The Advantages and Risks of M&A Across Country: Evidence from Infineon

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Abstract. By taking over Cypress Semiconductor, Infineon completed a stage of its development strategy. This study takes the case of Infineon take over Cypress Semiconductor as an example to analyse the advantages and risks of M&A across country for acquirer. In the great backdrop of semiconductor industry’s fast development, this measure completes the short come and expand the products’ scope of Infineon’s business, making automobile electronics the pillar part of its revenue. The strengthen of business in China also helps to improve the firm’s revenue. It is obvious that M&A across country brings the acquirer new market and new guests in other region outside its own country, and improves one’s industrial technology. Besides advantages, M&A across country brings risks on different aspects. In financial aspect, it may lay capital burden on the firm, causing difficulty in turnover. Besides, politics of the two firms’ country and laws are possible to be sensitive. Companies need to be careful not to violate them. For the corporations who want to complete a successful M&A, they should better look into the detailed information of both themselves and the target firm, including their needs and anti-risk ability. Carefully assessments toward the risks and benefits are import before making the final decision. These results shed light on guiding further exploration of M&A with multi-nations.

Keywords: M&A, semiconductor, firm Performance.

1. Introduction

After the information technology revolution’s appearance, global high-tech industry has been developing in a fast pace. As semiconductor material become the irreplaceable part of a huge variety of technology product for its special chemical nature, semiconductor industry also makes up an important part of electronic information industry. Chips made from semiconductor material are the main product of the industry, which become the core of many high-tech product. The huge space of potential is seen after the third semiconductor material generation like SiC and GaN is put into use. On the area of environment protection, semiconductor can also show effects in photocatalytic water splitting to help the process of exploiting new clean energy [1]. As shown in Fig. 1, the future of these new material is optimistic. It is fact that world’s popular scientific research field such as driver-less automobile, “internet of things” can’t go through without semiconductor chips, because they all need great amount of sensor and data processor. It is obvious that semiconductor industry is still developing.

![Figure 1. Prediction of the scale of Global Market for SiC Power Device.](image)

In the area of semiconductor, there are a lot of technical firms, in which M&A aren’t something rare. When adding the factor of cross-country, the whole thing can bring different influences to the acquire. According to past researches, both Chinese firms and western firms share the motivation and inspiration of M&A which build on the basic resource-based view. However, they place emphasis on
different aspects. Chinese firms tend to gain external resources like intellectual property, technology and more channels. While western firms emphasize more on intangible resources such as experiences and brand [2]. It is obvious that M&A across country can bring great advantages, especially in the area of technology. An enterprise can complement the gap of technique of their product and business through takeover other firm in a different country. A leapfrog development of technique into innovation stage is even possible due to the M&A, making the firm achieve their goal of catching up new technology [3]. On the one hand, business in different regions bring broader market, important resources and investment opportunities to the enterprise after M&A. On the other hand, M&A across country also face risks on politics and economy because of the differences between different countries [4]. The changes that M&A across country make on a firm’s performance are influenced by many factors in different aspects. For example, the cash payment manners of M&A, the shareholding ratio of the acquirers’ biggest shareholder, the level of the differences of enterprises’ culture [5]. Besides, the scale of acquirer and the degree which the company is relevant to its government can also influence the revenue after M&A in both short term and long term [6].

This study chooses the case of Infineon taking over Cypress Semiconductor to analysis this typical M&A across country in high-tech industry between two established businesses which all play an important role in the total market. By comparing the data of the firm’s financial report before and after M&A, the influences of M&A across country towards the acquirers’ operation revenue and development strategy in technology industry can be analyzed. After assessing the advantages and risks of M&A across country, some suggestions and enlightenment will be given to the relevant type of M&A.

2. Case Analysis

2.1. Case Description

Infineon was a German firm established in April 1st 1999 in Munich. It is a leading enterprise in the area of power semiconductor and also ranks high in the world’s semiconductor industry. Infineon’s main business includes producing and selling cars, industrial power device, chip card, semiconductor for security applications and systems. Cypress Semiconductor is an American firm, established in 1982 and came on the market in 1986, which works on designing and producing semiconductor products. The firm’s main business is MCU, memorizer, analog IC and USB controller, which has the upper hand in the area of car and connected intelligence [7-9].

In June 3rd 2019, Infineon announced that the company was going to take over Cypress Semiconductor at the price of 23.85 dollar per share. The estimated total value of Cypress Semiconductor was than about 90 hundred million euro. The chief financial officer of Infineon declared that the company was going to complete 30% of the whole transaction amount by the method of equity financing, which means to do the initial allotment and issue a hybrid bond. Infineon issued 550 hundred thousand shares at the price of 19.30 euro per share which brought a total earning of 10.6 hundred million euro. After deducting the commission and expenses, these money were going to be used to pay back some parts of the funds for M&A which was provided by the bank. The two company posted an announcement showing that CFIUS had already give permission to the trade in March 2020. In April 7th 2020, Infineon claimed that all the necessary approval of regulatory agencies were obtained. Finally in April 17th, the delivery of business was completed and Cypress Semiconductor was merged into Infineon.

The products and core technology of Cypress Semiconductor are highly complementary with the ones of Infineon which can bring great advantages in the market. Besides, Cypress’ strong research and development ability and the substantial presence in American and Chinese market can also present insurance to the global customer base after M&A. Taking over Cypress is an important step of the development strategy of Infineon and this M&A provides more completed product line, expands the firm’s global business web and give advantages to follow the overall trend of digitalization and networking which promote the company’s business development. Infineon’s chief
executive officer once claimed: “This is the step in Infineon’s developing process of a milestone. One can now provide the most comprehensive products combination, linking the real life and the digital world.” Apart from the ambition on better service, the reasons why Infineon decided to take over Cypress Semiconductor may also be considered on the perspective of revenue. Before the M&A case was announced in June 2019, Infineon was facing a less optimistic trend. From the time in 2016 when Infineon continuously took over other technical corporation like the Holland semiconductor company Innoluce and part of the business of CREE, the firm was falling in the dilemma when its market capitalization and share price were keep going down. In the past year before the announcement, the share price of Infineon had nearly depreciated for about one third. The enterprise needed some measures to stop the tendency of falling down, gain the confidence and raise their operation revenue [10-12].

2.2. Analysis of the Influence

In Infineon’s expectation, the M&A will have an effect of cost synergy to a great extent, making the profit grow. An important reason is that Cypress can help Infineon to achieve the target of improving the revenue proportion of its business in IC and system area. The predicted cost synergy is about 1.8 hundred million euro, and the potential revenue synergy is over 15 hundred million euro. Just when the delivery of business was completed, Infineon stated that the annual operation revenue of 2019 should be 99.62 hundred million euro with automotive electronics business occupying 47% of the total revenue, being the first mainstay. However, the data from 2019 financial report shows that Infineon’s total revenue is 80.29 hundred million euro which is far from the expected target. But the result still grew at the ratio of 5.6% comparing to the annual data of 2018. Apart from the reason that Infineon was over-optimistic, the influence of covid 19 should be considered too, as it greatly stagnates many industries especially semiconductor industry. Infineon’s share price stopped the tendency of going down and started to rise in the third quarter in 2020. View from the side, this shows the growing confidence of investor. In the meantime, many economic indexes of Infineon were growing up slowly. As illustrated in Fig. 2, the total operating revenue and total property are rising steadily from 2018 to 2021. The results do not include data after 2021 due to the reason that in the end of 2021, Infineon took over another company which will influence the accuracy of data. Fig. 3 shows the data of total operating revenue, profit after tax and free cash flow each quarter from the second quarter in 2019 to the last quarter in 2021. Although the indicators are floating with ups and downs, the total tendency is still growing up.

![Figure 2. The annual index.](image-url)
Before the M&A, Infineon occupied 11.2% of the automotive semiconductor market. After Cypress Semiconductor was taken over, its proportion in the market will be added and the total market shares is up to 13.4%, which is in the first place. In the same time, Infineon will also be the supplier at the top of the power semiconductor, safety IC and NOR flash memory market. This M&A case increases Infineon’s market shares and makes it a top ten large scale enterprise in the industry, rebuilding the industry structure. M&A across country can make up a part of a company’s develop strategy which extend the company’s scale and business. It can also serve as a factor promoting the firm’s structural growth. The point of “across country” emphasize on exploiting new market and the customers in new region which is not in the country where the company settled. Companies who want to strengthen their overseas business can adjust and merge their service through offshore M&A to develop themselves. M&A across country can also act as the opening shot to enter into the local market of a region that a companies’ business has rarely been to. As shown in Fig. 4, the 2022 financial report data shows that the great China region has already become the main motivation of Infineon’s business growth in their global structure of operation revenue. Both Infineon and Cypress semiconductor have a large proportion of Chinese business. The M&A help Infineon to extend the scale of Chinese business. As the potential of Chinese car market gradually emerge with the pass of time, this market will bring greater profit to the Infineon.

**Figure 3.** The index each quarter.

**Figure 4.** Proportion of Different Region.
The advantage of M&A across country can present as the way of technical supplement especially in technical industry. The development of technology in one country may follow the same trend, facing limitations. Taking over other country’s company can bring in new elements by controlling its core technology and also promote the acquirers’ competitive power and R&D ability. However, decision makers should consider that the improvements in R&D ability may be a reason lead to disapproval of M&A. If the target company has a better recognition and public praise than the acquirer, the M&A may stimulate the investor’s confidence and help to improve the share price of the acquirer.

After Infineon merged Cypress Semiconductor, the company took over a Malaysia firm Syntronixs Asia who is majored in precise semiconductor electroplating technology in 2021. Then, in 2022 Infineon continuously merged Nobug located in Rumania and Serbia, which run the main business in the area of verification service supported by digital function. It is obvious that merging companies to get the needed semiconductor technology is the important strategy for Infineon to develop. Due to the 2022 financial report data, Infineon’s revenue for the quarter had a 25% rise over the previous year. As shown in Fig. 5, the business of car and power & sensor system had already become the biggest contributor of Infineon’s operation revenue. Cypress Semiconductor provides the necessary main technology that helps to connect the software system to the digital world in the system of Infineon’s business. The technology support helps to realize the intelligent interconnection, motivating Infineon’s service development in the internet of things and automotive electronics. These technological advantages assist the company’s revenue growth continuously.

Because of the currency, law and politics differences exist in different country, M&A across country contained many risks to companies. Trades involving different currency and foreign exchange may develop economic risks. While the way to assess cost can be different between countries, leading to a high premium which does not fit the original value of the target firm. Politics and culture also produce risks of M&A across country. In recent days, geopolitics are becoming more and more sensitive to many countries. Acquirers need to weigh the politics problem between their country and the target firm’s country. According to researches, the cultural heterogeneity will influence the operational revenue after M&A. The more differences there are between the two cultures, the less the growth of revenue is going to be [5].

When it comes to the area of law, the M&A between large scale enterprises in the same industry may be suspected of being involved in antitrust law. Governments are also sensitive to the combination of business in certain industry. Take the case of Infineon as an example, when Infineon announced to merge Cypress Semiconductor, American government officials were concerning about whether they should stop it. The main reason is that the two companies are both an important part in the global supply chain of chips and their business scale in China are big as they occupied about one fourth in the total business. Although the officials once suggested president Trump stop the trade as it may harm the state’s security of America, the trade still succeeded in getting all the needed permission in the end. This is not rare especially in technical industry. The Trump government had stopped Infineon’s attempt on taking over Wolfspeed in 2017 and a series of trades including the M&A between Chinese company and American company.
The end of a M&A does not mean a start of operation revenue growth. Purchasing a company means a great amount of expense itself, especially when strategic acquirers inspired by cost synergy are more likely to pay way much than what it should be according to valuation model. The growth of a firm’s service and products also brings more capital expense because of the rising cost. For example, operation fee of running the offshore business, management fee and FR&D costs that technical corporations emphasize on can all contribute to the growing expenditure. Expanding of enterprise’s business scale give out harder request to the company’s running efficiency to manage different apartments. Besides, some consideration and operation strategy of the acquirer may not be suitable to the environment the receiver is facing. It is possible that the business that used to develop healthily appeared to have problems after M&A, making the operation revenue grow slowly or even go down.

The M&A case of Infineon merging Cypress Semiconductor ended at April 2020, which was accidentaly in the period when the Covid 19 had just being noticed and attached attention to. The padanmic badly influenced the production of semiconductor chips so the factories could not maintain the usual amount of output. Meanwhile the transportation cost rised at a high ratio. On the upstream side of producing, the supplies were lessening and on the downstream side of consuming, the number of orders was dropping too. These two aspects caused by Covid 19 destroyed the global supply chain. Especially in the automotive electronics industry, the semiconductor chips shortage of supply lowered the car output. The market’s downturn decreased the operation revenue growth rate of relevant companies. It was not until 2021 that Infineon could finally reached the revenue target of about 100 hundred million which was predicted to be in 2019 after the M&A. The phenomenon of downturn of the whole semiconductor industry caused by Covid 19 was sure to influence the company’s level of income. The advanges brought by the M&A across country came into play afterwards and was kind of late. The impact of COVID 19 has been gradually declined from the end of 2022, but the changes that happened in this period will still play an important role in the semiconductor industry and market, bringing intangible and long lasting effect. One example is the reestablishment of the once brokened supply chain.

3. Suggestion

Infineon is a typical strategic acquirer in this M&A across country. The company established a customized strategy according to its own traits and needs and reach its target by completing M&A across country. This could be a practicable developing path for company’s progressing, especially for technology firms. However, risks always come after benefits and advantages. The huge risks underlying call for the firms’ attention. M&A across country request way more consideration on complex factors than M&A in the same country. Infineon has a strong ability to control risks in their hands because it is already a top 15 enterprise with a large scale in the semiconductor industry before the M&A. But small and medium sized businesses cannot also be strong enough to handle the risks. In the technical area focused by the whole world, a company will need to consider many factors. First, the company should fully analyze their shortage and advantages, then conclude the final demands because they aimed to merge other companies. The acquirers need to ensure that they are equipped with basic anti-risks ability, including technology supporting and economic basis. By taking investment bank’s advice, the chosen target company’s detailed information and situations should be investigated clearly with a complete acknowledge. The technical acquirer should do in-depth research and analysis before making the decision, assess the most suitable program to achieve their goal. The M&A should help the company to develop their business but not be a burden on the business.

4. Conclusion

Taking over Cypress Semiconductor provides Infineon the complementary products and core technology that can help Infineon develop its main business in their advantageous field. In the meantime, the market and customer basis in other region are extended because of the mergers of
companies while the financial report data present the successful promotion on Infineon’s operation revenue and share price. Besides, the process of M&A presents several risks that may involve economy, politics and law such as reaching the red line of geopolitical issues or antitrust laws. Considering every aspect, the case of Infineon merging Cypress Semiconductor can be considered a success M&A example which shows the import meaning for enterprises of M&A across country. Nevertheless, this study is limited by methods being used. Only financial report data is compared but more valuation models should be used. There can be more detailed information about stock market to show the market’s estimation and expectation to this M&A case. The analysis in this passage can be used in further comprehensive study of M&A’s effects in the combination and innovation of technology.

References