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Analysis about the Impact on Financial Reports of China's Aviation Entities under the Climate-related Risks--An Example of Spring Airlines

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Abstract: Climate-related risks significantly impact business operations, including financial aspects. Governments and organizations have introduced different kinds of policies and regulations to inform entities to reduce emissions and disclose climate-related risks. Under these circumstances, carbon intensive industries, eg. aviation entities could be significantly affected. Meanwhile,investors and other skateboarders also need to understand the impact on entities' financial status in order to make decisions. In China, government has set a goal of reaching peak carbon emissions in 2030 and carbon neutrality in 2060. The release of IFRS S2 could be a reference for China to establish its own climate-related disclosure regulations in the future. This paper focuses on the impact of climate-related risks to China's aviation entities ,using Spring Airline company as a case study. By referencing IFRS S2, the study analyzes the implications for financial reporting and discusses potential future developments in this area.

Keywords: Climate related risks, aviation, Spring Airline, financial reports

1. Introduction

In 2023, the International Sustainability Standards Board (ISSB) released the IFRS S2 climate related disclosure guidelines for enterprise, which set a series of standards to restrict the financial information and sustainable reports. Following the Paris Agreement, China gave the promise of reaching peak carbon emissions in 2030 and attain carbon neutrality in 2060. On 4th October 2021, at the 77th IATA Annual General Meeting, IATA member airlines made a promise that they will achieve net-zero carbon emissions from their operations by 2050[4], aligning their efforts with the Paris Agreement's temperature goals.

With the release of IFRS S2, climate related disclosure will force entities to transfer the business into green and low carbon emission ones. In the coming years, China is expected to introduce more regulations or standards to monitor the process and more and more entities will adopt IFRS S2 in sustainability report.

To support the carbon emissions targets, enterprises in China will face stricter supervision in various aspects. It is necessary for them to consider about how financial information can be influenced if Chinese government adopts standards in IFRS S2. Among different kinds of entities, aviation entities will face much more pressure as aviation industry itself is carbon intensive and have much

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more pressure under the targets. Regulations like IFRS S2 will have profound implications on their sustainability reports and financial information.

This essay focuses on aviation entities to discuss IFRS S2's impact and possible future developments.

2. Possible influence to Spring Airlines

China's aviation market accounted for 18.9% in 2021 and is still growing[1]. Spring Airlines, a prominent low-cost carrier, reported revenues exceeding 17 trillion yuan in 2023, reflecting a remarkable 78.5% increase compared to 2022 (Spring Airlines). After the pandemic, the low cost airline entity has been growing fast and may keep growing in the coming year.

However, as one of the carbon intensive industry, aviation entities faces the fact of transferring to a more sustainable operation model. Climate related disclosures and sustainable report will likely increase relevant cost. Meanwhile, to meet the carbon emissions goals, the Chinese government has introduced regulations to encourage the use of SAF(sustainable aviation fuel), a transformation of china's aviation entities is inevitable.

According to sustainable report disclosure requirements like IFRS S2, entities are required to disclose current and predicted financial influence of climate-related risks. Such disclosures must address potential effects on financial statements and cash flow statements. Among these accounting figures , several aspects need to be considered.

2.1. Non-Current Assets

Climate-related risks influence the value of non-current assets in entities. There are evidences showing climate-related risks will affect the impairment of the assets and the judge of impairment . It could affect the calculation of value in use and the depreciation if entities changes the residual value and method of depreciation under certain regulations or policies. If China establishes the climate-related disclosure standard in the future, which is already in progress, depreciation method may be revised, necessitating more detailed and specific disclosure standards..

2.2. Provision

With the IATA committing to net-zero carbon emissions by 2050, airlines entities are increasingly turning to sustainable aviation fuel (SAF) to reduce the carbon emissions. SAF, recognized and promoted by various countries and organizations, has already been adopted in China; for example, China airline has already used it in practice in 2022 December. CAAC(Civil Aviation Administration of China) and NDRC(National Development and Reform Commission) both encourage the use of sustainable aviation fuel and trying to increase the amount to over 50 thousands tons.

Nevertheless, SAF's limited availability and high production costs currently make it significantly more expensive than traditional aviation fuel. Additionally, contingent liabilities could arise if entities commit to carbon emission reduction targets. These financial impacts could result in economic outflows and reduced profitability, adding pressure to entities' financial performance.

2.3. Revenue

The use of SAF may increase the ticket price which could effect the revenue of airlines entities like Spring Airlines, which operates as low-cost carrier. According to a report released by Delottie, the use of SAF in aviation industry is still in the emerging stage and only several airlines are using it in some flights[1]. Spring Airline is not on the list. It also states that the cost of SAF is 2 or 5 times higher than current fuel, but will be lower if the scale of production is expanded. According to Canada

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Airlines, the carbon price in the flying ticket will reduces passenger demand and travel intentions. The report shows that the carbon price in the ticket would be 123 Yuan or 170 Canada yuan[12]. This may give pressure to Spring Airline if the Chinese government release the specific carbon emissions targets which aviation entities should reach. As a result, the entity may rise the price.

2.4. Cost

The climate related disclosure requirements of IFRS S2 states that enetities should disclose four aspects, which are governance, strategy , risk management, and metrics & targets.

For example, Spring Airline lags behind other airline entities in terms of sustainability reporting. Unlike its competitors, it has not released detailed sustainability reports outlining specific goals and strategies for reducing carbon emissions and managing climate-related risks. Additionally, the entity lacks specific climate related governance committee or other department.

All of these disclosure will increase operational costs, which is inevitable under the relevant laws or regulation if it adopts IFRS S2 in China.

2.5. Other Financial Information

Climate-related risks may also affect financial information beyond direct accounting entries. A critical consideration is the entity's going concern. When the cost is increasing and assets are decreasing due to disclosure standards, the business environment may become increasingly challenging, particularly for a low-cost airline company like Spring Airlines.

For instance, aviation revenue is the key audit matter, accounting for 97% in the whole group entity[9]. An increase of 5% in fuel price could lead to a 21.46% increase in operational cost[11]. The operation of Spring Airline may be seriously affected if the entity increase the price of flying tickets.

On the other hand, climate-related risk could also affect the financial market, including loan interest, which is another aspect being affected not only in airline entities but also in other companies. Once the loan interest is changed, the capital structure may also be affected.

3. Possible Opportunities for Spring Airlines

Sustainable report is becoming increasingly important as investors take this as a curial indicator of company’s value. In China, government is encouraging airline entities to use SAF in reducing carbon emissions and is supporting the establish of the climate-related disclosure regulations. In 2023, the 1st session of China’s national legislature was held and expressed its intention to establish climate-related disclosure standards tailored to domestic entities.

If China take IFRS S2 as the reference to establish its own disclosure standards, significant impacts on Spring Airlines' financial information are expected. However, there are also opportunities for Spring airlines if it take a chance in the following aspects.

3.1. The Support from Local Government

Governments are likely to play a crucial role in facilitating airlines' transition to greener and more sustainable operations. Although the climate-related disclosure standards may rise the cost of the business, government support in the form of subsidies or incentives can help alleviate these pressures. For example, NDRC encourages the using of SAF and the construction of related airports facilities. The government may also establish a standardized carbon price for flight tickets based on mileage, creating a structured framework for sustainable practices. With such policies in place, airlines like Spring Airlines could allocate more resources toward SAF procurement and related investments, enabling smoother transitions into sustainable operations.

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3.2. Enhanced Brand Image and Innovation Promotion Models

In respond to China's carbon emissions goal, Spring airlines can enhance its brand image among customers by adopting sustainable practices. For example, even though government could set a carbon price in the flying ticket, the passengers who have regular travel needs will not be seriously affected. Spring airline could take this chance to launch a green travel package for these passengers. The price of the package should be more acceptable comparing to single ones.

4. Future Developments and Problems

IATA estimates that in 2050, the demand for air passenger would exceed 10 billion[4]. As the aviation industry continue grow, local governments in China are likely to release more specific climate-related disclosures standards for aviation industry. Organizations and related departments are already introducing new policies and make discussions about how to cope with other leading countries and regions. This means to survive in a competitive business environment, aviation entities will need to complete the green transformation and set climate-related goals as part of their business strategies. Currently, there is no specific regulations in China for aviation entities in climate related disclosure aspect. However, considering the industry is carbon intensive, the government is expected to set a carbon emission goal for the industry, which may not easy for low-cost airline entities like Spring airlines.

4.1. Development

Recently, China released several regulations to encourage the use of SAF and reduce the carbon emissions. With the release of IFRS S2, Chinese government will set its own standards for climate-related disclosure and other sustainable report. A key challenge lies in tailoring these standards to align with China's unique societal and economic conditions. Ye addressed ten key challenges in developing climate-related disclosure standard in China, emphasizing the importance of incorporating carbon emission goals into disclosure requirements. This includes the need for clear guidelines to help entities establish their own carbon reduction targets and set realistic timelines. Meanwhile, on 9th May,2023, Spring airline finished its first "green travel" from Tianjin to Shanghai with SAF[9].

The use of SAF will is a crucial way to reduce carbon emissions in aviation industry. This requires supports from not only airlines but also other entities such as airports and SAF production providers. The building of production and consumption chain requires time and government should be the leading the project. Other supportive policies are important for China's low-cost airlines. Policies such as tax incentives or operational cost reductions could encourage low-cost carriers like Spring Airlines to expedite their green transformation and secure long-term benefits for the industry.

4.2. Problems

China's commitment to achieving carbon neutrality will necessitate the introduction of comprehensive regulations and laws in the near future. These regulations may follow IFRS S2 and require more specific disclosures for different kinds of entities.

No matter what kinds of climate-related disclosure standards, they are based on the standard of greenhouse gas emission. The problem is how to gain relevant data and how to increase the reliability. The data is also significant for Investors and they may use the information to make relevant decisions. It could also be a rating indicator for banks when borrowing loans to aviation entities.

For example, for investors and regulators, the data should be traceable and accurate in order to make decisions. Still, there are some difficulties in measuring the accurate amount regarding to

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climate information by currency. Although some organizations such as IASB have given advises about the analysis of climate-related risk, the cost of such analysis and accuracy remains a problem. IFRS requires entities disclose the goal of carbon emission in the following years to show the determination of reducing carbon emission. Achieving these goals, however, demands substantial industry-wide advancements in infrastructure and practices. In Spring airline's report, it mentioned the reduce of carbon dioxide by 33,177 tons in 2023[9] but gave little explanation about the date collection. Without reliable measurement disclosure and relevant audit information, it is hard for investors or regulators to rely on such data, leading to potential inefficiencies and wasted resources for the entity itself. In addition to the accuracy of carbon emissions, the ability to deal with climate-related risk is also a request in the disclosure standards. IFRS S2 suggests entities use scenario analysis to evaluate the ability of dealing with different climate changes, including the potential financial influence. Governments should give advice and guidelines for the entities as most entities in China lack these experiences , not to mention the large effort and resources they are required.

5. Conclusion

As China's aviation industry continues to develop, it is inevitable that the sector will undergo a transformation to align with sustainable development goals. To support sustainable development, Spring Airline need to consider several financial aspects of climate-related disclosure. While the company's annual reports already reflect some efforts, such as the initial use of SAF and reporting on carbon emissions, these disclosures fall short of meeting the standards outlined in IFRS S2 and lack sufficient detail.Above all, as a low-cost company, controlling operation cost and revenue are crucial. To meet the standard of IFRS S2, costly measures like scenario analysis and other disclosure may increase of the price of flying ticket. Additionally, the depreciation of assets and the need for increased provisions also could be seriously changed because of the standards.

It is foreseeable that local government will release specific climate-related disclosure regulations to cope up with the development of reducing carbon emissions in the near future. Some aviation entities such as China Airline is trying to compliance with the regulations and disclose the climate-related risks and management in their sustainable reports. Spring Airline's needs to make efforts to catch up with the situation to maintain its leading positions in the low-cost airline market.

References

[1] *Delottie. (2023).Our Ponit of View: Sustainable Aviation Fuels (SAF) in China Checking for take off from https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/energy-resources/deloitte-cn-saf-en-230922.pdf.*

[2] *Fengying Ye. (2021).The analyst of accounting affects on climate related risks. Finance and Accounting Monthly, 23, 155-160.*

[3] *Fengying Ye & Shizhong Huang.(2023). The Regulations and challenges of Climate Related Risks on Financial Aspect. Finance and Accounting Monthly, 16, 11-18.*

[4] *IATA.(2021). Our Commitment to Fly Net Zero by 2050 from https://www.iata.org/en/programs/sustainability/flynetzero/*

[5] *The International Financial Reporting Standards Foundation.(2023). S2 Climate-related Disclosures from https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures.html/content/dam/ifrs/publications/html-standards-issb/english/2023/issued/issbs2/#standard.*

[6] *Jingming Wang.(2024). The impact of Sustainability Disclosure Standards on Entities' ESG reports and financial information disclosure. Aeronautical Finance and Accounting, 02, 54-62.*

[7] *Pengcheng Wang.(2022). The Considerations of Climate Change Risk in Financial Reporting Auditing. Finance and Accounting Monthly, 14, 110-115.*

[8] *Rachel Burbidge, Christopher Paling & Rachel M. Dunk .(2024). A systematic review of adaption to climate change impacts in the aviation sector. Transport Reviews, 44:1, 8-33.*

[9] *Spring Airlines Co. Ltd.(2024).2023 Fianancial Reports and Audit report.from https://ajax.springairlines.com/content/invester/Spring Airlines: Spring Airlines Annual Report 2023. pdf.*

DOI: 10.54254/2754-1169/164/2025.20720

[10] *Shizhong Huang & Fengying Ye.(2023). Ten Key Challenges and Response to These Challenges in Developing Climate-related Disclosure Standard in China, 051, 3-10.*

[11] *Yiling Zhang& Xiaodong Liu.(2022)Fubabcual Risr Literature Review of Aviation Enterprises, Foreign Economic Relations&Trade, 05, 92-95.*

[12] *Zheng, S. (2024). Demand response to aviation carbon pricing in Canada. https://theicct.org/wp-content/uploads/2024/04/ID-134-–-Aviation-Canada_final.pdf*