

Corporate Governance and the Commercialization of Space Transportation

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Since 1980s, the role of the private entities in space activities has become more and more significant. In the field of space transportation, needless to say, companies such as Arianespace and Space X are now offering the space transportation services to the customer on a commercial basis and there are under severe competition in the satellite launching market. As the private entities, especially the companies, increase their presence in the space activities, the new issue arises, which is the issue of the corporate governance. Organization of Economic Co-operation and Development (OECD) has released the OECD Principle of Corporate Governance in 1999 and 2004, and they stated the good practice in business customs. They also mentioned on the relationship between the companies and its stakeholders including shareholders. These principles have been set after the collapse of the huge companies giving the considerable impact to the world economy. Due to the strict regulations and the government involvement deriving from its historical background, the aspect of corporate governance has not been brought to a focus. However, the private entities are now under the regulation of the rules of the private law, as the space activities by the private entities are emerging. In this paper, we look through the transition in the main actor in the space activities and the current situation, with reference to the OECD principles on the corporate governance to pick up the idea which relates to the private space entities. Then the consideration and analysis would be made on the impacts and possible consequences.

I Introduction

In the field of space transportation, the main actor has been shifted from government or governmental organization to private company. Needless to say, companies such as Arianespace, the market leader, and Space Exploration Technology (Space X), the new space venture company, are now offering the space

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transportation services to the customer on a commercial basis and there are under severe competition in the satellite launching market.

As the private entities, especially the companies, increase their presence in the space activities, the new issue arises, which is the issue of the corporate governance. Company is a legal entity that acts through its director and for the joint stock company, the most common form of the company, the ownership and the management is separated. Thus the daily management of the company is vested on the directors, and therefore there are the needs to monitor the directors, who have the strong power to control the company, by the owner, the shareholders of the company.

The space transportation business is no exception to this. As far as the private company takes the major role in the space transportation, it has to follow the rule, but the difficult part of the corporate governance is that there is no one absolute model, and the standards and details of the corporate governance varies according to the countries and regions. Organization for Economic Co-operation and Development (OECD) has issued "OECD Principles of Corporate Governance (hereinafter OECD Principles)"¹ as non-binding but "to serve as reference point" of the corporate governance. With reference to OECD Principles, this paper consider and analyse what is the principle of corporate governance in the field of space transportation and how the corporate governance is maintained in the existing company forms.

II Feature of Space Transportation Business

Space transportation business is to provide the access to the space, and it is also to provide the transportation infrastructure, currently the expendable launcher. Space application program using the satellite, such as navigation, broadcasting and telecommunication systems, cannot be undertaken without the access to the space. The assured, secured and stable access is the key element for the development of the space application. It is strategically important to maintain the access to the space for the country focusing the space activities.

The other points are, firstly, the cost to develop the launcher and its related facilities is enormous so that the purely private company would not take the risk alone. Secondly, the space activities have been considered to be "Ultra Hazardous" and the Space Treaties stipulate the continuous supervision on the space activities by the states² as well as the compensation by the states for the damage

1 OECD. *OECD Principles of Corporate Governance*. OECD Publications. 2004.

2 The article XI of "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies", 27 January, 1967, stipulates that "the activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty" as well as the international responsibility on the national activities.

caused by the space activities³, which have related to the substantial involvement of the governments and in most cases, the space transportation systems has been developed by the governments or governmental agencies.

For this background, unlike the other sector of business, the governance of the space transportation business seems to be focused more on public and political point of view.

Whereas, as the space budgets keep shrinking in the most of the space faring nations due to the current economic constraints over the world, to put in the hands of the private sector whatever could be done by the private sector become the hot issue and now the private companies are playing the major role in the space transportation business.

III Relationship between Space Transportation Business and Corporate Governance

The private companies become the major players in the field of space transportation nowadays, and they have to follow the private law, especially the company law, which outline and regulate the private companies. One of the recent major issues among the companies is the corporate governance, after the massive impact of the collapses around 2000s.

The issue of corporate governance is broadly interpreted, as the corporate governance is very wide and flexible term. Still, the core of the corporate governance is the issue of “who owns and controls the company?” and ultimately the relationship between its shareholder and directors. As the company is very strong and has prominent presence in the society today, the effect it would give to the global economy as a whole is enormous.

The major organs of the company are the directors and the shareholders, whose liabilities are limited by shares, and the directors are assigned to manage the companies. On the other hand, the shareholders are “not closely involved in the day-to-day management of the companies, but they do exercise ultimate control over the company⁴” by the majority vote at the general meeting. The shareholders provide “equity funding” and the rights they receive in turn are “generally rights to vote, to receive dividends out of company’s profit and to share in any surplus assets of the company when the company is wound up⁵”.

This division of power between two major organs of the company, the directors and the shareholders, is to increase the efficiency of the management to achieve

3 The article II of “The Convention on International Liability for Damage Caused by Space Objects”, 29 March, 1972, stipulates that “A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft flight”.

4 Len Sealy and Sarah Worthington. *Cases and Materials in Company Law (9th Edition)*. Oxford University Press. 2010, p. 2.

5 *Ibid*, p. 2.

more profit, because the directors specialized in the management of the company are more suitable, but this results in “the larger and more widely dispersed the membership or shareholding of the company, the more marked this difference between “ownership” and “control” usually is⁶ “. This division of “ownership” and “control” is the core background of the corporate governance and how those two are balanced and how to govern the company to achieve the efficient and sustainable management of the company is the profound question. Space transportation business is no exception to this. As the private company is now the main player in the space transportation business, the corporate governance issue has to be discussed and formulated. However there is certainly the different perspective in the corporate governance in the space transportation business. Mentioned in previous chapter, the space transportation business is providing the infrastructure to access to outer space under the public policy, and the overall discussion has been focused on public and political point of view. Unless this situation drastically changed, the corporate governance of the space transportation is meant to include the public and political point of view, not only the relationship between the directors and the shareholders.

In OECD Principles Preamble, it says “corporate governance is one key element in improving economic efficiency and growth as well as enhancing investor confidence⁷” and also “Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and its shareholders and should facilitate effective monitoring⁸”. By introducing the six principles of corporate governance⁹, OECD Principles emphasizes the significance to set out the appropriate monitoring framework, and clarifies the relationship and responsibilities of the directors and shareholders. This is showing that the relationship between the directors and the shareholders is the important point of the corporate governance.

In next chapter, by comparing three different forms of space transportation companies, how the corporate governance frameworks are formulated in each form would be examined focusing on the relationship between the directors and the shareholders, then the possible consequence would be given in the conclusion in the final chapter.

6 Ibid, p. 179.

7 OECD, supra note 1, p. 11.

8 Ibid, p. 11.

9 OECD Principles, introduces following six principles; i) Ensuring the basis for an effective corporate governance framework, ii) The rights of shareholders and key ownership functions, iii) The equitable treatment of shareholders, iv) The role of shareholders in corporate governance, v) Disclosure and transparency, vi) The responsibilities of the board.

IV Analysis on the Corporate Governance in the Space Transportation Sector

IV.I In Europe

The privatization of the space transportation in Europe began more than 30 years ago¹⁰. In 1980, the launch service provider, Arianespace, was jointly established by the French space agency(Centre Nationale d'Etude Spatiales, CNES) and the European space industrial firms¹¹. Its main shareholder has been CNES and now the composition of the major shareholders is CNES 34% and other space related entities in Europe such as Astrium¹². In contrast to other framework, Europe has chosen the capital-based approach for the privatization of the space transportation¹³. By owning more than one third of the share, the governmental agency has the control over the company to the certain extent. Furthermore Arianespace is the closed company, not the listed company, objecting to provide the space transportation service and the shareholders are limited to the space related entities of Europe, thus the harmonization of the interest between the shareholders is relatively achievable, and assumingly there would not be the shareholder pursuing purely the economic gain. While the day-to-day management of the management can be vested to the professional directors, the government can exercise ultimate control on the public point of view. As a result, the private company will not exit from the space transportation business, unless the government wish to cancel its policy to promote the space transportation. Under this framework, it is also noted that the monitoring will be done by the share- holding space related entities. The space transportation is still a risky business which may result in the loss. The shareholders may exercise its power to monitor and control, such as dismissal of the director or the derivative suit. OECD Principle points out that there is some risk that the legal proceedings against management can “become prone to excessive litigation¹⁴”. Though many legal systems have introduced so-called “safe-harbours for management” such as business judgement rules¹⁵, the directors are at the risk of dispute with the shareholders especially in the field of space transportation where the failure

10 Frederic d'Allest. “Why is the most widely used launcher in the world European?”. Proceedings of an International Symposium on “Twenty Years of the ESA Convention”, Munich 4-6 September 1995(ESA SP-387, November 1995), pp. 47-50.

11 Arianespace. *About Arianespace*. <www.arianespace.com/about-us/service-solutions.asp> (retrieved September 2012).

12 Arianespace. Corporate Information. <www.arianespace.com/about-us/corporate-information/shareholders.asp> (Retrieved September 2012).

13 Seiko Morikawa, “Comparative Analysis on the Legal Framework of Privatization of Space Transportation”, ISTS Web Paper Archives. 28th International Symposium on Space Technology and Science. 2011. P2-3 <http://archive.ists.or.jp/upload_pdf/2011-v-06.pdf> (Retrieved September 2012).

14 OECD. *supra* note 1, p. 40.

15 *Ibid*, p. 40.

is somehow inevitable. Considering this risk, limiting the shareholders to the related entities is one reasonable way to avoid excessive dispute yet ensuring the monitoring framework by the shareholders.

IV.ii In US

One of the notable recent news in US space transportation is the rise of venture business, especially Space X. Space X successfully launched the Falcon 9, its expendable rocket¹⁶, and it managed to launch the spacecargo, Dragon, to International Space Station under the Commercial Orbit Transportation Service (COTS) Program funded by National Aeronautics and Space Administration (NASA)¹⁷. Space X is the private company founded by Mr. Elon Musk and he is the major shareholder of Space X¹⁸. It has no capital relationship between US government including NASA, but has the long-term contract, COTS, with NASA. The government issues the licence for the space flight and apply administrative regulation focusing on the safety matters, but US government is not directly involved in the management of company. Thus, should it decide to close the business, which is not likely to happen for a while, it would not be interrupted unlike the European framework examined in the previous chapter. The point in here is that Space X is currently the closed company and its major shareholder, the owner of the company, is the founder himself¹⁹. This provides very simple style of corporate governance structure. In the interview, Mr. Musk expressed his view that he made sure the investors to his business were “like-minded” and that he had sufficient control of the company to optimize for very long term²⁰. This implies that for the risky space transportation business, due to the large investment at the beginning with no assurance for success, it is difficult to achieve the necessary consent continuously from the investor, especially the shareholder, as the object of each shareholder varies in listed company in particular. Although this style may be considered to end up with less monitoring compared to the one in the mature industry, it seems to be suitable notably for the venture business which is under the development, and since the space transportation business can be regarded as the under-developing business, this venture style corporate governance is apparently required for a while.

16 Space X. “SPACE X’S DRAGON SPACECRAFT SUCCESSFULLY RE-ENTERS FROM ORBIT”. December 15, 2010 <www.spacex.com/F9-002.php> (Retrieved September 2012).

17 Space X. “SPACE X MAKES HISTORY”. May 25, 2012 <www.spacex.com/F9-003.php> (Retrieved September 2012).

18 Patt Morrison. “Space Case”. *Los Angeles Times*. August 1, 2012 <<http://articles.latimes.com/2012/aug/01/opinion/la-oe-0801-morrison-musk-SpaceX-20120801>> (Retrieved September 2012).

19 Caleb Melby. “How Elon Musk Became A Billionaire Twice Over”. *Forbes*. March 12, 2012 <www.forbes.com/sites/calebmelby/2012/03/12/how-elon-musk-became-a-billionaire-twice-over/> (Retrieved September 2012).

20 Morrison. *supra* note 18.

IV.III In Japan

The privatization of the space transportation in Japan is based on the contract (technology transfer contract) between Japan Aerospace Exploration Agency(JAXA) and Mitsubishi Heavy Industry(MHI) signed in 2003²¹. MHI is a manufacturing company and responsible for all the process of manufacturing and operation of H-IIA. This implies that the operation of the space transportation business is in a hand of the private sector which is fully owned by private capitals. As the debate of the corporate governance is emerged in the society as a whole, the importance of monitoring is more and more emphasized. Consequently, the directors of the company now has grave responsibilities, and in the worst case, the single mishap may lead to the removal of the director or, even worse, the derivative suit by the shareholders. This may lead to the overresponse of the directors and to shrink their activities and the business judgment. For example, in Japan, the Companies Act(Act No. 86 of 2005) states that the board of directors shall supervise the execution of duties by directors (Article 362, Paragraph 2, Item 2), and the directors neglect their duties, they shall be liable to the damages arising thereof to the company. This could mean that the directors become more hesitant to make or even agree to the risky business in the board of directors, as they might be theoretically accused and sued by the shareholders if the attempt fails. The space transportation is still the risky business, and supposedly no major launcher has managed to achieve and continue 100% success rate. It is too demanding for fully private-owned, listed and public company to bear all the risk by itself.

Another point is that when the technology transfer contract period comes to the end and the private sector decides not to extend the contract, the privatization framework cannot be sustained. The private company has to make the profit assuring the understanding of the shareholders. If it does not make sufficient profit, the director may choose to backdown from the business. Fortunately, the current situation is not as severe, but as I mentioned above, only one mishap may end up with this consequence and this can be said the limit of the contract-based framework in Japan.

V Conclusion

In OECD Principles, it states “Corporate Governance is affected by the relationships among participants in the governance system²²”. As we have seen in this paper, the space transportation is strongly affected by the public policy. The Corporate Governance in space transportation business does include the relationship with the public policy especially in terms of sustaining the space

21 JAXA. *The Future Prospect and the attempt of the Reliability Improvements on H-IIA*. (In Japanese) 2007, pp 11 <www.jaxa.jp/press/2007/04/20070404_sac_h2a_j.html> Retrieved September 2012).

22 OECD. *supra* note 1, p. 12.

transportation, and the different approach is taken by each country to fulfil that objective.

In summary, under European framework, the business itself would be continued as long as the country keep the policy to continue, because the governmental agency is the major shareholder. Furthermore, other shareholders are also from space-related entities, so that their objective is more likely the same.

The example of Space X in US gives another form of the corporate governance in space transportation. For the government does not own the share of the company, the government would not be able to hold back the company withdrawing from the business. One shareholder with more than majority is managing the company as well in Space X and it is not a listed company. The owner of the company is equal to the director of the company, which means rapid and flexible day-to-day management is possible. On the other hand, the monitoring function may not be as strong as the listed company. Reportedly there may be Initial Public Offering in the near future²³, then the monitoring by shareholders would be strengthened.

Japanese framework may be the most demanding in terms of corporate governance. As MHI is the listed company, it has to follow the legal regulations and also the listing rules of the stock exchange, resulting in the need of strict monitoring, and check and balance function. The composition of shareholders is diverse, and the corporate purpose is apparently neither limited nor focused on the space transportation. Less profit or negative perspective in the space transportation business may lead to the conclusion to backdown from the business, and for the multipurposed company, that conclusion would be justified in terms of the corporate governance for the ordinary company. The government would not be able to force the company to continue the business, in case the company considers to backdown by terminating the technology transfer contract. The Fundamental Agreement on the privatization in Japan, which is concluded between JAXA and MHI, has the provision that the parties can terminate the contract, which means the space transportation business will no longer be sustained²⁴.

Comparing these three frameworks, the most demanding framework in terms of the corporate governance is Japanese framework in pursuit of space transportation business. To keep the soundness of the company's business as a whole, which is the most important objective of the corporate governance, the answer is to withdraw from the risky business. This is because the corporate governance framework is to "be developed with a view to its impact on overall economic performance, market integrity and the incentives it creates for market participants and the promotion of transparent and efficient market²⁵".

23 Melby. *supra* note 19.

24 JAXA/MHI. *Conclusion of the Fundamental Agreement on the Implementation of the Launch Service Business Using H-IIA*. (In Japanese) 2003 <www.jaxa.jp/press/nasda/2003/h2a_20030212_j.html> (Retrieved September 2012).

25 OECD. *supra* note1, p. 17.

As seen above, each framework gives the different consequence. Having the private company as the main player of the space transportation business, the issue of corporate governance is inevitable like any other private companies, but the most difficult part in the corporate governance in the space transportation business is that it is meant to be the assured access to the outer space and it is still the risky business. Balancing the corporate governance requirements as a private company and the public policy will be the key to the space transportation business.

Note: This paper is written in authors' personal capacities. Any errors and omissions are solely attributable to the authors.