the Ministry of Commerce has averaged over 20% in the last two decades. This impressive growth is the result of the rising middle class which finds itself with enough disposable income to eat out and frequent restaurants. Looking ahead, China wants its restaurants and catering industry to achieve yearly average growth of 18% through 2013 according to guidelines released by the Ministry of Commerce. The Ministry expects the catering industry to be a consumption driver, which will support tertiary industries including farming, livestock breeding, and food processing.

To realize its growth objectives, the guidelines call for building 800 staple food processing and distribution centers, and the opening of 160,000 chain breakfast outlets. As incentive, restaurants serving the middle class are likely to see a reduction in their power and water bills. The Ministry's incentive program aligns with the central government's overall plan to move to a more consumption-based economy. This rings a positive note for the MSG industry since the use of MSG is mostly prevalent in cheap and processed foods.

## *Supply*

On the supply side, Fufeng nearly doubled its MSG production capacity from 280,000 tonnes in 2008 to 540,000 tonnes in 2009. Most of this supply replaced lost production from smaller players that were sidelined during consolidation. However, when the construction of the Northeast plant is completed in the second half of 2011, it will provide the Company with 200,000 tonnes of additional capacity. The Company also plans to move along the value chain and use all of its glutamic acid in-house for the production of MSG. This move is expected to increase Fufeng's output of MSG by 260,000 tonnes as management aims to reach its production goal of one million tonnes by 2013. That means that between 2011 and 2013, Fufeng will increase the MSG supply by 460,000 tonnes, or 20% of current global demand. At the same time, it's safe to assume major competitors will also be moving to increase their own capacity. Even with management's assumption of 10% domestic growth, these moves will likely result in material over-supply and temporary price pressure in the market.

Management tells us they do not believe that any price pressures will be material or permanent. They expect that when the industry has been reduced to four or five suppliers, an oligopoly will emerge, and Fufeng will use its leadership position in the industry to set prices. At least, that's the plan. As a basis, management points to Taiwan, where industry consolidation left only a single player, Vedan International, as the dominant supplier and price leader.

However, there are considerable differences between the Taiwanese and Chinese markets, and between Vedan and Fufeng. The most obvious is that Taiwan's market is considerably smaller than China's. Management is comparing a market of 23 million people to one of 1.3 billion. The likelihood that Fufeng will be able to corner the Chinese market is questionable. Then there is the issue of margins. Vedan's gross profit margin is only about 18%, whereas Fufeng's margin is closer to 25%. The higher margin lends itself to competition. Overall, we question the extent to which Fufeng will have control over prices when added production comes on-line from all sides post-2011.

## **Revenue and Production Forecast**

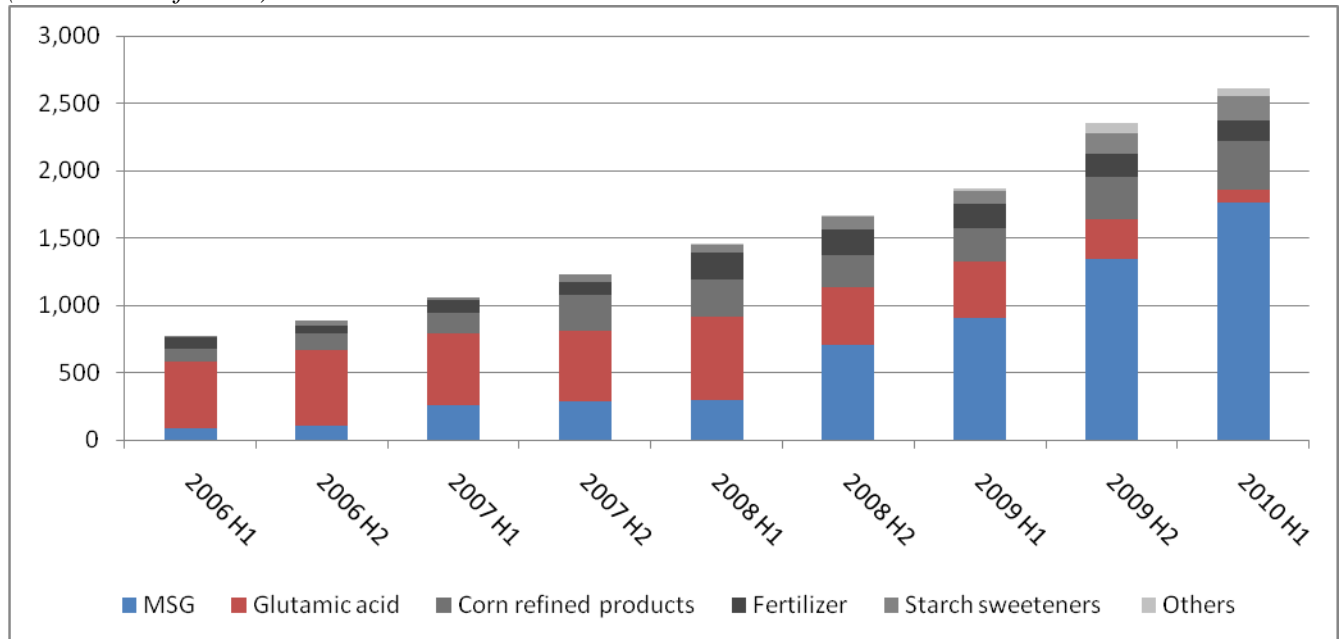
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Fufeng reports two business segments, the MSG segment which comprises about 93% of revenues, and the XG segment which makes up the balance.

### *MSG Segment*

The MSG segment includes revenue from MSG and related byproducts, including fertilizer and corn oil. As Figure 3 illustrates, MSG has become an increasingly larger portion of sales for the segment. This is primarily the result of management's strategy to move up the value chain and use glutamic acid in-house instead of selling it to external customers.

**Figure 3**  
MSG Segment Revenue Mix  
(in millions of RMB)



Source: Company reports

MSG segment revenue increased by 35% to RMB4.2 billion in 2009. The trend continued in the first half of 2010 with year-over-year growth of 39%. Increased production capacity and higher realized prices due to a move from glutamic acid to MSG have continued to be the primary growth drivers.

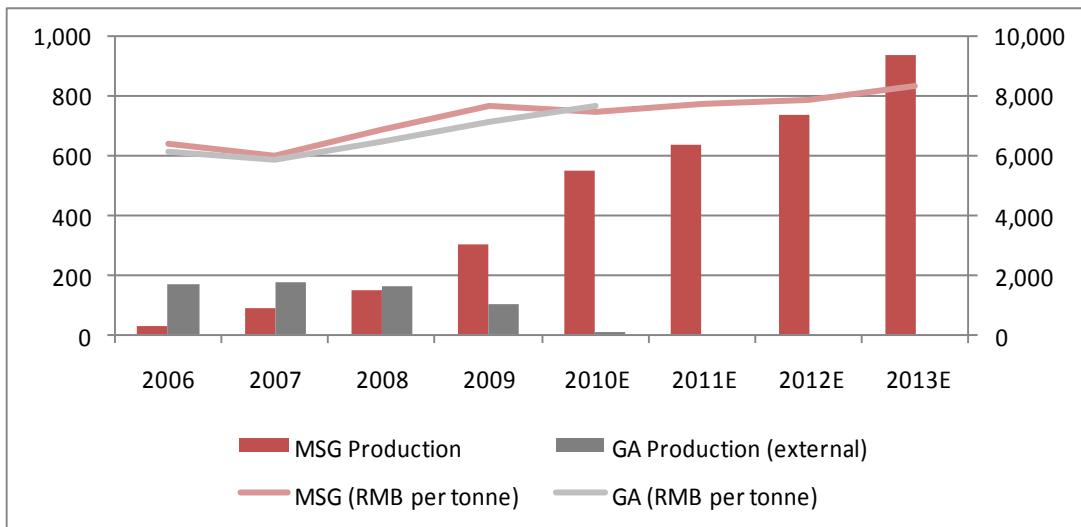
### ***Production Capacity***

Fufeng doubled its production capacity in 2009 to 540,000 tonnes, thanks partially to the construction of a new production line with an annual capacity of 150,000 tonnes at the Inner-Mongolia plant. Management has targeted production capacity of one million tonnes by 2013, as it seeks to expand its market share and establish itself as the undisputed global leader in MSG production. To reach its goal, Fufeng will likely rely on new capacity from the Northeast plant and utilize all of its glutamic acid in the production of MSG. We also suspect the Company will look to expand capacity in 2012 with the construction of a new production line to attain its target. Figure 4 shows our expected annual MSG and production through 2013. Note that we expect the sale of glutamic acid to external customers to end in 2010 as it is diverted in-house.

**Figure 4**

Production and Selling Price of MSG, Glutamic Acid

(left axis: production in thousands of tonnes, right axis: RMB per tonnes)



Source: Company reports, RedFile Research estimates

### ***Average Selling Price***

In 2009, the average selling price of MSG and glutamic acid shot up by over 10%. This was mainly the result of a temporary price spike in the fourth quarter as smaller producers were shut down, creating supply disruptions. Prices have since returned to more normal levels. In our price forecast, we weighed the possibility of oversupply against Fufeng’s price leadership position, and general commodity prices. For example, in 2012, we expect material oversupply as new production from Fufeng and its competitors comes on-line. At the same time, we expect this capacity to be mitigated by demand growth in the food industry and increases in raw materials as the economy recovers robustly coupled, with Fufeng’s historically high inflation pass-through rate.

### ***Other MSG Segment Products***

Fufeng sells the byproducts at each step of its production process. These products include refined corn products, fertilizer, and starch sweeteners. Although these byproducts contributed to 30% of segment revenue in the first half of 2010, we expect that figure to decline going forward as MSG sales make increasingly larger contributions to the top line.

- **Fertilizer** – current fertilizer capacity is 560,000 tonnes. We expect this figure to rise proportionally as Fufeng expands its corn processing capacity, creating byproduct.

For our price forecast, we have turned to Hanfeng Green, a major fertilizer company in China. Hanfeng has seen fertilizer prices decrease by approximately 10% in the first quarter of 2010, but expects prices to stabilize going forward with support from a

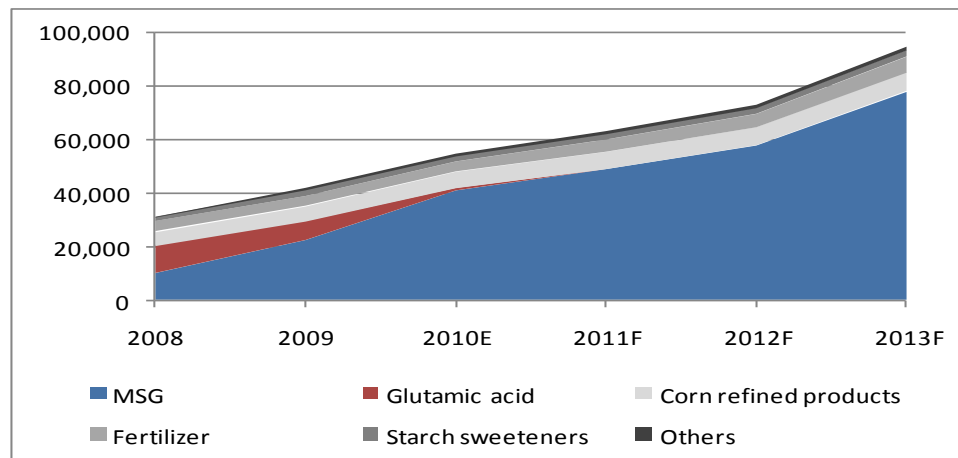


recovering domestic commodities market. We can find no evidence to the contrary and have incorporated this outlook into our fertilizer pricing model.

- **Starch Sweeteners** – production capacity for this product is fully utilized at 100,000 tonnes annually. We see no plans for further expansion of this division line as the industry is well established and it is not part of management’s long-term vision.
- **Corn Refined Products and Others** – this includes various byproducts of corn. Due to its residual nature, it is difficult to apply ‘production capacity’ and selling price to this division in any given year as it highly depends on the overall manufacturing process, salvageability, and marketability. However, this division has remained relatively stable, and we have modeled it as such going forward.
- **Threonine** – In the first half of 2010, Fufeng constructed a new 5,000 tonne Threonine production line in its Inner Mongolia plant. A second line with an additional 5,000 tonne capacity will be completed in 2011. Threonine is an essential amino acid found in cottage cheese, fish, and flax seed, which maintains the body’s protein balance and promotes cell growth. As a chemical, it is mainly used in medicine, foods, and as a feed additive. While mass production has already started in the finished production line, sales numbers are not yet available. However, management is confident demand for this product will be high and margins lucrative. Regardless, lacking any concrete data, we have left this product line out of our model. Consider it a kicker.

Figure 5 shows our sales projections for the MSG segment based on the above analysis. We expect revenue to grow by 30% to RMB5.5 billion in 2010, and double from current levels by 2013. Through this modeling period, we expect the primary growth driver to be Fufeng’s ability to capture market share, and expand capacity.

**Figure 5**  
MSG Segment Revenue Forecast  
(in billions of RMB)



Source: Company reports, RedFile Research estimates

### ***XG Segment***

XG sales declined by 9.7% in 2009, which resulted from the drop in global drilling and exploration activities. However, in the first half of 2010 year-over-year revenue more than doubled as sales volume increased 127%. Management attributes the impressive growth to recovery in oil drilling activities, general market conditions, and strong marketing efforts. Globally, Fufeng currently holds about 40% market share and is one of the top three players in the XG market. Leveraging its lowest-cost production, the Company hopes to capture 60% of the XG market in the coming years. While we don't believe two-fold sales growth is sustainable, nor do we expect it to be repeated, we do believe Fufeng has the margins to cut deep into any competitor's market share and take the helm as the global leader in the market.

### ***Production Capacity***

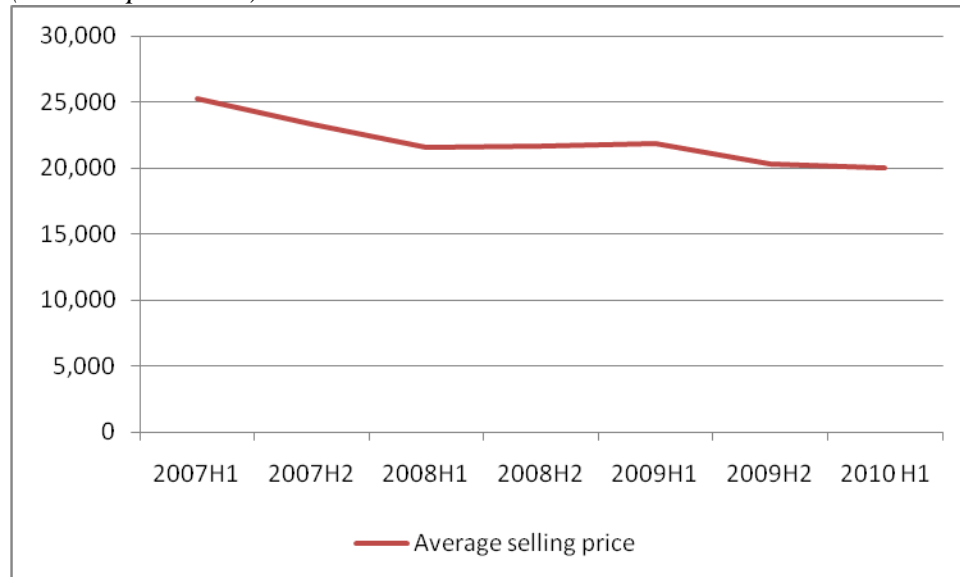
Fufeng has the capacity to produce 44,000 tonnes of XG thanks to a 12,000 tonne expansion at its Inner Mongolia plant that came on-line this year. 44,000 tonnes is equal to half the world's production capacity. With utilization rates at 83% in the first half of 2010, we believe the Company has the means to reach full capacity in the coming years. However, most of that will depend on market penetration and pricing.

It should be noted that Fufeng sells 88% of its XG output to the international market, and as a result, the segment is sensitive to movements in global macro factors, including GDP growth and oil exploration activities. While China may have escaped the global recession unscathed, the same can't be said for the international markets that are teetering on a very fragile recovery. If Fufeng wants to capture 60% of the market in the current environment, it needs to do so by reducing prices, undercutting competitors, and giving the market a reason to switch.

### ***Average Selling Price***

For Fufeng, the answer lies in its margins. In the first half of 2009, the gross profit margins of the XG segment was 35.1%. Following the commencement of operations at the lower cost Inner Mongolia plant, the margins increased to a lofty 39.2%. With its major competitors situated in the West where production costs are higher and margins are lower, Fufeng has ample room to cut prices and capture the market. Currently, the average selling price of XG is approximately RMB20,000 per tonne, as illustrated in Figure 6. Over the coming years, we expect the price to continue to drift downwards to the RMB19,000 level as Fufeng further penetrates the market.

**Figure 6**  
Average Selling Price of XG  
(in RMB per tonne)

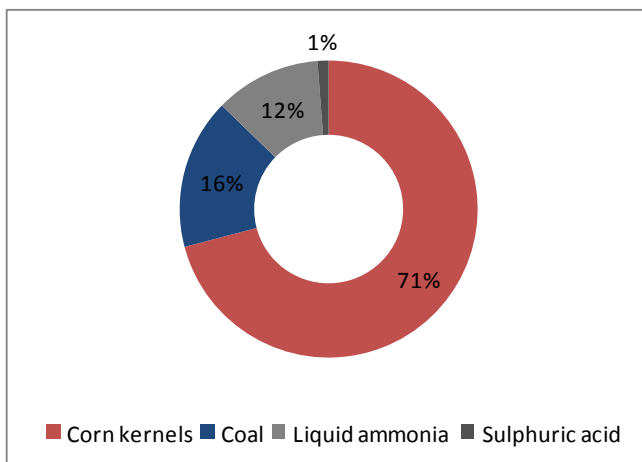


Source: Company reports

## Costs of Production

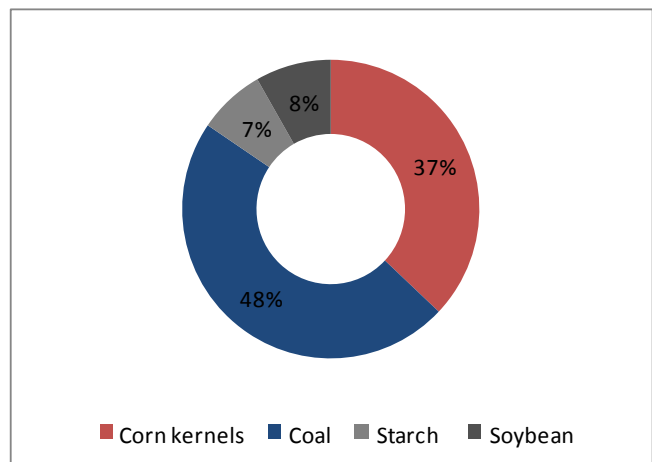
The cost of raw materials account for 81% of Fufeng’s total production costs, with the balance comprising of depreciation, employee benefits, and other expenses. Of that 81%, corn and coal account for 69% and 19% of costs, respectively. Figures 7 and 8 show the breakdown of material costs used in the production of MSG and XG.

**Figure 7**  
Breakdown of MSG Costs (2009)  
(in percent)



Source: Company reports

**Figure 8**  
Breakdown of Xantham Gum Costs (2009)  
(in percent)

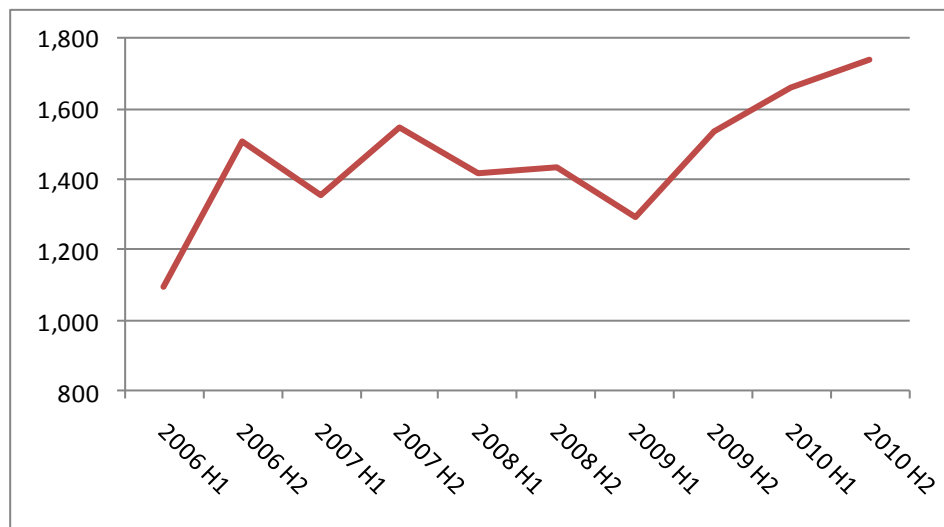


Source: Company reports

## Corn

Domestic corn prices decreased between the peak of 2007 through the first half of 2009, as the recession led to a fall in commodity prices. Since then, corn prices have recovered along with the global economy. In the second half of 2010 prices hit a new high of RMB1,755 per tonne, as shown in Figure 9.

**Figure 9**  
Average Price of Corn Kernels  
(in RMB per Tonne)



Source: Company reports

Overall recovery aside, there were several reasons for the rise in prices, specifically (i) land constraints, (ii) a bad harvest season last year, (iii) rising living standards, and (iv) speculators. The affects of land constraints are self-explanatory, and good/bad harvest seasons are a fact of life. Focusing on living standards, a growing number of middle class are including larger portions of meat in their diet. As a result, China's need for livestock feed almost becomes a political imperative to keep meat consumption available. To tackle these issues and keep prices stable, China has been forced to import large quantities of corn from the US. Given China's policy of self-sufficiency, this move shows an increasing concern over rising prices. More recently, the central government urged local governments to develop wholesale and retail vegetable markets, and map out programs to cope with emergency supplies. Banks and other financial institutions were also told to step up lending to agricultural companies for expansion projects.

Adding to the demand and land-constraint mix are speculators. The government's resolve to curb the real estate market has pushed liquidity to the commodities market. To tackle this problem, the government has placed stricter rules on auctioning state inventories to prevent hoarding. Additionally, the government has vowed to punish profiteers.

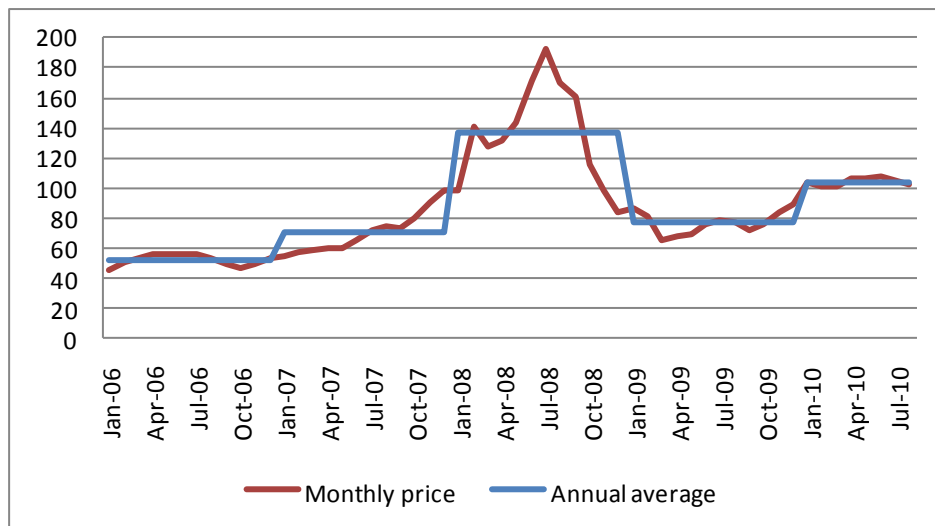
Looking into 2010 and 2011, we expect corn prices to increase modestly. According to the China National Grain and Oils Information Center (CNGOIC), a commodities think tank, China may be in line for a record corn yield of 168 million tonnes this year. That is more than their estimates of 164 million tonnes in 2009, and well above China’s consumption needs of 150 million tonnes. However, it should be noted that the CNGOIC is a government entity and as such, is politically motivated to express optimism in its forecasts. According to Shanghai JC Intelligence, a private consulting firm, last year’s harvest was only 140 million tonnes which led to the price hikes. The firm expects output to increase to 150 million tonnes this year to match demand. There are some promising signs that the optimism is warranted, including better weather in the northeast and expanded corn acreage from farmers encouraged by higher prices.

Still, Fufeng’s sensitivity to the price of corn should not be underestimated. In the first half of 2007 and only months after its IPO, the Company issued a profit warning due to high corn costs. The result was one of the worst performing Hong Kong listed IPO’s of 2007. With the growing demand for corn and feedstock, there is nothing to say it won’t happen again. The fact that China has become a net importer of corn speaks volumes to supply constraints.

### Coal

Coal is king in China, providing 70% of the country’s energy requirements. In 2007, China’s domestic supply was not able to keep up with demand, and for the first time, China became a net importer of coal. In fact, the IMF estimates China will overtake Japan as the largest importer of coal this year. China’s voracious demand, coupled with the recovery of the global economy and renewed demand from South Korea, Japan and India, have driven up international and domestic prices. Figure 10 shows the price of Australian thermal coal, a benchmark for Asian coal prices.

**Figure 10**  
 Australian Thermal Coal Prices  
 (in US\$ per tonne)



Source: IMF

However, despite the headline statistics and 20% price gains over last year, we believe any further increases will be muted going forward. Our reasoning is based on several short and long-term factors. On June 25, 2010, the National Development and Reform Commission (NDRC) issued a notice asking some of China's major coal miners to keep contract coal prices steady to curb inflation as China enters the peak electricity use season of summer. The notice essentially amounts to a de-facto price cap which paves the way for further control measures should the price of coal continue to rise.

Looking further ahead, market fundamentals may be yet another reason to expect coal prices to have limited upside. The BP 2009 Review estimates that China consumed 1.4 billion tonnes of coal in 2008 and demand is expected to grow by about 5.5%. According to the China National Coal Association, over the last four years fixed asset investments in China's coal mining and processing industry reached US\$128 billion, and by 2015, China plans to open 20 new coal mines with a combined annual output of approximately 500 million tonnes. After crunching the numbers, demand is projected to increase 637 million tonnes by 2015, leaving a shortfall of 137 million tonnes which is already being balanced by imports. With the short-term market capped, and the long-term market expected to be at equilibrium, we believe price appreciation will be moderate.

## **Margin Talk**

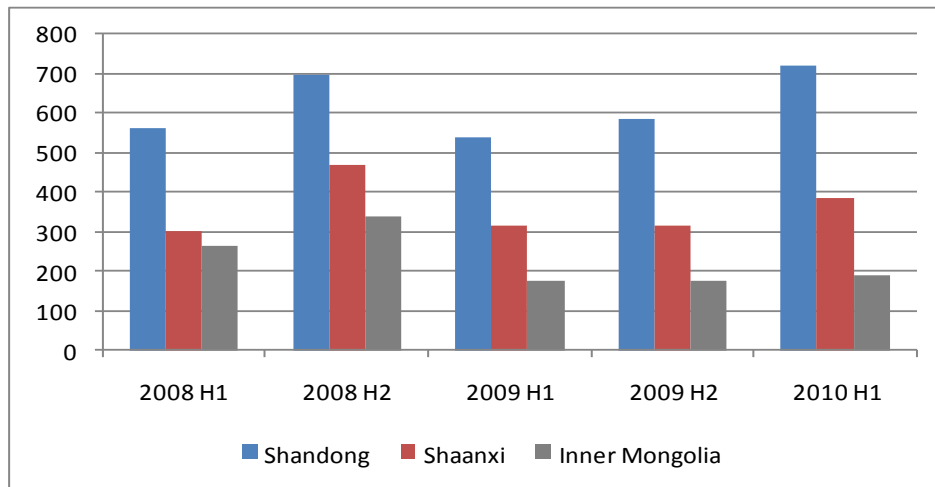
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Fufeng is in the commodities business which means that all the bells and whistles aside, success really comes down to being the lowest-cost producer. To that end, Fufeng has focused on sourcing raw material from the cheapest parts of China. So far the efforts appear fruitful.

Geographically, over 50% of China's MSG production facilities are located in Shandong province. By contrast, Fufeng has production facilities in Shandong, Shaanxi, and Inner Mongolia with capacity of 80,000 tonnes, 100,000 tonnes, and 360,000 tonnes. When the Northeast plant bordering Inner Mongolia is constructed, less than 11% of Fufeng's production capacity will be located in Shandong – and this is exactly where the cost advantage comes into play.

Historically, corn prices in Shandong have been 7% to 8% higher than Shaanxi and Inner Mongolia. The price difference is mainly related to wage costs in Shandong province. Coal is also cheaper in Shaanxi and Inner Mongolia. While wages play a part, they don't fully explain the gapping difference in coal prices between the provinces, as illustrated in Figure 11. The large disparity in price is primarily the result of geographical supply and demand. Shandong's proximity to the densely populated eastern markets puts heavy price pressures on its coal. By contrast, Shaanxi and Inner Mongolia have an abundant supply of coal but relatively light demand, making prices 45% to 60% cheaper.

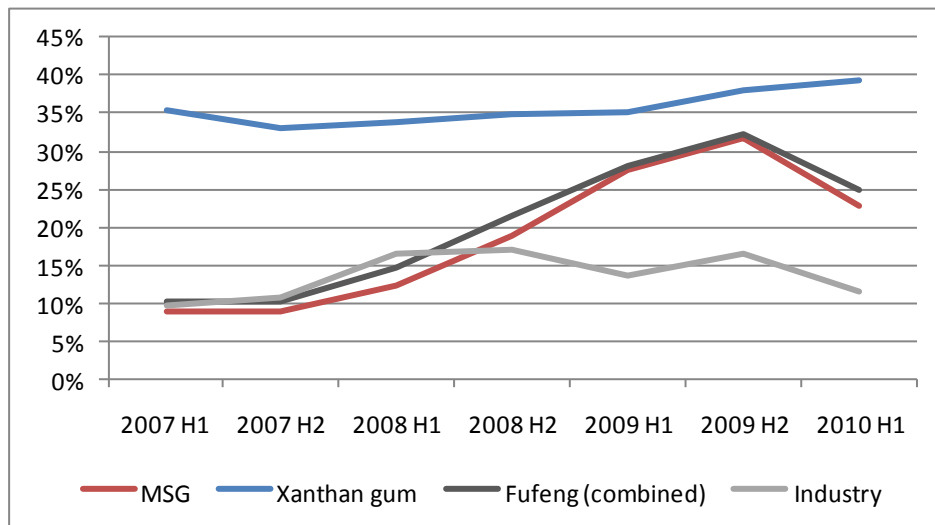
**Figure 11**  
 Cost of Coal by Location  
 (in RMB per tonne)



Source: Company reports

These cost advantages have given Fufeng much higher margins than the industry, as shown in Figure 12. Since its shift from glutamic acid to MSG production in 2008, Fufeng’s margins have been 10% to 18% higher than the industry average. Management believes that once its Northeast plant is operational, ‘normal’ margins should be between 25% and 30% percent. However, we expect company margins to be closer to 25% to 27% as input costs rise and competition intensifies.

**Figure 12**  
 Fufeng and Industry Margins



Source: Company report, China Statistics Bureau

## Valuation

## Revenues and Gross Profit

Based on our analysis, we expect revenue to grow 33.7% and 14.8% in 2010 and 2011, respectively. We also expect revenue to nearly double from current levels by 2013 as Fufeng becomes the world's largest MSG and XG producer.

**Figure 13**

Sales and Gross Profit Forecast

(in RMB 000's)

	2009	2010E	2011F	2012F	2013F
MSG segment sales	4,224,760	5,502,974	6,346,051	7,331,682	9,503,484
XG segment sales	408,124	689,500	764,400	860,000	860,000
Total sales	4,632,884	6,192,474	7,110,451	8,191,682	10,363,484
MSG - gross profit margin	29.6%	24.2%	24.7%	25.2%	24.8%
XG - gross profit margin	36.5%	38.5%	37.5%	37.5%	38.0%
Gross profit	1,399,607	1,597,177	1,854,125	2,170,084	2,683,664

Source: RedFile Research estimates, Company reports

Looking at gross profit margins, we expected ratios from the MSG segment to drop to the 24-26% range. Management insists that production from the Inner Mongolia and Northeast plants will handsomely expand margins. However, we are concerned with rising corn prices. Accordingly, we expect industry margins to decrease while Fufeng's margins stay relatively stable from the trade-off. We do however expect XG margins to stay lofty given the economies of the new Inner Mongolia production line and stable input costs.

## Expenses

### Debt Issues and Financing Costs

Fufeng issued RMB1 billion of convertible bonds in April, 2010. The Bonds were 1.5 times oversubscribed with a coupon rate of 4.5% per annum, and are convertible any time between now and March 2015. The conversion price is HK\$7.03 per share, which represents a 25% premium over the current market price. Full conversion of the bonds will represent 166 million shares, approximately 10% of the existing shares outstanding.

Proceeds from the offering were used to meet the Company's capital expenditure requirements in 2010. Management expects expenditures of RMB1.2 billion this year, which includes financing



the expansion at the Inner Mongolia plant, construction of the Northeast plant, and upgrading existing facilities.

Looking forward, management has stated they also expect to produce 1 million tonnes of MSG by 2013. Even with the completion of the Northeast plant in 2011, we still see a shortfall of approximately 250 million tonnes. Accordingly, we believe Fufeng may issue another RMB1 billion worth of notes in early 2012 for additional financing.

The most recent round of financing brought the debt/equity ratio to 1.03 from 0.78. It also brought the interest coverage ratio down to 19x from 42x. Assuming a second round of financing at a conservative 100 basis point increase in credit spread over the first issue, we estimate the interest rate coverage ratio will drop to 10x, which is still considered very high quality by any manufacturing rating standard. Accordingly, we believe Fufeng has the capacity to take on new debt and to easily service the debt.

In our model, we have ignored the dilutive quality of the convertible bonds in favour of the coupon expense.

### ***Income Tax***

Prior to 2008, corporate taxes were governed by the Enterprise Income Tax Provisional Regulations which stipulated a tax rate of 25% unless a lower tax rate was accepted by law under a self-governing or special economic region. Effective January 1, 2008, a new tax law was approved by the State Council which will converge the tax rate of all regions to the national rate by 2012, as illustrated in Figure 14.

**Figure 14**  
New Tax Rates

	2008	2009	2010	2011	2012
Effective tax rate	18%	20%	22%	24%	25%

Source: Government of PRC

Under the new law, certain companies that qualify as a ‘high-tech enterprise’ are exempt from convergence and will continue to be taxed at 15%. To qualify, Fufeng must apply for the status on a plant-by-plant basis.

*Inner Mongolia plant:* under a policy called ‘Open up the West’ the Chinese government initiated an investment project in the western region of the country in an attempt to boost economic development and growth. Part of this policy includes giving qualifying businesses a 7.5% tax rate. The Inner Mongolia plant currently enjoys this tax rate, but it is set to expire in December, 2010. At the same time, the plant has qualified for high-tech enterprise status and will only have to pay 15% in taxes when the Western China policy expires. Moreover, the plant receives a 50% tax holiday until the end of 2011, effectively giving it a 7.5% tax rate until that time.

*Shandong and Shaanxi plants:* both plants have qualified for the high-tech enterprise status and will continue to enjoy a 15% tax rate.

*Northeast plant:* Management plans to apply for high-tech enterprise status for this plant when it is constructed. Given its similarities and location relative to the Inner Mongolia plant, we believe the application will be successful and the plant will fall under a 15% tax rate.

**Figure 15**  
Effective Tax Rates

	2009	2010E	2011E	2012E	2013E
Inner Mongolia plant	7.5%	7.5%	7.5%	15.0%	15.0%
Shandong plant	15.0%	15.0%	15.0%	15.0%	15.0%
Shaanxi plant	7.5%	15.0%	15.0%	15.0%	15.0%
Northeast plant	-	-	15.0%	15.0%	15.0%
Effective tax rate	9.3%	10%	11.8%	15.0%	15.0%

Source: Company reports, RedFile Research estimates

Based on the above analysis we have forecasted Fufeng's earnings through 2013, as shown in Figure 16. Management told us they are aiming to produce RMB9 billion in sales and RMB1.6-1.8 million in earnings by 2012-2013. Our forecasts hit the lower end of that range, and remains fairly conservative. We have forecasted diluted earnings of RMB0.60 and RMB0.67 in 2010 and 2011, respectively. Additionally, we expect net income to grow at CAGR of 15.7% through 2013.

**Figure 16**

Earnings Forecast

(in RMB 000's, except EPS figures)

	2009	2010E	2011F	2012F	2013F
Revenue	4,632,884	6,192,474	7,110,451	8,191,682	10,363,484
Cost of sales	(3,233,277)	(4,595,297)	(5,256,326)	(6,021,598)	(7,679,820)
Gross profit	1,399,607	1,597,177	1,854,125	2,170,084	2,683,664
Other income	63,908	115,794	134,358	155,477	197,717
Selling and marketing expenses	(215,715)	(260,084)	(312,860)	(360,434)	(455,993)
Administrative expenses	(194,910)	(272,469)	(291,542)	(311,950)	(333,786)
Other operating expenses	(4,042)	(4,000)	(5,000)	(6,000)	(8,000)
Operating profit	1,048,848	1,176,418	1,379,081	1,647,178	2,083,601
Finance costs	(25,251)	(55,871)	(69,339)	(121,529)	(123,719)
Profit before income tax	1,023,597	1,120,548	1,309,742	1,525,649	1,959,882
Income tax expense	(95,312)	(112,055)	(154,177)	(228,847)	(293,982)
Profit for the year	928,285	1,008,493	1,155,565	1,296,801	1,665,900
EPS	0.56	0.61	0.70	0.78	1.00
<b>Diluted EPS</b>	<b>0.56</b>	<b>0.60</b>	<b>0.67</b>	<b>0.75</b>	<b>0.94</b>
Basic S/O	1,660,000	1,660,000	1,660,000	1,660,000	1,660,000
Diluted S/O	1,661,249	1,686,899	1,712,944	1,739,392	1,766,248

Source: RedFile Research estimates, Company reports

We have used a discounted cash flow (DCF) model as our primary tool in valuing Fufeng. Additionally, we have also valued Fufeng on a P/E basis against its peers to test the reasonableness of our DCF valuation.

## **Adjustments and Inputs**

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### ***Capital Expenditures***

Management has stated that over the coming years Fufeng will strive to be the dominant MSG and XG producer in the world with sales at twice the current level. Those are lofty goals, and lofty goals require lofty investments, particularly in plants and equipment. But it's not only manufacturing equipment that Fufeng needs to invest in – the same environmental policies that shut down Fufeng's competitors are also forcing the Company to spend ever more money on meeting the Ministry of Environment's stringent standards on emission and waste water requirements. In 2010, management plans on spending RMB1.2 billion on capital. In the first half of 2010, the Company spent RMB500 million on expansions, meeting environmental regulations, and maintenance. In the second half of 2010, the balance will be spent. Management also expects to spend a minimum of RMB600 million in any given year on capital expenditures, both for maintenance and expansion. Figure 17 shows our capital expenditure forecast through 2013.

**Figure 17**  
Capital Expenditure Requirements  
(in RMB 000's)

	<b>2010E</b>	<b>2011F</b>	<b>2012F</b>	<b>2013F</b>
Capital Expenditures	1,200	600	1,000	700

Source: RedFile Research estimates

### ***Weight Average Cost of Capital***

We have used the CAPM model to find an adequate discount rate for our DCF model. All the necessary numbers are readily available to calculate the WACC, except for Market Risk as it pertains to China.

**Figure 18**

WACC Data

Market risk premium	6.35%
Adjusted beta	1.02
Risk-free rate	2.73%
Debt/Total capital	34.56%
Cost of equity	9.21%
Cost of debt	4.74%
WACC	7.66%

Source: RedFile Research estimates, Bloomberg

To calculate the appropriate market risk premium, we took China's country rating from Moody's (A1), and applied it to the sovereign bond market to estimate a spread for that rating. China does not have a significant sovereign bond market, so we have used Chile as a proxy. Chile has the same rating as China and recently sold US\$1 billion of 10-year bonds at a yield of 3.89%, or 90 basis points above comparable US notes. The 90bps is the risk spread required for A1 rated countries such as China. However, this only measures the country's default spread on bonds and not the country's equity risk premium, which is likely to be greater. To adjust our country risk premium, we have assumed that the equity market is 1.5 times more volatile than the bond market and accordingly, have increased our country risk premium to 1.35%. Adding this premium to the equity market of the US (historically 5%), we calculate China's market risk premium at 6.35%. Accordingly, we derive a WACC of 7.66% using the CAPM model which we use as the discount rate.

### *Terminal Value*

We have applied a free cash flow (FCF) multiple to the terminal value, which we believe does a better job of capturing Fufeng's long-term growth potential than a perpetual growth model. To arrive at our FCF multiple, we looked at what multiple Fufeng is trading at. Currently, the market values Fufeng at approximately 8.5x 2009 FCF. Since lower growth is implied in later years – along with lower multiples – we have applied a 7x FCF multiple to our terminal value.

### **Discounted Cash Flow Target Price**

Figure 19 shows our DCF valuation. Based on our above inputs and analysis, we derive a one-year target price of HK\$7.77. This implies a 48% upside from the current market price of HK\$5.25. Moreover, approximately 67% of the Fufeng's value lies in its terminal component, which we believe implies moderate risk.

**Figure 19**  
Discounted Free Cash Flow Estimates  
(in RMB 000's)

	2010E	2011F	2012F	2013F	Terminal
EBIT	1,176,418	1,379,081	1,647,178	2,083,601	
Taxes	(117,642)	(162,339)	(247,077)	(312,540)	
Depreciation expense	247,699	284,418	327,667	414,539	
Amortization of leasehold	3,963	4,551	5,243	6,633	
Employee share options	24,093	33,971	46,541	60,968	
Change in NWC	(29,917)	(21,159)	(95,886)	115,184	
Operating cash flow	1,304,614	1,518,523	1,683,666	2,368,386	
Capital expenditures	(1,200,000)	(600,000)	(1,000,000)	(700,000)	
Free cash flow	104,614	918,523	683,666	1,668,386	
PV of cash flows	54,444	822,222	568,428	1,288,430	9,0190,010
Sum of PV	5,676,548				
Cash	1,086,637				
Debt	(1,414,977)				
NPV	15,348,208				
					Discount rate: 7.66%
					Terminal FCF multiple: 7x
Value Per Share (HK\$)	<b>7.77</b>				

Source: RedFile Research estimates

### *Sensitivity Analysis*

To measure the robustness of our model, we have performed a sensitivity analysis of our discount rate and terminal multiple, as illustrated in Figure 20.

**Figure 20**

Sensitivity Analysis

		Terminal FCF multiple				
		6	6.5	7	7.5	8
Discount rate	9.66%	6.48	6.89	7.30	7.71	8.12
	8.66%	6.68	7.1	7.53	7.95	8.38
	7.66%	6.89	7.33	7.77	8.2	8.64
	6.66%	7.11	7.56	8.02	8.47	8.92
	5.66%	7.34	7.81	8.28	8.75	9.21

Source: Redfile Research

We can see from the table that while the discount rate has only a small affect on overall valuation, the terminal multiple has a much larger affect. Looking closer at the terminal multiple, we see that our sensitivity analysis spans a range of +/- 14% while the change in value is limited to a range of +/-11%. Accordingly, we believe this speaks to the strength of our model.

Finally, we need to consider how reasonable our DCF valuation is. On a P/E basis, our target price implies 10.5x next year’s earnings. Is that reasonable? To answer the question, we have to compare it to the industry.

## Peer Comparables

Figure 21 shows a table of Fufeng’s closest comparables, all companies that produce MSG as their primary line of business.

**Figure 21**  
Peer Comparables

	Listing	Net income (HK\$)	Market cap	3-year ROE	Yield	P/E
Vedan International	Hong Kong	18M	959M	6.3%	7.0%	6.9
Wei Chuan Food	Taiwan	702M	17.4B	15.6%	1.8%	24.7
Ajinomoto	Japan	1.49B	53.0B	1.9%	1.9%	-
Henan Lotus	Shanghai	216M	6.7B	17.6%	0.0%	31.2
<b>Average</b>	-	<b>606M</b>	<b>19.5B</b>	<b>10.3%</b>	<b>2.7%</b>	<b>20.9</b>
Fufeng	Hong Kong	928M	8.6B	19.6%	4.7%	8.6

Source: RedFile Research, Financial Times

The average P/E ratio among the comparables is 20.9, much higher than Fufeng’s 8.6. However, the individual P/E ratios vary considerably and averaging them out provides a poor benchmark.

The variations are related to unusual company-specific factors. For example, Henan Lotus is listed on the Mainland where capital outflow is restricted. This creates market inefficiencies and limited opportunities for investors. As a result, Mainland listed stocks tend to have much higher valuations than their Hong Kong equivalents. Ajinomoto was the company that created MSG and was the first to sell it over a century ago. However, the Japan-based company is being destroyed in red ink from the yen exchange rate and some of the highest production costs in the industry. Vedan International issued a profit warning this month as it seeks to settle a waste water dumping claim brought on by Vietnamese farmers who accuse the company of dumping untreated water into their river over a period of 14 years. The compensation is estimated to be over US\$6 million, with more lawsuits still outstanding.

The only companies in the industry that seem to be issue-free are Fufeng and Wei Chuan Food. Wei Chuan Food would make the best comparable for Fufeng, but it would be ambitious to expect Fufeng to begin trading at Wei Chuan Food's multiples. In the absence of proper comparables, we can at least use Wei Chuan Food and Vedan International as an upper and lower range and conclude that 10.5x earnings isn't unreasonable.

There is however a concern in using industry peers as a benchmark or guide in that we run the risk of the entire sector or market being overvalued. To gauge if current valuations make sense – at least theoretically – we turn to the justified earnings multiple using the Franchise model.

## Franchise Model

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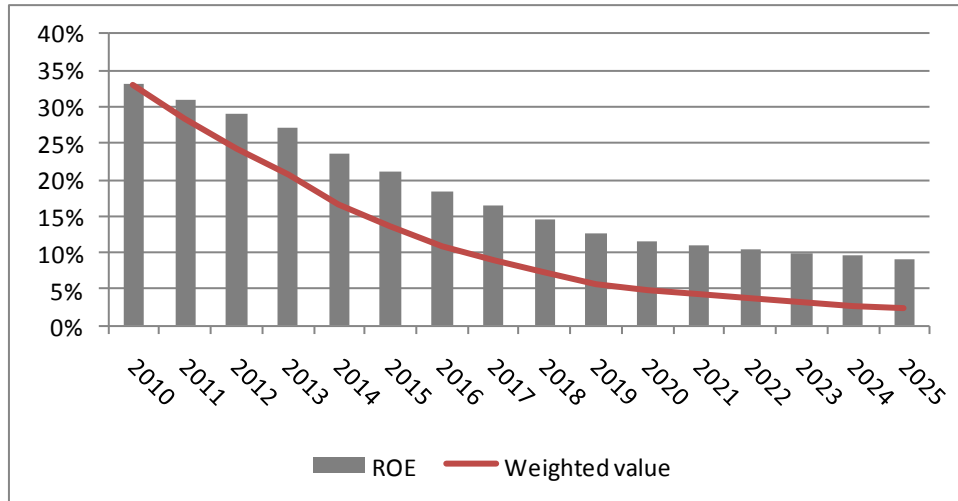
The Franchise model provides us with an intrinsic earnings multiple as the sum of two components:

*Tangible value*, which is the earnings multiple one would apply assuming no growth in the company. This is equivalent to a zero growth perpetual discount rate used in calculating the terminal value of a cash flow model. The tangible value is calculated as the reciprocal of the required rate of return, which we estimated as 9.21%, or 10.9.

*Franchise value*, which is the added earnings multiple that an investor would pay for company-specific growth calculated as  $[(1/r)-(1/ROE)] * (g/(r-g))$ . We calculate long-term ROE at a weighted average of 22.8%. As shown in Figure 22, this number was derived from our 2010-2013 forecasts and a 15-year decline to 9.21%, which implies no growth excess of the required return. Long-term growth, or 'g' was set at 3.5%, about a third of the GDP growth China has experienced over the last 30 years. When we crunch out the above numbers, we arrive at a franchise value of 4.

**Figure 22**  
Forecasted ROE





Source: RedFile Research estimates

Adding the two components together, we get an intrinsic P/E value of 15, which is higher than that implied from our DCF valuation. Accordingly, we are satisfied that the value derived from our DCF model is sensible and reiterate our one-year target of HK\$7.77 for Fufeng Group.

## Final Thoughts

Based on our valuation process and models, we believe that Fufeng is currently undervalued. We expect Fufeng's share price to increase by 48% from current levels to reach HK\$7.77. This target is close to the consensus target of HK\$8.07. However, we have noticed some key difference in our estimates relative to our peers:

1. We are concerned about the rising price of corn. The fundamental constraints we previously discussed give us cause for concern. Accordingly, we have estimated lower margins than our peers.
2. Across the board, we have the lowest 2010-2012 earnings per share estimates and growth rates. This is a reflection of our lower margins, higher estimated dilution from share plans, and unusually high selling prices in the second half of last year. As a result, our earnings CAGR through 2012 is a conservative 10.2%.

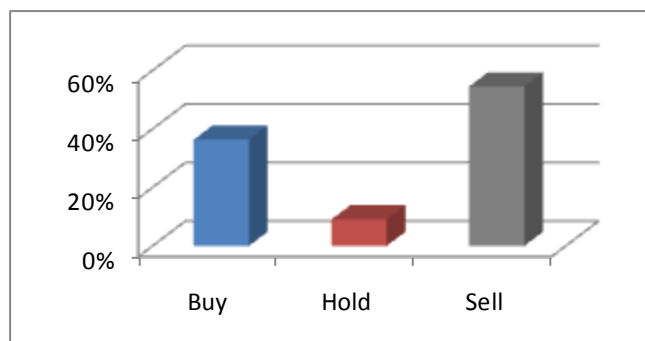
The real question is 'will shares of Fufeng actually reach HK\$7.77 in the next twelve months or so?' With the economic uncertainty over the last few years, there has been a disconnect between price and value, particularly for emerging markets. The business leaders we have talked to in China see a slowing in the third and fourth quarters of 2010. This is in line with the international markets where government stimulus has subsided and the private sector has failed to pick up the baton. Looking ahead, we expect the sluggish growth to continue well into 2012.

So where does this put Fufeng? It's important to remember that Fufeng sells a product that is used primarily in inexpensive foods. As a result, prices tend to be less sensitive to overall market conditions. It also sources raw materials (coal and corn) that are extremely sensitive to market conditions. Accordingly, a global slowdown will likely reduce input costs much more than selling prices. Let's not forget that in 2007 when the economy was soaring and commodity prices were high, Fufeng issued a profit warning. Since then, the economy has slowed down and commodity prices dropped, yet Fufeng has grown earnings hand over fist.

To conclude, we do believe it's within reason to expect shares of Fufeng to reach our one-year price target of HK\$7.77. Accordingly, we have initiated coverage of Fufeng Group with a **buy**.

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RedFile Ratings





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