

## 8. Risk Factors

### Risk from business operation of the Company

Business of the Company and its subsidiaries are as follows:

1. Raw sugar and brown sugar manufacturing and distribution operated by Buriram Sugar Factory Co., Ltd. (“BSF”)
2. Byproduct business as follows:
  - Biomass power plant operated by Buriram Energy Co., Ltd. (“BEC”) and Buriram Power Co., Ltd. (“BPC”) and Buriram Power Plus Co., Ltd. (“BPP”)
  - Organic fertilizer manufacturing and distribution business operated by Key Brand Fertilizer Co., Ltd. (“KBF”)
3. Supporting business operated by Buriram Sugarcane Research and Development Co., Ltd. (“BRD”)

### 1. Risk from Business Operation of Buriram Sugar Factory Company Limited (“BSF”)

#### 1.1 Risk Factors from Raw Material Sourcing

BSF produces and distributes raw sugar and brown sugar which use sugarcane as a main raw material. However, BSF does not own sugarcane farm sufficiently for production capacity, thus to allocate sufficient sugarcane for crushing is the most important factor affecting the operations and the performance of the Company. The quantity of sugarcane available each season is depended on these main factors:

(a) The risk from changes of the amount of planting areas which may cause by the decrease of the sugarcane price affecting to the farmers to grow other agricultural plants that gain the higher price instead or the government supporting policy to appropriately allocate the planting zone, also known as zoning. Nevertheless, Buriram province is one of the pioneer areas to switch from rice to sugarcane plantation according to the policies issued by Ministry of Agriculture and Cooperatives. Additionally, the Company has conducted the surveys for evaluating the changed factors and also solved those problems since 2012 until 2016 (present). Hence, the amount of the sugarcane plantation has gradually increased every years, the details are as follows;

Crop Year	2012/13		2013/14		2014/15		2015/16		2016/17 (Forecast)	
	Sugarcane Plantation (Rai)	Average Production (Ton/Rai)								
Buriram Province	188,946	11.09	200,112	11.29	200,941	11.09	210,919	10.00	210,962	10.00
All areas in Thailand	9,487,320	11.32	10,078,025	11.24	10,530,927	11.08	11,012,839	9.15	11,080,364	9.15

*Source: Office of the Cane and Sugar Board*

*Note: 6.1 Rai = 1 hectare*

(b) The risk from Climate change, rainfall, irrigation, soil fertility, sugarcane varieties and other sugarcane diseases affects to the crop yield of sugarcane per Rai. The changes of each factor can cause agricultural output diminution. According to these factors, the Company has supported the watering system during dry season through drip irrigation system in sugarcane farm by cooperating with The Office of the Cane and Sugar Fund. As the result, the Company has been offered long-term loan with 2% interest rate per annum for irrigation development.

(c) The risk from soil fertility. The Company has the policies which focus on soil improvement to recover the soil fertility in sugarcane plantation areas, for example, harvesting freshly sugarcane, preserving organic matter, adjusting pH for fertilizer efficiency and using filter cake-based fertilizer which is a byproduct of the Company's sugar production. Since the policy implementation, the agricultural output of sugarcane has been increased gradually from 8-9 tons/Rai during 2004-2010 to 12-13 tons/Rai during 2011-2016.

(d) The risk from sugarcane varieties. The Company has carefully chosen sugarcane varieties which are appropriate for the plantation areas and also provide the sugarcane varieties testing area for the selection of new sugarcane variety in order to replace deteriorated ones to provide higher crop yield and sugar per ton as well as the higher returns for farmers.

(e) The risk from the purchasing competition of local sugarcane. If other sugar factories in local areas offer higher price of sugarcane than BSF's, the farmer may trade their sugarcane to those factories instead therefore the amount of cane crush will be decreased respectively.

As the result, BRD provides the solution for this matter through conducting the contract farming between the Company and farmers by providing fund, fertilizer, chemical, sugarcane variety, or other agricultural machines in the plantation of 50 kilometers around the factory in order to legally transfer the rights of the products to the Company in advance before cane crushing season. Additionally, BRD aims to keep good relationship with farmers through using the support strategies by providing 17 teams of agriculture specialists to give advices to farmers in individual planting areas, for example, recommend suitable sugarcane variety for each plantation, manage and examine soil and water condition and support all facilities in the crop period from material preparation to harvesting and sell to BSF by using online and GPS system to ensure that every sugarcane plot is monitored and supported appropriately so that farmers can produce the quality productions and gain more crop yield per Rai which means that farmers will gain more revenue and stable household economic status. As the results, BSF has not encountered the insufficiency of sugarcane in cane crushing season.

Nevertheless, the Company has allocated the sugarcane plantation or zoning among sugar factories in Buriram province, Surin province and Nakhonratchasima province in order to prevent the purchasing competition of sugarcane.

## **1.2 Risk from Fluctuation in Global Sugar Market Prices**

Regarding to sugar trading in global market, sugar is one of the agricultural products which have the highly price fluctuation compared to other agricultural products. The fluctuation in global sugar market price depends on demand and supply of manufacturing and consuming countries, the export and import volume in each country, the arbitrage by arbitrageurs in commodity market and the proper climate for planting in each countries which issued the support policies, trade invention policies, export and import policies of sugar industry group from government especially for developed countries. Furthermore, sugar price currently corresponds to fuel price since cane juice and molasses can be used to produce ethanol which can be mixed with oil for automobile fuel. The factors as mentioned above affect to the fluctuation in global sugar market prices.

According to The Sugarcane and Sugar Act, B.E. 2527, Thai sugar factories can export sugar through agencies as indicated only, depending on the quotas allocated for export and

domestic sale which refer to the amount of sugar produced in each crop year, therefore, the ratio of export and domestic sale of Thai sugar factories is quite similar. In 2015-2016, the export revenue of the Company is equivalent to 80% and 78% of the total revenue respectively. The export price is primarily based on global sugar market price which has been changed pursuant to global demand and supply. Hence, the revenue of the Company shall be affected according to the global changes. As in 2016, the price of New York sugar No.11 averaged 16.49 cent/pond.

#### Average Price of New York Sugar No.11

Fiscal year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average Price (Cent/Pond)	14.63	9.9	12.1	17.98	22.28	27.07	21.57	17.47	16.34	13.12	16.49

#### Average Price of London Sugar No.5

Fiscal Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average Price (US\$/Ton)	421.66	309.55	351.59	487.39	616.49	706.07	587.74	496.58	439.30	376.32	458.32

*Source: Bloomberg*

Nevertheless, the main cost of sugar production is sugarcane price which is changed according to the revenue of the Company. (70:30 Profit Sharing System set up by Thai government and regulated by the Office of the Cane and Sugar Board). Therefore, if the global sugar market prices decrease, the sugarcane cost will be decreased in the ratio as of 70% pursuant to the Profit Sharing System which can minimize the effects of sugar price fluctuation.

In the past, the operating results of the Company depends on the business of sugar and molasses only which means that the fluctuation of global sugar market price has the influence on the operating results of the Company definitely. However, in order to minimize this effect, the Company aims to invest in many projects which relate to the developed and value-added business from sugar and by products particularly, molasses; for instance, biomass power plant by using bagasse and cane trash as the main raw material for fertilizer production and distribution business.

### 1.3 Risk from Non-Performing Loans on Sugarcane Advance Payment Loans

BRD/BSF supports the sugarcane farmers by providing the sugarcane advance payment loans in individual planting areas according to each step of crop-growth period by using the database and GPS (Global Position System) to survey the plantation in order to assure that each area is exactly supported and monitored appropriately.

The support from sugarcane advance payment loans is paid by post-dated cheque so that the farmers shall spend the investment in term of sugarcane variety, land, watering system, fertilizer and so on. This kind of advance payment loan is similar to the reservation of sugarcane in advance which is that the farmers who are provided the advance payment loans have to sell the sugarcanes only to the Company after harvesting, in the period of cane crushing season. Those farmers shall harvest and send to the Company accordingly, after that the Company will pay the returns to the farmers by deducting from the sugarcane advance payment loan. As the result, the Company has the risk from this kind of non-performing loan if the farmers cannot send the crops as engaged which may be caused by the drought or plant diseases and so on. Therefore, if the expense from the doubtful accounts increases, the operating results of BSF shall be affected directly. In 2012 to 2016, the Company had projected the allowance for doubtful accounts as follows:

(Unit: Million Baht)

	2012	2013	2014	2015	2016
Allowance for Doubtful Account	-	20.33	1.05	3.44	79.86
Farmers Account Receivable	975.21	1,135.29	880.68	989.21	1,069.92
Percentage of Doubtful Account	-	1.79	0.11	0.34	7.46

The ratio of allowance for doubtful account during 2012 to 2016 was approximately 1.94% of farmers account receivable at the end of the accounting period. The Company emphasized this advance payment loans and managed its risk through specify the qualification of farmers and classify them according to their performance so that the loan payment shall be offered and paid into performance terms, in addition, the securities or guarantor specification are also taken into account as well. Besides, the Company also provided the agricultural specialist teams to look after the planting process and used GPS to survey the planting areas in order to precisely collect the data in real time and solve the problems in time.

## 1.4 Foreign Exchange Risk

The Company has recognized the export revenue in term of US Dollars (USD), approximately equivalent to 77% of total sugar selling revenue, therefore, the revenue of the Company shall be fluctuated according to the exchange rate of USD/THB (Thai Baht)

Therefore, the Company hedges the foreign exchange risk with forward contracts. The exchange currency rate in forward contract shall be higher than the rate specified by Thai Cane and Sugar Company Limited in calculation of quota B sugar; however, this matter depends on the consideration of executives about the trend of exchange rate at that time. Nevertheless, the exchange rate hedging will not be effective if THB appreciates continuously in long period.

## 1.5 Risk from Governmental Control

### 1.5.1 Risk from Government Policy

The sugarcane and sugar industry in Thailand is regulated by the Office of the Cane and Sugar Board under the Cane and Sugar Act B.E.2527 which is the law concerning to the governance of sugarcane and sugar industry of Thailand; such as, sugarcane farming management , the production in factory, sugar export, the allocation of sugar quota (classified into 3 types which are Quota A for domestic sales, Quota B and Quota C for export), retail price for domestic sales and the 70:30 Profit Sharing System between farmers and sugar plants.

The 70:30 Profit Sharing System is calculated from the price of Quota B distributed by Thai Cane and Sugar Company Limited as the standard price in order to calculate the total export revenue of country and add it with the total revenue from domestic sale as well as the molasses; therefore, it will be total revenue of sugar industry. Then, the production and distribution cost will be deducted to forecast the profit. The profit shall be allocated to the ratio of 70:30. 70% will be divided by the total amount of sugarcane in that crop year for pricing the selling price of sugarcane; therefore, the 70:30 Profit Sharing System shall generate the consistency in the sugar industry which can minimize the risk from the fluctuation of raw material price and sugar price to all sugar manufacturers in the country.

Nonetheless, Minister of Industry, Minister of Agriculture and Cooperatives and Minister of Commerce are responsible for control and regulations according to the laws. Therefore,

the price adjustment in the domestic sale, the regulation changes or the amendment of Act shall significantly affect to operating results of the Company as well as other companies in the sugar industry.

There is a possibility to loosen the restriction in the sugarcane and sugar industry in order to create free trade in accordance with the agreement on other countries; for example, ASEAN Free Trade Area, Bilateral Free Trade Agreement, Regional Comprehensive Economic Partnership as well as multilateral framework such as world trade organization (WTO). Trade liberalization is the chances and challenges for sugarcane and sugar industry which should pay attention closely.

Nevertheless, the sugarcane and sugar industry is the agricultural industry as well as a primary industry of food and beverage and also the export industrial crop. The regulations and policies issued by the government in the past aim to develop the industry in country including the farmers' lives as well as sugar factory economic status therefore it can be convinced that the regulations which may be changed are likely the positive supporting policies on industry, farmers and sugar factories.

#### **1.5.2 Risk from the Fluctuating Income from Sugar Sales**

According the cane crushing period is in the period of November to April, the Company gradually sells sugar since December until January to the end of cane crushing season. However, the Company will sell Quota A for domestic sales within 52 weeks. Moreover, Quota C for export will be distributed according to the existing amount of sugar, crop yield, global sugar market price and the selling price of Quota B sugar set by Thai Cane and Sugar Company Limited in order to standardize the selling price of Quota C sugar.

Nevertheless, the amount of sugar sale in each quarter year over year is different therefore the income from sugar sales in each quarter shall be fluctuated according to these factors as mentioned.

## 1.6 Risk from the Cost of Raw Materials

The price of sugarcane is formulated in the profit allocation of 70:30 Profit Sharing System. The farmers gain 70% of profits from sugar sales. The calculated sugar price on the sugarcane price that has to pay to farmers is from average selling price formulated by Thai Cane and Sugar Company Limited, therefore, if Thai Cane and Sugar Company Limited sell the sugar in higher price, the cost of raw materials will be increased respectively, whereas, if Thai Cane and Sugar Company Limited sell the sugar in lower price, the cost of raw materials will be decreased respectively. The fluctuation of raw materials cost will affect to the profit margin of the Company as well.

Consequently, in order to minimize this risk, the Company has to sell sugar in higher price than the average price formulated by Thai Cane and Sugar Company Limited to prevent losses from the increasing price of raw materials. As the results, the Company has to follow the sugar sales news from Thai Cane and Sugar Company Limited closely for pricing appropriately.

## 2. Risk from Business Operation of Byproducts

2.1 Biomass Power Plant Business operated by *Buriram Energy Company Limited (BEC)*, *Buriram Power Company Limited (BPC)* and *Buriram Power Plus Company Limited (BPP)*

### 2.1.1 Risk from Insufficiency of Fuel Material for Electricity Generation

Currently, BSF provides the bagasse which is the byproduct of sugar manufacturing to BEC, BPC and BPP as a biofuel material for electricity generation. Therefore, if the amount of sugarcane in the crop year is small, it will affect to the insufficiency of bagasse for electricity generation and the break-off of the generator accordingly. The amount of bagasse from the sugar production of the Company is approximately 26% of total weight of sugarcane crushed. In the crop year of 2016/2017, the Company produced bagasse approximately 650,000 tons in which the sugar factory used as fuel in amount of 250,000 tons for heat generation in sugar production process, whereas, the capacity of each power plants is 9.9 MW., which requires the fuel material in amount of 430 – 500 tons per day or equivalent to 150,000 tons per year. However, the Company plans to supply the additional sugarcane leaves from farmers in amount of

40,000 tons which is sufficient to generate electricity, on the other hand, if the amount of cane crushing is less than 2.50 million tons, the amount of bagasse will not be sufficient for full capacity of electricity generation.

Additionally, the machine of the Company can be substituted by other fuel materials, such as woodchip, rice husks or sugarcane leaves to generate electricity. In the crop year of 2016/2017, the Company purchased the additional sugarcane leaves from more than 20,000 households of the sugarcane farmers. The advantage from using sugarcane leaves as fuel material is that the moisture level of sugarcane leaves is quite lower than bagasse which can be satisfactorily used for electricity generation; therefore, this risk can be minimized properly. Nonetheless, the using of other raw materials will increase the cost of electricity generation which definitely affected to the net profits accordingly.

### **2.1.2 Environmental Risks**

The operation of power plant is under the Acts and regulations concerning to the environmental protection and management which is included the pollution control. Throughout the period of business operation, the Company has followed these measures to protect and prevent any kinds of environmental impacts, for example, the water drainage system, the control system of substances, wastewater management system and waste elimination system. The Company also provides green space or open space reserve within the area of power plant location, totaling 25 Rai, as well as the following and verifying the operation in terms of environmental impacts closely in order to regulate the electricity generation process pursuant to laws and regulations concerning to the pollution deduction such as the using of the wet scrubber system.

In July 2012, BEC was awarded the Green Industry Level 2 (Green Activity) and promoted to level 3 (Green System) in July 2016 and also certified by ISO14001:2004 in March 2016. Furthermore, BPC was promoted from Green Industry Level 1 (Green Commitment) in 2015 to Level 2 (Green Activity) in April 2016. These certificates can be explained that the Company emphasizes the environmental management systematically and assesses as well as review the practices continuously by Provincial Industry Office and Provincial Industrial Estate Authority

## 2.2 Manufacturer and Distributor of Fertilizer operated by *Key Brand Fertilizer Company Limited* (KBF)

### 2.2.1 The Risk from Existing Consumption Behaviors

KBF was initiated the business of organic fertilizer manufacturer in order to provide the soil improvement and nutrition since December 2012. The target customers are mostly the sugarcane farmers. The sugarcane farmers have more understanding and knowledge about the soil improvement by organic substance and soil pH adjustment by Dolomite which increase the efficiency of chemical fertilizer and highly improve the physical and chemical property of soil. However, the sugarcane farmers have found the problem from the using of powdered organic fertilizer in the planting area. Therefore, KBF has cooperated with BRD to solve this problem by changing the method to apply the powdered organic fertilizer through designing the Big Bag packages and use the raising sugarcane truck to lift the Big Bag and put into the fertilizer application machine. According to this method, the farmers can apply the powdered organic fertilizer in the planting area very closely. Furthermore, the Company also conveys the knowledge of organic fertilizer and takes tour the demonstration farm that applied the organic fertilizer, including the academic information support which influenced the changes of farmers consuming behaviors to increasingly apply the powdered fertilizer.

### 2.2.2 Environmental Risks

The business operation of fertilizer manufacturer and distributor for soil improvement is under laws and Acts B.E. 2518 and its amendment No.2 B.E. 2550 concerning to the quality control to sustain the benefits for farmer and agricultural industry which included the pollution control, waste management, health and safety in workplace and dangerous material management. These regulations are complicated and have been changing continuously; in addition, the law enforcement sometimes depends on the individual interpretation by relevant departments

In the past, KBF received the factory establishment license and the fertilizer manufacturing license pursuant to the laws and relevant regulations. Additionally, KBF also set the measures of environmental protection and prevention for employees and surrounding areas such as the utilization of dust collector chamber, wet scrubber system, water cannon vehicle and providing

soundproof headband to reduce acoustic impact including participating CSR activities in order to sustainably develop the community. The manufacturing plant of KBF is located far away from community areas therefore it can be assured that the environmental risk is quite low.

### 3. Other Risks

#### 3.1 The Risk from High Debt to Equity Ratio (D/E Ratio)

According to the financial statement year ended on December 31, 2015 and December 31, 2016, the D/E ratio of the Company is equivalent to 2.18% and 2.45% respectively. However, the Company is a holding company therefore the bank loan agreement currently signed by the subsidiaries which has been operated such as BSF, BEC and BPC in which each subsidiary calculated and maintained D/E ratio separately. On December 31, 2015, D/E ratio of BSF, BEC and BPC are in compliance with bank loan contracts. Regarding to the capital raising in Stock Exchange of Thailand, the D/E ratio of the Company was decreased, therefore, the risk related to D/E ratio of the Company was also decreased as well. Nonetheless, the bank loan agreement is not written or defined that the Company and its subsidiaries has to maintain other financial ratio properly, except for D/E ratio.

#### 3.2 The Risk from the Influences of Major Shareholders on Policy Formulation and Administration

The family of Tangtrongwechakit and Buriram Capital Company Limited, in which the major shareholders is the family of Tangtrongwechakit, holding shares by 74.32% of registered capital which was issued and paid-up after offering the ordinary shares. In addition, the family of Tangtrongwechakit has taken positions of the executives and authorized directors. The Company and/or the minor shareholders may have the risk from the influences of major shareholders on policy formulation and administration somehow, for example, the policy and management control, approval voting control in the shareholders' meeting which requires the majority votes, except for any agenda which required three-fourths of total votes from the shareholders' meeting. Therefore, other shareholders may not control the votes to balance the power of major shareholders.

Nevertheless, according to the transparency, accountability and the power balance of the executives and directors, the Company currently set up the Department of Internal Audit regulated by Audit Committees and auditing outsource companies to audit and balance the power in term of the approval of any agenda before proposed to shareholder's meeting in order to prevent the conflict and the transparency of operation. Additionally, the department of Risk Management was set up and regulated by Risk Management Committees to manage all of the risks in the organization by setting up the risk management plan as needed.