

Consideration of social, environmental and legal impacts when approving corporate loans

Exercise

Thursday, 15 June 2023



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Background and rationale

When reviewing loan applications for businesses, banks and other financial institutions typically consider several criteria to determine a company's creditworthiness and its ability to repay the loan on time. These include the company's credit score (higher scores indicate that the company has a history of good credit management); review of a company's financial statements, including the balance sheet, income statement and cash flow statement, which provide information about the company's financial health And ability to pay the loan instalments on time; collateral such as business or personal assets of the business owner to Guarantee the loan; the industry in which the company operates; current market trends; and management's track record.

So far, few financial institutions recognise that the businesses they finance can have a significant impact on society and the environment. Even fewer institutions include these factors into their loan approval process. Unlike conventional business loans, green loans (either as a stand-alone green finance facility or as regular business loans for investments in green infrastructure) have unique features that go beyond purely financial criteria. These include social (i.e., job creation) and environmental (i.e., decreased water consumption) as well as economic (i.e., access to export markets) impacts.

Learning objectives

By the end of this session, participants will:

- 1) recognise that lending/funding to businesses to improve green compliance and water resource efficiency can have a significant impact on society and the environment.
- 2) start thinking in optimising their own lending/ funding procedures by taking into consideration non-financial aspects criteria.
- 3) learn how some water project can increase the life span of a business in the market (or its market share), which in turn help the bank keep its clients for additional period.

Learning methodology

Exercises using three (3) fictitious Jordanian business cases from three different industries; namely: the beverage, the dairy, and the poultry industries.

Case study: Beverage Producer

Jordan's bottled water and beverage industry is a growing sector that has seen significant growth in recent years. The industry is dominated by several major players, which produce a wide range of bottled water, juices, and other beverages. In addition to the major players, there are also several smaller companies that produce specialty products such as herbal teas, energy drinks, and other unique beverages.

The private beverage producer in our example extracts water from its own groundwater well to produce bottled water and juices. Like many other Jordanian businesses, this company has been affected by the depletion of water sources. Due to the decline of groundwater (its main raw material), the company has been forced to cut production or buy water from tankers. Tanked water price is at least 3 times higher than the well one. Implementing measures to use water more efficiency will allow the company to potentially operate at its maximum capacity without the need for external water supply, thus increasing revenues and profits. The raw water passes through several treatment stages to remove impurities, reduce the salt content and eliminate possible microbiological contamination before it is used for the production process, cleaning and washing, cooling and rinsing. About half of the water is embedded into the company's products (bottled water and juices) as an ingredient, the rest (Non-Production-Output (NPO) water) is discharged water (e.g. RO reject, backwash water from filters, water for rinsing operations), water for cooling and heating purposes and for domestic use. The RO reject water and rinsing water amount to more than 75% of the NPO water use. The treated water can be used for cooling, heating, and domestic purposes. In addition, there is a potential for even more water savings by implementing best practice measures around the factory. The combination of these interventions offers an estimated water saving potential of $\frac{1}{3}$ of the total annual raw water consumption. Taken together, these measures lead to an increase in production capacity of more than 40%, as more water is available

The following scores were the results of different studies external specialized consultants made.

The indexed **Environmental, Social and Governance (ESG) Impact** score is **55**. This score results from the low to medium evaluation of ESG-related criteria. For example, only a small number of nearby farmers benefit from the use of RO reject to irrigate their crops.

With a value of **88**, the **Economic Sustainability** score is by far the highest in this example. The positive assessment is based on one additional working day per week due to a more efficient use of available water, the expected improved revenue and marketing/CSR potential, and the reduced costs due to less water wastage.

The company's **Risk Management & Compliance** score of **68** considers the mitigation of serious business risks and absence of compliance issues (at present).

With a score of **87**, **Financial Health** is the best of the three companies in this example. The score is based on the company's high and increasing net worth and the regular and steady income stream that allows it to continue investing in assets or operations.

The company's indexed **Credit Score** of **77** considers its long credit history, the overall good payment behaviour and the industry risk being rated as low. In the past, there were late loan payments, but recently the payment behaviour has returned to normal.

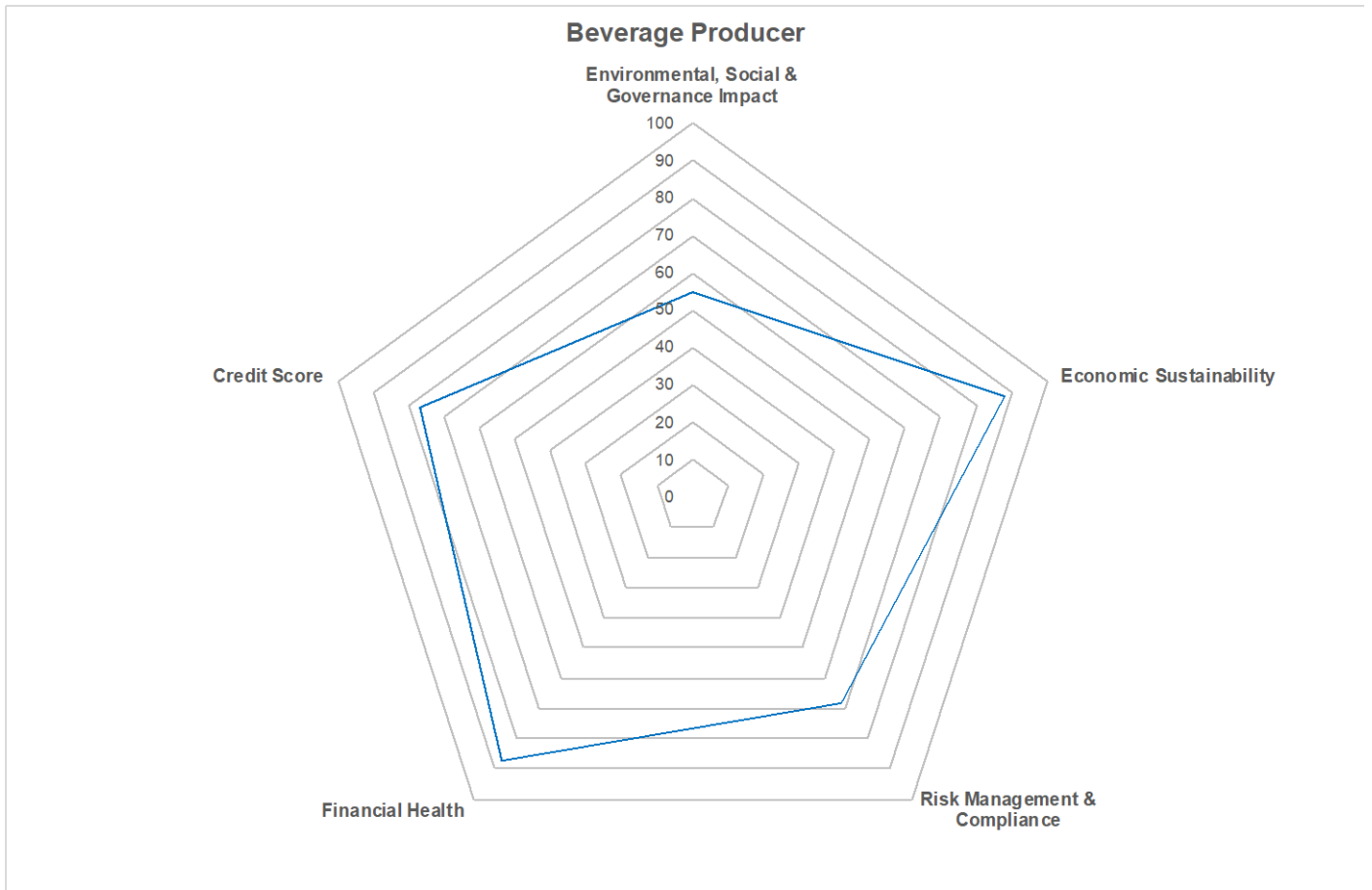


Figure 1: Radar chart visualising the performance of the Beverage Producer with regard to ESG Impact, Economic Sustainability, Risk Management & Compliance, Financial Health and Credit Score.

Case study: Dairy Producer

Dairy production is an important component of animal husbandry in Jordan, and the country has a well-established and growing one. Dairy farming is mostly practiced on small to medium-scale family-based farms, with a smaller number of larger commercial operations. The dairy industry in Jordan has undergone significant growth in recent years, with increased demand for milk and dairy products in Jordan and its neighbouring countries driving expansion and modernization of production facilities.

The private dairy producer in our example operates his own cow farm in addition to the milk-processing business. The production processes are well organised and highly automated. 80% of the water consumption is used on the farm and in the dairy factory (split equally) and the 20% is used for greening. Today, the company's own wastewater treatment plant is undersized due to the sharp increase in production since the company was founded 10 years ago and cannot cope with the increased volume of wastewater from the farm and dairy production. Therefore, excess wastewater is trucked away at high costs and dumped in the nearest landfill. In response to the ever-growing demand for dairy products, the company plans to double the number of cows in the future to increase production.

With an indexed score of **80**, the company is ranked second with regard to **Environmental, Social and Governance Impact**. This score results, amongst others, from less environmental pollution due to proper onsite treatment of all wastewater (instead of dumping it outside the company premises and the reuse of treated effluent for irrigation of greening area (instead of using raw water).

The mediocre rating of the company's **Economic Sustainability** with an indexed score of **57** is mainly the result of the low scoring for the expected improved export / market expansion potential and improved marketing/CSR potential due to the planned measures. The cost savings achieved due to the use of treated wastewater for irrigation have a favourable effect.

The combination of the lack of an immediate legal compliance issue and the company's low willingness to address water efficiency issues result in a score of **55** for **Risk Management & Compliance**.

At a value of **70**, the **Financial Health** score reflects the median net worth of the company, which nevertheless has a very regular and steady cash flow. Low liquidity and assets reduces the score.

The company's indexed **Credit Score of 67** considers the very young age and credit history, the overall good payment behaviour and the industry risk being rated as low.

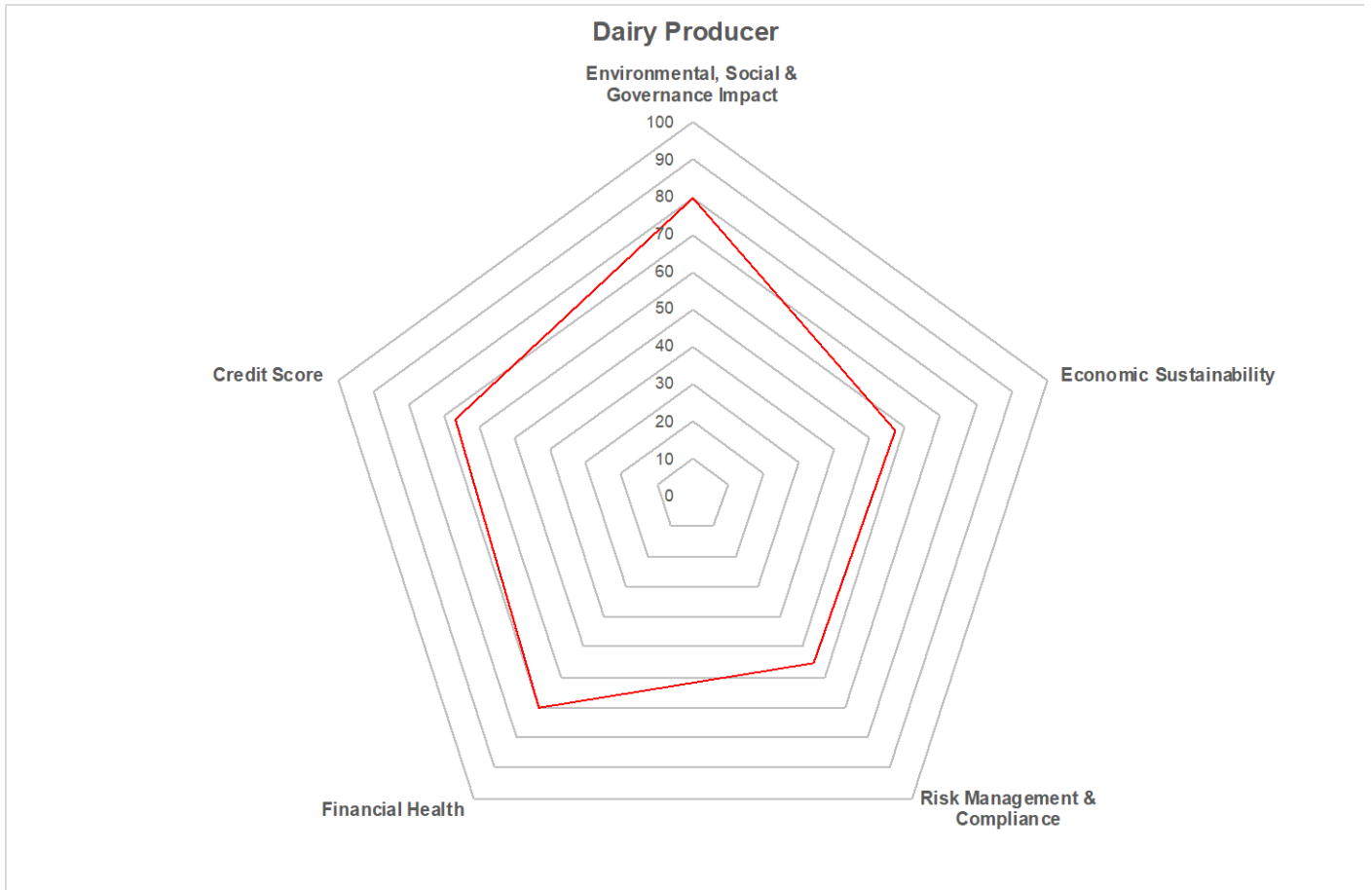


Figure 2: Radar chart visualising the performance of the Dairy Producer with regard to ESG Impact, Economic Sustainability, Risk Management & Compliance, Financial Health and Credit Score.

Case study: Poultry Farm

Poultry farming is a significant component of animal production in Jordan, and the country has a well-established and growing poultry industry. The majority of poultry farming is done on a commercial scale, with a smaller number of backyard or family-run operations. The poultry industry in Jordan has experienced significant growth in recent years, with increased demand for poultry products driving expansion and modernization of production facilities. However, the industry has also faced challenges, such as the bird flu outbreak and concerns about animal welfare and environmental impacts. To address these challenges, the Jordanian government has taken a number of measures to promote sustainable and responsible practices in poultry farming, including regulations on housing, feeding, and biosecurity, as well as efforts to promote alternative feed sources and reduce water consumption.

Like many other Jordanian livestock farms, the privately-owned farm in our example is also affected by water problems. In recent years, the water level in the farm's own wells has dropped considerably. This has led to the farm having to buy ca. 50% of its total water consumption of 900 m³/day from other sources at more than two Jordanian Dinar per cubic metre (JOD/m³) - eight times the cost of water from its own well. In this case, there is a very large (water) saving potential if treated wastewater is used instead of purchased water. By adding a tertiary treatment component to the company's existing wastewater treatment plant, the treated wastewater can reach quality levels that are acceptable for reuse. With the tertiary treatment unit in place, the company is expected to be able to recover up to 400 m³/day of treated wastewater for reuse at its facility (e.g. boiler, cooling tower, receiving area, etc.).

The high score of **92** for **Environmental, Social and Governance Impact** reflects the use of treated wastewater for irrigating own plants and providing part of it to nearby farmers for competitive price.

Although the proposed measure will result in more water being available, which would allow for a 50% increase in production, the **Economic Sustainability** score of **67** is in the midfield.

The proposed Water Efficiency Measure contributes greatly to mitigating the threat of legal compliance issues arising from the use of poorly treated wastewater in restricted irrigation. This combined with a high willingness/ability to address water efficiency issues, results in a **Risk Management & Compliance** score of **88**.

Based on mediocre assessments of the company's net worth, liquidity and assets as well as cash flow, the **Financial Health** score is **80**.

The very low **Credit Score** of 60 results from a short age of credit history, on-time loan repayments and a high industry risk.

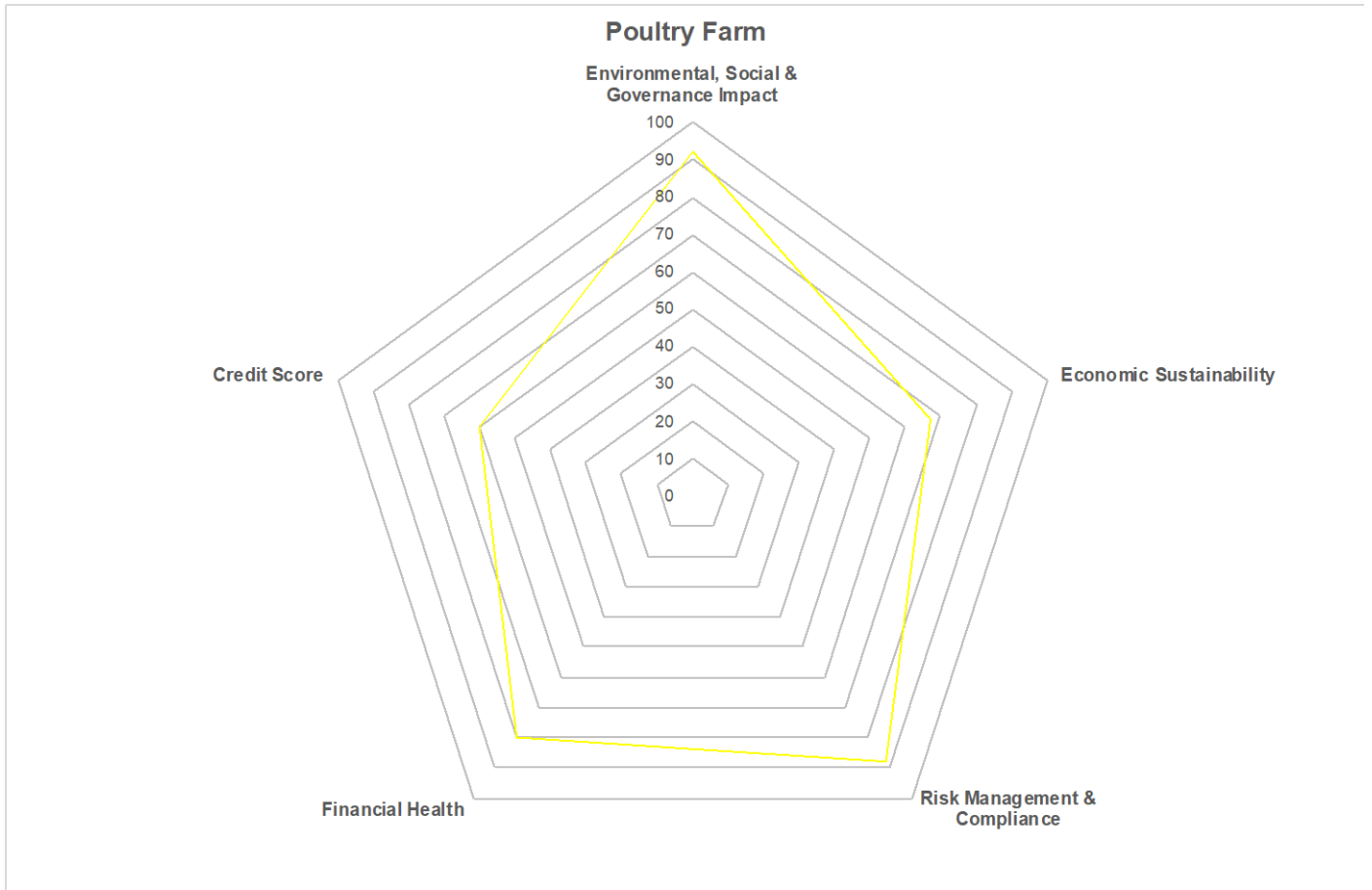


Figure 3: Radar chart visualising the performance of the Poultry Farm with regard to ESG Impact, Economic Sustainability, Risk Management & Compliance, Financial Health and Credit Score.

Exercise

In this exercise we assume that you are responsible for assessing loan applications from companies. We further assume that there is only a limited amount of credit available and therefore only one of the three (3) credit applications submitted by companies from the beverage industry, the dairy industry and the poultry industry to finance water efficiency measures can be serviced.

Applicants' performance in relation to the following five (5) factors was carefully evaluated by experts in the fields of law, engineering, environmental and social sciences: Environmental, Social & Governance Impact, Economic Sustainability; Risk Management & Compliance; Financial Health; and Credit Score. The indexed scores for each company are shown in the printed radar chart. Explanation of information the ratings are based on are available from the case study descriptions.

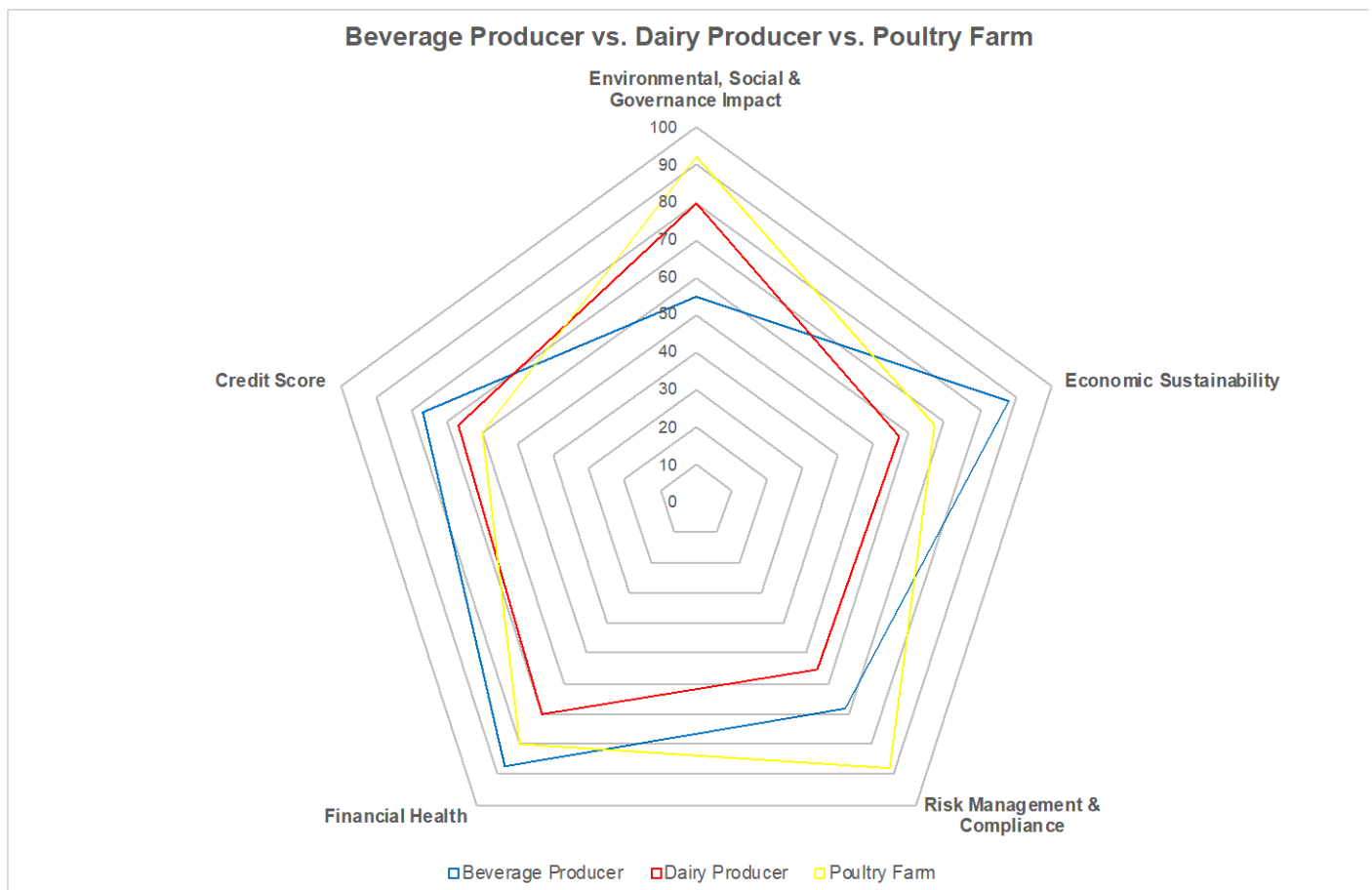


Figure 4: Performance comparison of Beverage Producer, Dairy Producer and Poultry Farm with regard to ESG Impact, Economic Sustainability, Risk Management & Compliance, Financial Health and Credit Score.

- Task 1:** Discuss available information and develop a line of reasoning on how social and environmental impacts, economic sustainability and legal compliance can support the selection of one candidate over the others. Present your finding to the other group(s).
- Task 2:** Discuss available information and develop a line of reasoning on whether the high performance of the dairy processing company and the poultry farm on some factors can compensate for their lower performance on creditworthiness and still qualify them for credit approval. Present your finding to the other group(s).