

### 3. 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. By-product business as follows:
  - Biomass-fired power plants operated by Buriram Energy Co., Ltd. (“BEC”), 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”).

#### **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 by using sugarcanes as main raw material. However, BSF does not own sugarcane farm sufficiently for production capacity, thus to allocate sufficient sugarcanes 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 the 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 2018. Hence, the amount of the sugarcane plantation has gradually increased but there will be some years that the company meet with drought as result of sugarcane planting area are decreased as shown in the following table:

Crop Year	Sugarcane Plantation (Rai)	Number of Plots (Plot)	Average Production (Ton/Rai)
2012/13	129,571.31	21,876.00	13.51
2013/14	168,763.90	28,460.00	10.43
2014/15	177,167.67	30,934.00	11.01
2015/16	185,062.64	32,876.00	12.15
2016/17	181,202.71	30,872.00	13.22
2017/18	247,090.68	40,003.00	13.76

(b) The risks from climate change, rainfall, irrigation, soil fertility, sugarcane varieties and other sugarcane diseases affect the crop yield of sugarcane per Rai. The changes of each factor can cause agricultural output diminution. According to the climate change and rainfall, the company has supported the watering system during the drought through drip irrigation system in the sugarcane farms by cooperating with the Office of the Cane and Sugar Fund (OCSF) to provide a long-term loan with 2% interest rate per annum for sugarcane farmers to install such drip irrigation system.

(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 sugarcanes, preserving organic matter, adjusting pH for fertilizer efficiency. The company produces the fertilizers from filter cake as a main raw material which is a by-product from sugar production process.

(d) The risk from sugarcane varieties. The company has selected and procured sugarcane varieties which are appropriate for the plantation areas and also provide the sugarcane varieties testing area for the selection of a new sugarcane variety in order to replace deteriorated ones, including the arrangement of the sugarcane varieties for planting, and use of qualified sugarcane varieties to provide higher crop yield for higher returns for the farmers, as well as higher sugar production per ton.

(e) The risk from the purchasing competition of local sugarcanes. If other sugar factories in local areas offer higher price of sugarcanes than BSF's, sugarcane farmers may trade their sugarcanes to those factories instead; therefore, the amount of sugarcane crushing will be decreased respectively. As the result, BRD provides the solution for this matter through conducting the contract farming between the company and sugarcane farmers by providing fund, fertilizer, chemical, sugarcane variety, or other agricultural machines and equipment in the plantation of 40 kilometers around the factory in order to

legally transfer the rights of such products to the company in advance before cane crushing season. Additionally, BRD aims to keep good relationship with sugarcane farmers through using the support strategies by providing 17 teams of agriculture specialists to give advices to sugarcane farmers in individual planting area such as recommending suitable sugarcane variety for each plantation, managing and examining soil and water conditions and supporting all facilities in the crop period from material preparation to harvesting and selling to BSF by using online and GPS system to ensure that every sugarcane plot is monitored and supported appropriately so that sugarcane farmers can operate the quality production and gain more crop yield per Rai which means that sugarcane farmers will gain more revenue and stable household economic status. Consequently, BSF has not encountered the sugarcane insufficiency for the sugarcane crushing season.

Besides, 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 sugarcanes.

BRD has the additional risk management plan to earn more sugarcane output and efficiency from the sugarcane farmers by mean of supporting sugarcane farmers in each plantation area with the focus on the precision agriculture policy consisting of 3 elements: information technology, know-how technology and management. Such policy is based on the concept that agricultural plants and environmental factors such as soil, water, sunlight, and wind in a planting area affect the agricultural output differently in line with each environmental condition. Thus, agricultural plants in the same area are monitored in a different manner by taking the most efficient output into account. Regarding the sugarcane cropping season in 2019/2020, BRD has the policy for supporting the complete irrigation system in the sugarcane plantation – by applying the irrigation system for managing the water supply in the sugarcane plantation with efficiency, in order to increase the sugarcane’s productivity and create sustainability in sugarcane production.

BRD’s goal is to implement every sugarcane farm adhered to the precision agriculture in order to ensure the higher efficient output and the consequent benefits received: lower cost, more output, acceptable quality, achieving the maximum benefits from using resources, and environmental conservation.

## 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 issuing the promotion policies, trade invention policies, export and import policies of sugar industry group by the government sectors 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 gasoline for automobile fuel. The factors as mentioned above affect 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 and the export price is primarily based on the 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 market change. In 2018, the price of New York Sugar No. 11 was averaged at 12.24 cent per pound.

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

Fiscal year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Average Price (Cent/Pound)	11.37	18.08	22.14	27.09	21.55	17.47	16.32	13.12	18.18	15.78	12.24

### Average Price of London Sugar No.5

Fiscal Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Average Price (US\$/Ton)	351.38	487.86	614.79	706.39	587.68	489.71	440.04	373.40	500.39	433.25	343.79

Source: Investing.com

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, in the event that 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.

However, the operating results of the company depend on the of sugar and molasses business only which means that the fluctuation of global sugar market price has the influence on the operating results of the company definitely. However, BSG has invested in many projects related to the sugar and molasses business such as the biomass power plant by using bagasse, the factory producing and distributing organic fertilizer, which will be decreased the impact on revenue or operating results base on the mechanics of the sugar price in global market.

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

BRD/BSF support 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 in order to receive such support in line with the actual results.

The support from sugarcane advance payment loans is proceeded by transferring to sugarcane farmers' bank accounts so that the sugarcane 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 sugarcane farmers who are provided the advance payment loans have to sell sugarcanes only to the factory after harvesting, in the period of sugarcane crushing season. Those sugarcane farmers shall harvest and send to the factory accordingly, after that the factory will pay the returns to the sugarcane farmers by deducting from the sugarcane advance payment loan.

According to such advance payment loans mentioned above, if the sugarcane farmers were unable to bring the sugarcane for crushing as per agreement, which may be subject to many causes such as; drought problem, flood or epidemic, etc. Hence, the company shall be at risk of doubtful accounts from non-performing loan in the event that the sugarcane farmers unable to pay the debts on the due date, and the company will be forced the doubtful accounts increase, and it also directly affected the BSF's operating results during 2014 until 2018. Whereas, the company has set the allowance for doubtful accounts as below;

(Unit: Million Baht)

Item	2014	2015	2016	2017	2018
Allowance for Doubtful Accounts	1.05	3.44	0.74	10.28	4.56
Sugarcane Farmers Account Receivable	880.52	782.61	1,069.92	957.07	682.56
Percentage of Doubtful Accounts	0.12	0.44	0.07	1.07	0.67

The ratio of allowance for doubtful accounts during 2014 to 2018 was approximately 0.47% of sugarcane farmers account receivable at the end of the accounting period. The company has emphasized this advance payment loans and managed its risk through specifying the qualification of sugarcane farmers and classifying 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 has also provided the agricultural specialist teams to look after the planting process and used GPS system to survey the planting areas in order to precisely collect the data in real time and solve the problems timely.

#### 1.4 Foreign Exchange Risk

The company has recognized the export revenue in term of US Dollars (USD), approximately equivalent to 70% of the total sugar selling revenue; therefore, the revenue of the company shall be fluctuated according to the exchange rate of USD/THB (Thai Baht).

However, the company has a preventive measure by hedging the foreign exchange risk with forward contracts. The exchange currency rate in the forward contracts shall be higher than the rate specified by Thai Cane and Sugar Company Limited (TCSC) in calculation of quota B sugar. In this regard, such matter depends on the consideration of the executives about the trend of exchange rate at that time.

In addition, the company also closely monitors the movement of the currency exchange rates, in order to take any actions required due changed situation on time. However, the prevention of the mentioned risk factors may not be able to prevent from the risks, if Thai Baht currency tends to rise consecutively in long-term.

## 1.5 Risk from Governmental Control

### 1.5.1 Risk from Government Policy

Sugarcane and sugar industry in Thailand has faced the significant change which comes with quite great impact. On January 15th, 2018, the Council of Ministers had the resolution of acknowledgement of order by the Head of National Council for Peace and Order 1/2561 – regarding of Law amendment for bearing the restructuring of sugarcane and sugar industry for whole system, in order to cancel the determination of sugar selling price which was consumed within the Kingdom, and it shall be according to the mechanic of sugar price in global market. The occurred difference from the average price survey of actual sugar selling price in the Kingdom in one month, and the average price of white sugar price in London Market number 5 plus Thai Premium Sugar in one month. Then, send it the fund for maintaining the stability of sugarcane and sugar industry system, and issue the regulations of Sugarcane and Sugar Committee in respect of collecting money from sugar distribution in the Kingdom into Sugarcane and Sugar Fund B.E. 2561.

Moreover, there is the restructuring of sugarcane and sugar industry - cancellation of all 3 quotas system of sugar which are; domestic consumption (Quota A), export for selling price (Quota B), and export by factory (Quota C). Also, the new management system will determine the factory to organize sufficient sugar for domestic consumption, while the competent authorities shall appoint representative to discuss on the export criteria.

Nonetheless, the floating sugar price will not have issue with the sugar quota. Office of Cane and Sugar Board (OCSB) will determine that the sugar factory shall reserve sugar for 1 month, to prevent insufficiency, and import the sugar under the ASEAN Free Trade of 0% tax in order to prevent the monopoly and increase the efficiency of production and Cane and Sugar Fund management which will be determined to collect the money from the differences between the factory price and the average actual selling price into the Cane and Sugar Fund in order to save it for maintaining the stability of the cane price for the farmer's strength. However, by the principle, Department of Internal Trade will remain the sugar to be in the Restricted Goods Account because sugar is a necessary product for living, and it is also consumable goods with the price that changes by the global market, for simple management without wide impact on the consumers.

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

According to the cane crushing 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 sugar based on 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, in each year, the amount of sugar revenue is different. Therefore, the revenue from sugar selling of the company in each quarter might increase or decrease based on the mentioned factors and the sales amount of each quarter. It is also related to the restructuring of sugarcane and sugar industry that cancel the quotas system and also cancel the determination of sugar selling price which is consumed in the Kingdom to be according to the mechanics of the sugar price in global market. However, the company has the risk management measures in term of domestic distribution for bearing with the change of regulations, and closely monitor on announcement/regulations from government authorities. In 2019, the company will be focusing on the marketing through 3 major channels which are; distributors channel (Yee-Pua), modern trade channel and food service channel as the new channels for the company. Anyway, the company has the proportion of domestic sugar selling calculated as 30%.

### **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 sugarcane farmers gain 70% of profits from sugar sales. The calculated sugar price on the sugarcane price that has to pay to sugarcane 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 followed up the status of sugar sales from Thai Cane and Sugar Company Limited closely for determining the appropriate price of sugar in comparison with the average price of Thai Cane and Sugar Company Limited.



**Risk from Business Operations of Byproducts****Biomass Power Plant Business operated by Buriram Energy Company Limited (BEC), Buriram Power Company Limited (BPC), and Buriram Power Plus Company Limited (BPP)****1.1 Risk from Insufficiency of Fuel Material for Electricity Generation**

Currently, Buriram Sugar Factory Company Limited or 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 sugarcanes 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.

In the production year 2017/2018, the company had bagasse after crushing in amount of 903,607.57 tons which is 28.64% of the sugarcane for crushing, which the sugar factory uses it as the fuel for heat generation in the process of sugar production in amount of 303,349.04 tons. For each power plant has the requirement of fuel around 600 to 1,000 tons per day, however, the power plant's machines can use other replacement fuel materials such as; wood chips, sugarcane leaves, and chaff. In the previous production year, Buriram Sugar Group has added the project for purchasing the sugarcane leaf from sugarcane farmers more than 20,000 families, in order to use the sugarcane leaf as the fuel. Since, the sugarcane leaf has less humidity than the bagasse; therefore it is suitable as fuel for generating electricity. Hence, the company can control the risk of insufficiency on materials for generating electricity. Nonetheless, if the company uses other raw materials to replace, it might cause the cost of electricity generating to rise which will affect the net profits accordingly.

**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 such as soil, water, and air. Thorough 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 term of environmental impacts closely in order to regulate the electricity generation process pursuant to laws and regulations, and reduce environmental pollution such as a dust suppression by using scrubbing steam to change dust into soil by the wet scrubber system and applying

the exhaust from the chimney onto the sugar product development process in order to decrease the amount of the occurred exhaust.

In July 2012, BEC was awarded the Green Industry Level 2 (Green Activity) and promoted to level 3 (Green Activity) in July 2016 for the enhancement of environmental conservation, 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 from the Provincial Industry Office and Provincial Industrial Estate Authority. Such certificate can be explained that the company has emphasized the environmental management systematically, assesses and review the practices continuously.

In 2017, BEC received 2 awards; that is, the alternative energy of the cogeneration project in the event of Thailand Energy Awards 2017 by the Minister of the Ministry of Energy, and the winner cogeneration category in the event of 35<sup>th</sup> ASEAN Ministers on Energy Meeting at Pasay, Philippines.

In addition, the companies continue to develop and focus on preserving the environment continuously. In 2018, BPC received the Excellence Award for the bagasse-fired cogeneration power plant project from Deputy Prime Minister and Minister of Justice in Thailand Energy Awards 2018 Event, and it also achieved the First-runner up Award on the cogeneration category at the 36th ASEAN Ministers on Energy Meeting (36 AMEM) in Singapore.

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

### **1.1 The Risk from Existing Consumption Behaviors**

Key Brand Fertilizer Company Limited or 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. During the 3-5 years ago, 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.

Currently, the company has the method of using organic powdered fertilizer which can improve the efficiency of the sugarcane farmer's performance. As of which, it has been developed for three years – it was started from developing the machine and designing the transportation of big bag packaging, and the cane stacker truck will put the big bag into fertilizer machine. Then, the machine had been developed with

installation of hydraulics system for putting the organic powdered fertilizer on the pile in each farm, and it can be applied in the farm instantly. Therefore, the farmers no longer need to wait in the queue of the cane stacker truck for putting the organic powdered fertilizer in the big bag into the fertilizer machine. It decreases the step of working process, duration of plantation preparation for rain season, and improves the use of organic powdered fertilizer to be more well-known.

However, the company also conveys the knowledge of organic fertilizer and organizes a plant visit on the demonstration farm applying the organic fertilizers, including the academic information support which influences the change of sugarcane farmers consuming behaviors to increasingly apply the powdered fertilizer.

## **1.2 Environmental Risks**

The business operation of fertilizer manufacturer and distributor for soil improvement is under laws and Acts B.E. 2518 amended by No.2 B.E. 2550 concerning to the quality control to sustain the benefits for farmers and agricultural industry which included the pollution control such as soil, water, air and toxins, 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 microbe to accelerate biodegradation and elimination of waste disposal smell, the utilization of waste water ponds in the rainy season, the utilization of dust collector chamber, wet scrubber system, water cannon vehicle, and providing safety equipment for employees in order to reduce the machines' acoustic impact.

The CSR activities were organized in order to sustainably develop the community. The manufacturing plant of KBF is located far away from the community areas; therefore, it can be assured that the environmental risk is leveled low. In August 2018, KBF has achieved the award for implementing environmental governance principles in the operation of the business under the environmental governance project by the Ministry of Industry.

**Other Risks****1.1 The Risk from High Debt to Equity Ratio (D/E Ratio)**

According to the financial statements year ended on December 31, 2018 and December 31, 2017, the D/E ratio of the company is equivalent to 3.11% and 2.73% respectively. However, the company is a holding company; therefore, the bank loan agreement with the financial institutions, the agreement of Buriram Sugar Group Power Plant Infrastructure Fund, and the business operations of its subsidiaries such as BSF, and so on in which each subsidiary calculated and maintained D/E ratio separately, not calculating the entire business group. On December 31, 2018, D/E ratio of BSF was in compliance with commercial bank loan contracts.

Such D/E ratio is separately calculated as follows:

- Case 1 Debt to Equity: D/E ratio equivalent to 3.11 times
- Case 2 Interest Bearing Debt to Equity: IBD/E ratio equivalent to 2.76 times
- Case 3 Debt to Equity: D/E ratio excluding Infrastructure Fund equivalent to 1.84 times
- Case 4 Interest Bearing Debt to Equity: IBD/E Ratio excluding Infrastructure Fund equivalent to 1.49 times

In 2017, the company launched the investment unit “Buriram Sugar Group Power Plant Infrastructure Fund (BRRGIF)” to the financial institution and people in the Stock Exchange of Thailand. However, there is no accounting standard for recording the infrastructure fund, but to be accounted as a liability. Consequently, the D/E ratio of the company was increased.

In order to mitigate the risk on the loan from the commercial banks, the company has dealt the agreement on the D/E ratio and related agreement with the company and its subsidiaries without any obligations to maintain other financial ratio other than the D/E ratio.

**1.2 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 74.93% of the 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 influence of major shareholders on policy formulation and administration somehow, and the policy and management control, as well as voting control in the shareholders’ meeting

which requires the majority votes, except for any agenda which required 3/4 of the total votes at the shareholders' meeting. Therefore, other shareholders may not control the votes to balance the power of major shareholders. However, the company has determined the good corporate governance principles for the Board of Directors and executives to be comply with relating to the right of shareholders and information disclosure and transparency, etc.

Regarding to the transparency, accountability and the power balance of the executives and directors, the company has the Internal Audit Unit to be subject to the Audit Committee, and External Audit outsources to audit and balance the power of consideration and approval of any agenda items before proposing at the shareholder's meeting in order to prevent the conflict of interest, and to enhance the transparency of business operations. Additionally, the Risk Management Unit was appointed under the supervision of the Risk Management Committee to manage risk management of the entire organization to be an acceptable level (Risk Appetite). Moreover, the company appointed the Nomination and Remuneration Committee, and Corporate Governance Committee to ensure the transparency, clarity, and maintaining the best interest of all stakeholders.