

Fertilizer-ICB 1350  
August, 30<sup>th</sup>, 2016

## COMPANY RESEARCH REPORT Binh Dien Fertilizer Jsc, (BFC)



Adjusted price      Volume: 10,000 stock

Investment view	BUY
Target price	48,000
Market price (08, June, 2016)	41,000
Prospect 3M	Increase
Prospect 6M	Increase
Prospect 9M	Increase

### TRADING INFORMATION

Shares outstanding (mil.)	48
Market capitalization	1,953
Book Value (VND. Bil)	1,049
Foreign owned	14.75%
Market price on	41,000
Average 10 day volume	85,506
52W minimum price	20,200
52W maximum price	44,200
+/- 7 days	-6.82%
+/- 1 month	+16.81%

### Equity analyst

Tran Thi Hong Tuoi

Email: [tuoith@bsc.com.vn](mailto:tuoith@bsc.com.vn)

### INVESTMENT HIGHLIGHTS

We recommend **BUYING** BFC in the next 12 months at the target price of VND 48,000 per share (upsie 17%) under FCFF and P/E method. On 30<sup>th</sup> August, 2016, BFC was traded at VND 41,000 per share, equivalent to a P/E FW and P/B of 8.13x and 1.85x, respectively, which is relatively attractive compared to other fertilizer firms. BFC is the leader in NPK manufacturing and distributing in Vietnam. The firms directly benefit from the decline in input prices. Dividend payout is high. The investors can refer to [BFC update reports](#).

**Forecasted 2016 business results.** We estimate that the 2016 output will be 647 thousand tonnes of NPK fertilizers, revenues and net profit for parent shareholders will be VND 6,050 billion and VND 267 billion (+17% yoy) respectively, equivalent to 2016 EPS of VND 5,046.

**A first class NPK manufacturing firm in Vietnam.** BFC has the largest productive capacity of 927 thousand tons / year which is expected to increase by 250 thousand tons / year after the completion of Phase 2 of the 2 factories in Tay Ninh and Ninh Binh. BFC accounts for about 28% of market share in the South, 10% in the North and 10% in Central Vietnam. BFC's outstanding features are its distribution system, efficient utilization of local dealers and a good brand recognition. Penetration into the North and expansion to the export market will promote revenue growth for BFC in the context of saturated domestic demand.

**Sharp decline in input prices improved BFC's profit margin.** Raw materials accounted for 86%-90% of operating expense from 2012 to 2015. From 2014, the prices of the main inputs including urea, DAP and potassium decreased on average by 24%, 8% and 14% respectively while output price decreased by 1.3%. Gross margin rose from 10.67% in 2014 to 13.93% in 6M2016. Price of NPK often decreases slower than the input prices, therefore, the firm tends to maintain or improve its margin.

**Binh Dien Ninh Binh Jsc saves costs for BFC.** After comparing saved transportation costs and saved income tax expenses with interest and depreciation expense of Ninh Binh factory, we estimate that the factory will save about VND 33 billion for BFC's parent shareholders in 2016 (equal to 12% net profit).

**High dividends.** 28% cash dividend in 2015. Shareholders approved a plan of 30% cash dividend in 2016. BFC plans to issue 20% bonus shares in September, 2016.

	2012	2013	2014	2015	2016F
Net Revenue (bil.)	7,423	6,585	6,377	6,038	6,050
% y-o-y		-11%	-3%	-5%	0%
Total asset (bil.)	2,557	2,918	2,986	3,570	3,755
Equity (bil.)	554	669	842	1,107	1,199
Charter Capital (bil.)	397	397	476	476	572
Outstanding Shares (mil.)	40	40	48	48	57
Net income	139	211	229	229	267
% y-o-y		52%	9%	0%	17%
EPS	3,494	5,312	5,396	4,326	5,046
Book value	13,945	16,854	17,684	23,245	20,981
Gross Profit Margin	7%	11%	11%	13%	14%
ROS	2%	3%	4%	4%	4%
ROE	27%	34%	30%	23%	23%
ROA	5%	8%	8%	7%	7%

Sources: Financial statement of BFC, BSC research

## COMPANY OVERVIEW

Overview	
Name	Binh Dien Fertilizer Jsc.,
Address	C12/21 Tan Kien-Binh Chanh-HCM
Web site	<a href="http://binhdien.com/">http://binhdien.com/</a>
Tel	(08) 37560110
Fax	(08) 3756 0799
Chartered capital:	VND 476.4 billion
Core operation	- Manufacturing, distributing fertilizer

History	
Year	Event
	Binh Dien II fertilizer Factory
1991	Branding “Đầu Trâu” fertilizer
2003	Binh Dien Fertilizer Firm
2008	Binh Dien Fertilizer Jsc.
2015	Listed on HOSE

Offering (VND. Bil)	
Year	Event
2008	Equitization, Chartered capital: VND 397 billion
2014	Charterd capital: VND 476 Billion

No	Subsidiaries	Chartered capital (Bil. VND)	% of capital
1	Binh Dien Long An Sports Company Ltd	5	100%
2	Binh Dien Lam Dong Jsc.	49	51%
3	Binh Dien Mekong Jsc	30	51%
4	Binh Dien Quang Tri Jsc	30	51%
5	Binh Dien Ninh Binh Jsc	100	51%

### Large shareholders

No	Shareholders	Number of share	% of capital
1	Vinachem	30,966,000	65,00%

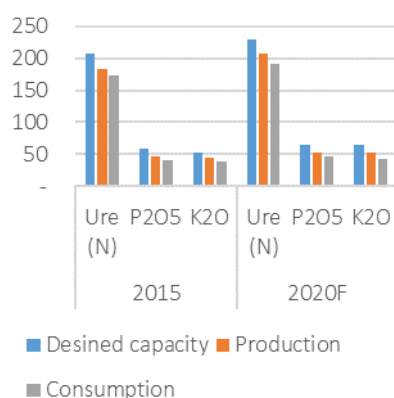
### Shareholders structure on 24th, May, 2016

No.	Shareholders	Number of shares	% of capital	Number of shareholders
1	<b>State - owned</b>	30,966,000	65.00%	1
2	<b>Insider holders</b>	164,840	0.35%	
	- Board of Directors	7,080	0.01%	1
	- Comission Board	12,200	0.03%	1
	- Board of management	145,560	0.31%	4
	- Staff			
3	<b>Outsider holders</b>	16,509,160	34.65%	
	- Domestic		19.90%	
	- Foregin		14.75%	
	<b>Total</b>	<b>47,640,000</b>	<b>100%</b>	

(Sources: BFC)

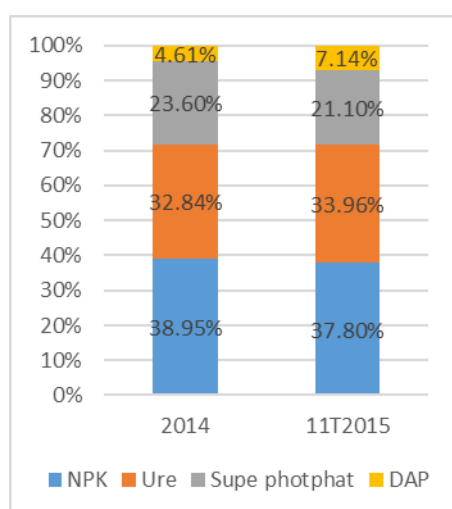
## NPK FERTILIZER PROSPECTS

### Global designed capacity, production and consumption



Sources: IFA

### Fertilizer consumption by elements



Sources: Agromonitor

Fertilizers enhance plant growth by providing the necessary nutrients. Depending on the elements, fertilizers are classified into organic, inorganic and biofertilizers. Most companies manufacture inorganic fertilizers which include:

- Straight fertilizers including Nitrogen fertilizers such as urea (made from  $\text{NH}_3$ ), phosphate fertilizer (made from anion  $\text{PO}_4^{3-}$ ) and potassium fertilizer (made from K)
- Multinutrient fertilizers including binary fertilizers (DAP, MAP, MKP) and NPK fertilizers.

Moreover, other nutrients for plants are secondary macronutrients (calcium, sulphur, magnesium, etc) and micronutrients (iron, zinc, manganese, Bo, Co, chlorine, etc) which are also combined in fertilizers.

**Demand for NPK fertilizer.** NPK fertilizer consumption depends on (1) the acreage cultivation, (2) price of NPK fertilizers compared to straight fertilizers. NPK fertilizers are more convenient, however, because of a sharp decrease in the price of straight fertilizers, the proportion of NPK consumption declined slightly from 38.95% in 2014 to 37.8% in 2015.

**Saturated market.** The total fertilizer demand in Vietnam is about 10 million tons per year, of which, NPK demand is 3.9 million tons (+ 2.6% yoy), according to Agromonitor. NPK consumption is forecasted to grow slowly in 2016, increase of 2.5% to 4 million tons thanks to a larger acreage cultivation. 2016 inventory is estimated at 288 thousand tons.

### Supply, demand and inventory of NPK fertilizers

	2014	2015	2016F
Beginning inventory		320,000	257,622
Supply	4,063,804	4,186,995	4,390,000
Domestic production	3,800,000	3,800,000	4,000,000
Imports	263,804	386,995	390,000
Consumtion	4,114,177	4,249,373	4,360,000
Domestic consumption	3,800,000	3,900,000	4,000,000
Exports	314,177	349,373	360,000
Ending inventory	320,000	257,622	287,622

Sources: Agromonitor, 2015

### Fiercer competition:

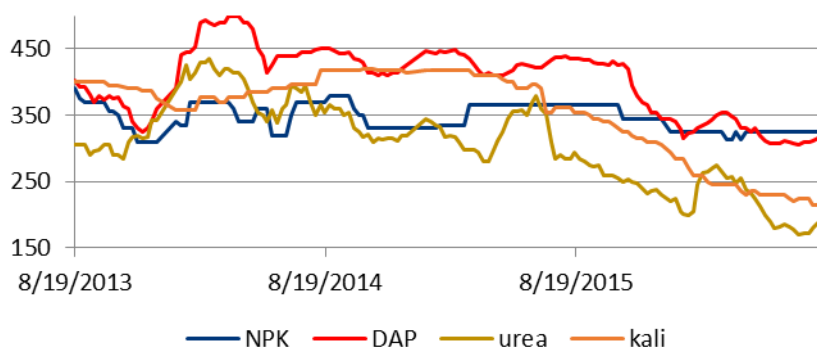
- Dispersed market structure with low barriers to entry. NPK fertilizers are made from urea, DAP, phosphate and potassium which are abundant. The set-up costs are low, therefore the number of NPK-producing enterprises is high and increasing (estimated at more than 100 manufacturers). Binh Dien, the leading fertilizer-manufacturing enterprise, is supplying only

about 16% of the national production.

- **The capacity of production continues to increase.** The total NPK capacity of the country is estimated at about 4 million tons/year. At the end of 2015, Bình Điền inaugurated and launched phase 1 of two NPK-manufacturing plants with a total capacity of 250,000 tons/year. After the completion of Phase 2, the capacity is expected to increase by another 250,000 tons/year. Phu My fertilizer plant plans to operate a NPK-manufacturing plant with a capacity of up to 250,000 tons in 2017. According to the investment projects concerning the fertilizer sector, a new plant with a capacity of 500,000 tonnes is expected to be deployed in the North during 2016-2018. The total capacity after 2018 has been estimated to increase to almost 5.3 million tonnes/year.
- **Competition with imported goods.** Imported NPK increases rapidly in terms of both value and volume, an increase of about 47% yoy in 2015, reaching 387 thousand tons, which accounts for about 10% of the total domestic demand for fertilizers. NPK is imported mainly from Russia and South Korea (accounting for 25% and 16% respectively of total imported NPK fertilisers in 2015). The market for NPK may face an even fiercer competition from foreign players, in particular from China as the tax rate has fallen from 6% to 0% since 2015, due to a set of FTA Asean - China agreements.

**The drop in input prices improves the profit margin for NPK manufacturers.** In the Vietnamese market, 6M2016, prices of raw materials such as of urea, DAP and potassium continued to fall sharply, by 24% yoy, 4%yoy and 10% yoy respectively while the average selling price of NPK decreased by about 1.3% yoy.

Global price movements of fertilizers

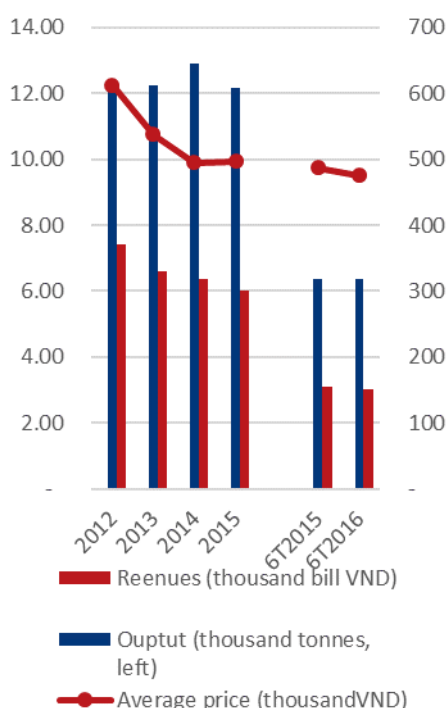


Sources: Bloomberg

**Exemption of Value Added Tax (VAT) on fertilizers increase the production cost for manufacturers.** This has been mentioned in the [sector outlook](#). The Ministry of Industry and Trade and the Ministry of Finance are currently discussing whether they can apply a 0% VAT on fertilizers instead of the exemption.

## BUSSINESS LONG TERM PROSPECTS

Revenue, sales volume of BFC's NPK fertilizer from 2012-6M2016



Sources: BFC, BSC research

**No NPK output growth.** During 2012-2015, BFC's production has decreased on average by 3%/year to the current 560 thousand tonnes while the NPK consumption has remained unchanged at 607 thousand tonnes in 2015. After 6M2016, the volume of NPK fertilizer sales was 319 thousand tonnes, virtually unchanged in comparison to the same period last year.

**Fertilizer revenues declined.** On average, the revenues continuously fell by 7% per year from 2012 to 2015 due to a drop in NPK prices of 6.7% per year during that period. After 6M2016, the revenues continued to fall by 2.4% to VND 3.030 billion. 83-87% of total revenues during 2012-2015 were from domestic sales.

**6M2016 business results.** Profit after tax of the parent company reached VND 129 billion (+ 23% yoy) mainly due to the drop in input prices. 6M2016 gross profit margin of BFC was 13.93%, thus it has increased from 12.33% in 6M2015 and 12.58% in 2015.

Net revenues and gross profit margin of BFC from 2013 to 2015

	Revenues (VND. Bil)			Gross profit margin
	2013	2014	2015	2015
Revenues from goods	6,583	6,375	6,031	12.56%
Domestic	5,497	5,472	5,223	12.51%
Export	1,087	902	809	12.85%
Others	2	2	6	34.37%
<b>Total</b>	<b>6,585</b>	<b>6,377</b>	<b>6,038</b>	<b>12.58%</b>

Sources: BFC

**BFC is a first class NPK manufacturer in terms of productive capacity and market share.** In December 2015, after BFC official launched phase 1 of the two new plants (one in Ninh Binh and the other in Tay Ninh with the respective capacities of 200,000 tonnes and 50,000 tonnes per year), BFC's total capacity has increased by 37% to 925,000 tonnes/year, the largest capacity in Vietnam. In 2015, the company supplied 607,276 tonnes which is equivalent to 16% of the country's demand. According to BFC's statistics, the company currently holds about 28% of market share in the South, 10% in the North and 10% in Central Vietnam.

Productive capacity of some local companies.

Companies	Brands	Capacity (tonnes)
<b>Binh Dien fertilizers</b>	<b>Đầu trâu</b>	<b>925,000</b>
Lam Thao	Lâm Thao	700,000
Jsc Material Synthesis and Biochemical Fertilizer	HS	360,000
Viet Nhat fertilizer	Việt Nhật	350,000
The South fertilizer Jsc	Con ó	300,000
Five Star International Group	Năm sao	300,000
Others		1,065,000

Sources: BSC research

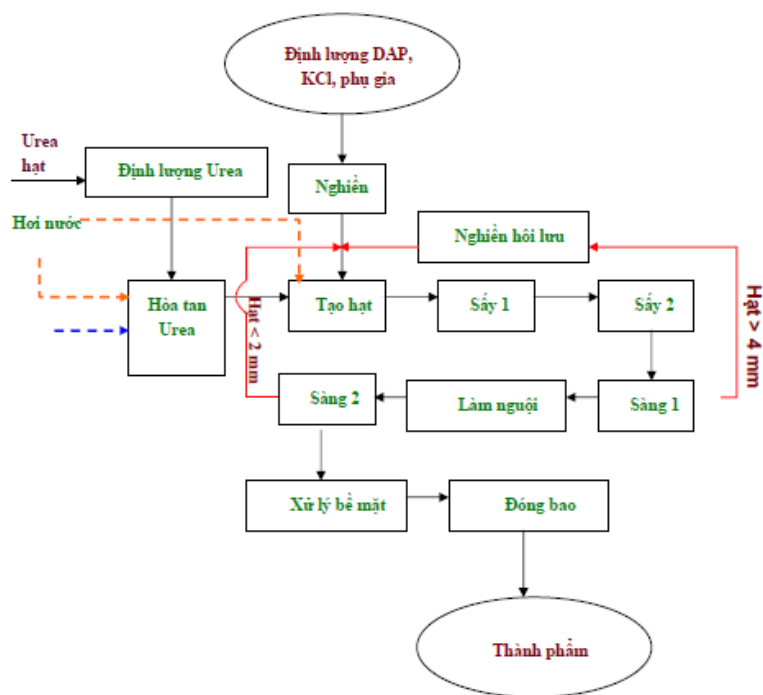
**Raising the capacity to increase the market share.** The total capacity is expected to increase by 250,000 tons which is going to supply both domestic and export markets.

- **Domestic Market.** Phase 2 of Binh Dien Tay Ninh and Ninh Binh plants is expected to double the capacity of both plants to 100,000 tonnes and 400,000 tonnes per year, respectively. The factory in Ninh Binh is expected to supply the North market more efficiently. The North consumes annually more than 100,000 tons of Đầu Trâu fertilizers. We believe that the company's presence and market share in the North will increase in the future.
- **Export market.** BFC is currently exporting to Cambodia, Laos and Myanmar. On average, total revenues accounted for 15% of BFC's revenues between 2013 and 2015. Export revenues were VND 809 billion in 2015. BFC has promoted consumption in the current export markets and plans to enter the Thailand market. These are all agricultural countries, in which the demand for fertilizers is forecasted to increase. (1) In these countries, the amount of fertilizers used per hectare is 2-5 times lower than in Vietnam. (2) Cambodia, Myanmar and Laos are heavily dependent on imported fertilizers. Meanwhile, there is no specialized fertilizers for crops in Thailand. In the context of a saturated domestic demand, we believe that it is necessary to focus on exports in order to ensure the company's growth in the future.

**A strong distribution system.** BFC owns 200 wholesalers and over 2,500 retailers, farms, cooperatives and farmers' associations. BFC's products are supplied across the whole country. BFC trains farmers' agencies to be experts on fertilizers and on "Đầu Trâu" products. The firm does not charge interest on deferred payments. They collect money at the end of the harvest or the end of the year for a guarantee of good quality products. Thanks to this strategy, BFC's distribution system has spread out not only throughout the country, but also to Cambodia, Myanmar and Laos. 2015 revenues were VND 6.039 billion.

**Diversified products with an on-going quality improvement.** The company has currently more than 40 product lines under the Đầu Trâu brand, including many specialized products for each type of crops. In particular, the Agrotain product line and the yellow protein Đầu Trâu 46A+ (coated with Agrotain) reduce loss of nitrogen by 30%, which equal to savings of VND 100,000 per tonne of nitrogen. This not only helps the company to create new business cycles for products but it also helps BFC to maintain its market share and ensures growth.

### 1 seed NPK production technology of BFC ( Urea technology)



Sources: BFC

#### BFC's sources of inputs

Material	Supplier
DAP	DAP- Vinachem Jsc, DAP-Lao Cai, Long Hai agricultural goods Jsc, Vinacam Jsc, Nguyen Phan Ltd, Tan Phat investment Ltd
Kali	Vinacam Jsc
Urea	DPM, Nguyen Phan Ltd, Ninh Binh urea Ltd,
SA	Tan Phat investment Ltd, Thai Son trade and services Ltd, Nguyen Ngoc company
Kaolin	Phuc Thisarnmineral Ltd, Tan Dien Ltd, Phuoc Quang Ltd, CTCP Binh Duong minerals and construction Jsc

Sources: BFC

The price of materials fell sharply. The cost of materials accounted for 86% -90% of production costs during 2012-2015. The main inputs for NPK production are urea, DAP and potassium. 90% of the company's raw materials are supplied by the local partners, particularly from the members of the Vietnam National Chemical Corporation (Vinachem). The remaining 10% (mainly potassium) is being imported as it cannot be locally produced yet. Number of raw material days is about 3 months. Therefore, the risk of shortage of materials and the exchange rate risk is low. In 2015, the prices of materials which are urea, DAP and potassium decreased by 4%, 4% and 5% respectively, while output price almost did not change. As a result, the gross profit margin improved from 10.67% in 2014 to 12.58% in 2015. In 6M2016, the raw material prices of urea, DAP and potassium continued to drop sharply, by 24% yoy, 4% yoy and 10% yoy respectively, while the average selling price of NPK decreased by only 1.3% yoy, thus the gross margin increased to 13.93%.

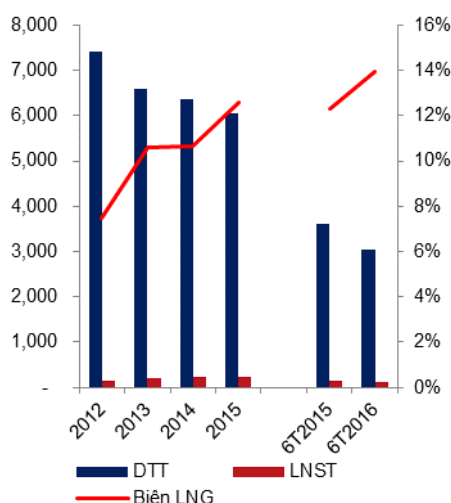
**Binh Dinh Ninh Binh fertilizers Jsc saves costs for BFC.** During the first 7 months of 2016, total sales volume in the North reached about 68,000 tonnes. With the assumption that the Northern farmers will consume 110,000 tonnes of NPK in 2016, the savings on transportation is about VND 77 billion. The depreciation and the interest expense of the factory is estimated at about VND 28 billion. Corporate income tax (CIT) rate on Binh Dien Ninh Binh factory is 0% in the first 2 years, and then 50% reduction in the next 2 years. We estimate that the the firm will save about VND 15 billion of CIT in 2016. Therefore, BFC will save VND 64 billion in 2016, equivalent to VND 33 billion of net profit for parent company shareholders (12% of profit after tax).



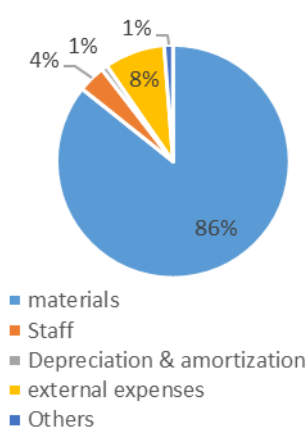
**Investment risks.** (1) The risk of a reduction in the market share and a drop in product prices. The NPK fertilizer market is already saturated, the demand for the fertilizers is expected to grow slowly, while the capacity of the whole industry may increase by 33% to 5.3 million tonnes after year 2018. This risk will lower the efficiency of the new factories if the output volume is too low as would not cover the fixed cost. (2) The decrease in the price of fertilizers, including the price of inputs and the NPK fertilizer pull down the business performance of the company as there are large inventories. At the end of the second quarter, 2016 inventory of BFC was VND 1,449 billion, accounting for 40% of total assets of the company and 73% of the revenues in this quarter.

## CORPORATE FINANCE

### Net revenues and net profit of BFC from 2012 to 2015



### Production cost breakdown in 2015



Sources: BFC consolidated financial statement

**Low revenue growth.** Because of the saturated market, BFC's output increased on average by only 3.1% per year from 2012 to 2014, then it even declined by 6% in 2015. NPK's price also dropped by 6.7% from 2012 to 2015. As a result, the company's net sales dropped by 6.7% on average from 2012 to 2015.

**Sharp fall in material prices improves the company's profit margin.** As mentioned above, input prices decreased faster than the NPK fertilizer prices so there was an increase of the gross margin to 13.93% in 6M2016. However, the gross profit margin and the pre-tax profit margin of the company is lower than its competitors' due to nitrogen and phosphorus manufacturers usually getting a better profit margin than the NPK manufacturers.

**6M2016 net profit increased by 23% yoy to VND 129 billion** which was mainly driven by the improved gross profit margin and the reduction in the selling expenses.

### Asset allocation.

- Current assets account for 79% -84% of total assets during 2012-6M2016. Companies often maintain inventories at a high level, accounting for 40% of total assets at the end of the second quarter, 2016, equivalent to VND 1489 billion. The number of inventory days was 110 days in 2015, then reduced to 105 days at the end of the second quarter in 2016 which is the average of other fertilizer firms.
- Abundant cash. Cash balances ranged between VND 384 billion and VND 426 billion during 2012-2015, accounting for 13% of total assets at the end of quarter 2/2016.
- **Increasing long-term assets.** In December, 2015, BFC put into operation 2 new plants in Ninh Binh and Tay Ninh. The total value of fixed assets rose to VND 219 billion. We believe that the fixed assets will increase due to the recognition of phase 2 of these above-mentioned factories.

**Capital allocation.** Financial leverage ratio is relatively high, reaching 3.53x at the end of the second quarter, 2016, the highest among its



competitors. The short term debt is high because BFC allows its customers to deferr payments without charging interest and it keeps large inventories. By the end of the second quarter, 2016, total outstanding short-term bank loans were VND 1,467 billion, representing 40% of the total capital.

**Liquidity.** Current and quick ratios were 1.17x and 0.54x respectively on 30th June, 2016.

### Fundamentals

	2012	2013	2014	2015	Comparable firms					
					DPM	DCM	LAS	SFG	VAF	NFC
<b>Solvency</b>										
Debt/Equity	2.57	2.40	1.86	1.64	0.03	1.13	0.52	0.87	0.00	0.32
Assets/Equity	4.62	4.36	3.54	3.22	1.28	2.32	2.02	2.33	1.53	1.48
<b>Assets Structure</b>										
Long-term Assets/Total Assets	18%	17%	16%	21%	25%	69%	8%	15%	16%	4%
Short-term Assets/Total Assets	82%	83%	84%	79%	75%	31%	92%	85%	84%	96%
<b>Liquidity</b>										
Quick Ratio	0.45	0.39	0.46	0.39	3.59	1.65	0.96	0.44	0.99	0.56
Current Ratio	1.10	1.15	1.29	1.20	4.40	1.83	1.81	1.49	2.43	2.96
<b>Operational Capacity</b>										
Days Inventory	21	24	25	26	5	1	69	44	3	29
Days Reveiabies	67	82	94	110	78	27	124	119	162	191
Days Payables	19	13	12	14	20	24	52	21	30	15
<b>Profitability</b>										
Gross Profit Margin	7%	11%	11%	13%	32%	31%	21%	9%	25%	20%
ROS	2%	3%	4%	4%	15%	14%	7%	4%	7%	3%
ROE	27%	34%	30%	23%	17%	14%	22%	15%	14%	9%
ROA	5%	8%	8%	7%	14%	5%	11%	6%	9%	6%

Sources: BSC research

### 2016-2020 EARNINGS FORECAST

**BFC's plan.** The company targets 656 thousand tons of NPK production and 675 thousand tons of NPK consumption in 2016. Revenues reach VND 6,625 billion, the profit after tax of the consolidated firm is VND 369 billion and of the parent company is VND 246 billion. Dividend payout ratio is 20%.

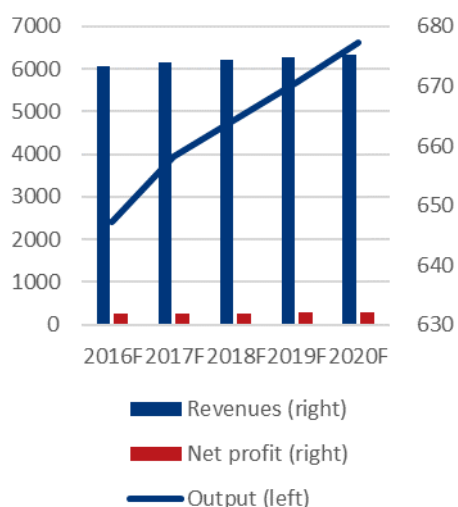
**Forecasted business results.** We predict that the net sales and the profit after tax of the parent company in 2016 is VND 6.050 billion, and VND 267 billion (+ 17% yoy), respectively. Then, 2016 EPS will be VND 5046 per share. The growth rate of revenues and profit after tax is approximately 1% per year during the period of 2016-2020. Our forecast does not account for the entry to the Thailand and other markets.

#### Assumptions:

- NPK fertilizer consumption is 647 thousand tonnes in 2016 (+ 6.6%



2016-2020 forecasted performance of BFC



Sources: BSC

yoy) mainly due to increased sales in the North (approximately 110 thousand tonnes), while consumption in the other markets remains stable. Then, the NPK consumption growth rate in the North is assumed to be 10% in 2017 and 5% from 2018 to 2020, reaching 153 thousand tonnes of NPK. We note that the NPK consumption in the North under our assumptions is much lower than the total capacity of Binh Dinh Ninh Binh factory of 400 thousand tons per year.

- The NPK price fell by 6% in 2016 compared to 2015 and will remain stable in the coming years. According to NPK price list updated by BFC (March, 2016), NPK prices fell by 3-6%.
- The price of materials such as urea, DAP and potassium fell by 15%, 11% and 20% respectively in 2016. Our assumption is based on the price movement of urea sold by DCM, Vietnam DAP fertilizers and global potassium in 6M2016. Material prices are assumed to remain stable in the next years. NPK price movements are dependent on the price movements of its components. We realize that NPK prices often decrease slower than straight fertilizer prices. Therefore, the firm tends to maintain and improve its gross margins.
- Gross profit margin of the company is forecasted to reach 14.18% in 2016, decline slightly in 2017 and 2018 due to a higher depreciation from phase 2 of the 2 new plants. The gross profit margin is projected to range from 13.94% to 14.18% during 2016-2019.
- Selling and administration expense margins are forecasted to be unchanged. In particular, staff costs increased due to an expected increase in staff numbers for new factories and a 5% increase in annual salaries. Transportation and external costs are expected to fall slightly; however, with prudence, we assume that these expense margins will remain unchanged.
- Financial expenses are forecasted to reach VND 138 billion (+ 34% yoy) in 2016, mainly due to the interest expense from Ninh Binh plant no longer being capitalized. The interest rate is expected to rise by 0.2% in 2017.

## VALUATION

We combine two methods which are FCFF and P/E methods to find out the fair value of BFC shares.

**FCFF method.** We apply two stage FCFF method because of (1) low growth of NPK output and business results; (2) high leverage ratio.

- Stage 1: From 2016 to 2020. FCFF cash flow is forecasted at VND 197 billion in 2016 and VND 390 billion in 2020.
- Stage 2: Long-term growth. The growth rate of cash flow in the long-term is forecasted at 1% due to saturated demand.

**Weighted average cost of capital (WACC).** We use CAPM method to



### Estimated beta of BFC

Firms	Beta	D/E	Unlevered beta	Estimated beta of BFC
<b>BFC</b>		<b>1.64</b>		<b>1.08</b>
DPM	0.72	0.03	0.70	1.63
DCM	0.51	1.13	0.27	0.62
LAS	0.76	0.52	0.54	1.24
SFG	0.51	0.87	0.30	0.70
VAF	0.72	-	0.72	1.65
NFC	0.34	0.32	0.27	0.63

### WACC

Risk free rate	6.09%
Beta	1.08
Market risk	11.75%
Cost of equity	12.19%
Cost of debt	8.00%
Loans/ (loans + equity)	0.56
WACC	8.97%

### FCFF method

Present value of FCFF (VND)	4,483
(-) Debt	-2,654
(+) Cash and equivalent cash	466
(+) Financial investment	10
Shareholder's value	2,305
Outstanding shares (mil)	47.64
<b>Price per share</b>	<b>48,392</b>

### Target price

Method	Price	Weight
FCFF	48,392	70%
P/E	47,305	30%
<b>Target price</b>	<b>48,066</b>	

Sources: BSC research

calculate the cost of equity. Risk-free rate is the yield of 5-year government bonds (6.09%), market rate is 11.75% according to DamonDaran. We use the pure method to estimate the beta of BFC because the firm was listed in 2015. Using other fertilizer enterprises in Vietnam as a reference, adjusting by leverage ratio of each company, we calculated that the beta of BFC is 1.08. Then, cost of equity is 12.19% and WACC is 8.97%.

Under this method, the fair value of BFC is **VND 48 392 VND per share**.

**P/E comparison method.** We refer to p/E of other Vietnam listed fertilizer manufacturers

- P/E is 9,38x
- The number of outstanding shares is 47,640,000 shares
- 2016 EPS FW is VND 5,046 per share.
- Fair value price is **VND 47,305 VND per share**

Stock	2015 Revenues	P/E	P/B
DPM	9,764.95	7.67	1.47
DCM	6,002.75	9.84	1.07
LAS	4,651.23	9.46	1.00
SFG	2,344.22	6.66	0.97
VAF	956.80	9.29	0.88
NFC	532.53	16.15	1.50
<b>Median</b>		<b>9.38</b>	<b>1.04</b>

Sources: Bloomberg

Combining the 2 above-mentioned methods, with the proportion of 70% for FCFF method and 30% for P/E method, a reasonable price for the stock is VND 48,066 per share.

**We recommend BUYING BFC in the next 12 months at the target price of VND 48,000 per share** (upsie 17%) under FCFF and P/E method. On 30<sup>th</sup> August, 2016, BFC was traded at VND 41,000 per share, equivalent to a P/E FW and P/B of 8.13x and 1.85x respectively, which is relatively attractive compared to other fertilizer firms. BFC is the leader in NPK manufacturing and distributing in Vietnam. The firms directly benefit from the decline in input prices. Dividend payout is high.

### APPENDIX 01: BALANCE SHEET

	2016F	2017F	2018F	2019F	2020F
<b>ASSETS</b>	<b>3,755</b>	<b>3,820</b>	<b>3,862</b>	<b>3,912</b>	<b>3,939</b>
<b>A. Current assets</b>	<b>2,909</b>	<b>2,986</b>	<b>3,096</b>	<b>3,218</b>	<b>3,312</b>
Cash and cash equivalents	567	604	691	792	864
Current financial Investments	0	0	0	0	0
Accounts receivable	477	485	489	494	499
Inventories	1,731	1,763	1,782	1,798	1,815
Other current asset	134	134	134	134	134
<b>B. Long term assets</b>	<b>847</b>	<b>834</b>	<b>765</b>	<b>694</b>	<b>627</b>
Long term receivable	0	0	0	0	0
Fixed assets	834	823	754	684	618
Intangible assets	342	440	381	319	262
Financial leases	59	52	44	36	28
Intangible assets	246	245	243	242	241
Assets in progress	186	86	86	86	86
	0	0	0	0	0
Long term investments	7	6	6	5	4
Other long-term assets	5	5	5	5	5
<b>LIABILITIES AND EQUITY</b>	<b>3,755</b>	<b>3,820</b>	<b>3,862</b>	<b>3,912</b>	<b>3,939</b>
<b>A. Liabilities</b>	<b>2,363</b>	<b>2,340</b>	<b>2,324</b>	<b>2,307</b>	<b>2,291</b>
Current liability	2,112	2,144	2,164	2,182	2,202
Long-term liability	251	196	160	124	89
<b>B. Equity</b>	<b>1,199</b>	<b>1,264</b>	<b>1,299</b>	<b>1,343</b>	<b>1,360</b>
<b>C. Minority interest</b>	<b>193</b>	<b>216</b>	<b>239</b>	<b>263</b>	<b>288</b>

### APPENDIX 02: FINANCIAL STATEMENT

	2016F	2017F	2018F	2019F	2020F
Net revenues	6,050	6,153	6,211	6,271	6,334
Gross profit	858	866	865	878	891
Financial incomes	4	4	5	5	5
Financial expenses	(138)	(147)	(144)	(142)	(140)
Gain or loss from associated companies and joint	(220)	(224)	(226)	(229)	(232)
Selling expenses	(94)	(90)	(86)	(83)	(82)
General and Administration Expense	410	409	414	428	442
Operating profit	-	-	-	-	-
Net other incomes	<b>410</b>	<b>409</b>	<b>414</b>	<b>428</b>	<b>442</b>
EBT	345	344	341	353	357
Net profit	78	76	73	78	78
Net profit for parent's share	267	268	268	275	279

Sources: BSC research

**BSC RATING SYSTEM AND VALUATION METHODOLOGY**

**Rating System:** Our recommendations are relative to the market development and are based on the difference between the current price and our 12-month price target includes dividends over the period (Unless otherwise specified). This structure applies from 1st Jan 2014.

**Valuation Methodology:** The selection of methods depends on the industry, the company, the stock. Our valuations are based on a single or a combination of one of the following valuation methods: 1) Relative models (P/E, P/B, EV/EBIT, EV/EBITDA); 2) Discount models (DCF, DVMA, DDM); 3) Asset-based evaluation methods (NAV, RNAV).

Rating System	Note
<b>STRONG BUY</b>	If the target price is 20% higher than the market price
<b>BUY</b>	If the target price is 5% to 20% higher than the market price
<b>HOLD</b>	If the target price is 5% higher or lower than the market price
<b>SELL</b>	If the target price is more than 5% lower than the market price
<b>NOT RATED</b>	The investment rating and target price have been removed pursuant to BSC policy when BSC is

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**Sales & Advisory****Duong Le**

Tel: 0439352722 (155)

Email: [duonglh@bsc.com.vn](mailto:duonglh@bsc.com.vn)**Head of Research****Long Tran**

Tel: 0439352722 (118)

Email: [longtt@bsc.com.vn](mailto:longtt@bsc.com.vn)**CONTACT INFORMATION****BSC Head Office**

10th, 11th Floor – BIDV Tower  
35 Hang Voi – Hoan Kiem – Hanoi  
Tel: 84 4 39352722  
Fax: 84 4 22200669  
Website: [www.bsc.com.vn](http://www.bsc.com.vn)

**BSC Ho Chi Minh Branch**

9th Floor – 146 Nguyen Cong Tru Str  
District 1, Ho Chi Minh City  
Tel: 84 8 3 8218885  
Fax: 84 8 3 8218510  
Website: [www.facebook.com/BIDVSecurities](http://www.facebook.com/BIDVSecurities)

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